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Equality and Ecological Space

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Introduction

This paper advances the proposition that, as a matter of global justice, we should recognize human beings as having equal claims on this planet's ecological space. An account of what this proposition means, and how it can be defended, is developed as a response to two critical questions. On the one hand, it can be asked why we should suppose that claims of global justice concern *ecological space* at all, rather than something else; on the other hand, the question is why, even if it is granted that claims of justice do apply to the distribution of access to ecological space, these claims should be *equal*.

In order to explain how the question could even arise of why ecological space should be the focus of egalitarian claims, it is necessary at the outset to say something about what this unfamiliar term refers to. In Section 1 I briefly highlight some key points about it that are particularly salient for the argument that follows. On that basis, I summarise the argument in favour of recognizing a basic right of access to the ecological space that secures conditions for individuals of minimally decent life. From this argument it follows that claims of global justice – whatever else they may apply to – can indeed be said to concern *ecological space*.

The challenge then is to address the criticism that even if the basic rights argument is accepted, this shows only that justice requires *sufficiency* of access to ecological space; it does not imply a case for *equality*. To respond to the challenge, it is necessary to clarify the understanding of egalitarian claims being invoked here, and so, in Section 2, I show how more exactly the concept of equality is being related to that of ecological space in the argument. To be emphasised is that equality here is not conceptualised on the model of slicing a cake into equal shares. The conceptualisation draws instead on another familiar idea of equality – as in equal rights of dignity, recognition, protection or participation – that does not necessarily imply entitlements to equal shares of some tangible or fungible resource. Such rights are satisfied when people's conditions of life and livelihood are

respected in the sense of not being undermined, or being protected from harm, or by materially supporting a range of appropriate opportunities. So even if we do think of ecological space as constituting a comprehensive *resource*, a set of material conditions that persons can use, occupy or command different amounts of, we nevertheless do not need to think of individuals as each having an entitlement to an equal quantum of it (something which, for a variety of reasons, would be inappropriate); rather we think of individuals as having an *equal right to a sufficient share of access to it*. In terms of purely moral considerations, then, the criterion of sufficiency is doing all the work. The distinctive pertinence of referring to equality arises from a consideration of the context in which the moral considerations arise.

In Section 3 I develop the normative argument that the basic claim on *sufficient* ecological space does imply a goal of equality in a sense that is important to recognize under the given circumstances of global justice. The circumstances that constitute the core global challenge today, those that make global justice as such necessary, are that we inhabit a crowded planet. These are circumstances in which humanity, globally, faces a dual problem. One aspect of this is the aggregate overuse of renewable natural resources and environmental capacities that can be referred to as *global ecological overshoot*. The other aspect consists of the extreme and structurally embedded discrepancies between the life chances of people and peoples in the world that can be referred to as *extensive radical* inequality (Nagel 1977; Pogge 2002). Whatever else global justice might require, it requires steps to resolve those problems. Such steps can be characterized, in general terms, as requiring both contraction and convergence compared to the current situation of excessive command and occupation of ecological space by some at the expense of adequate access for use by others. Contraction and convergence is thus the overarching requirement of global justice. The goal of convergence, in particular, suggests an ultimate goal of equality. The core of the argument for equality of ecological space can be stated quite simply: everyone is entitled to

enough (as affirmation of the basic right asserts); fulfilment of this entitlement takes priority over any other distributive principle (as the status of a basic right implies); therefore no one is entitled to more than enough (at least until everyone has enough); meanwhile, as long as everyone is entitled to enough and no one is entitled to more than enough, it follows (at least *pro tanto*) that everyone is entitled to equal.

An implication of the argument is that no distribution within an affluent nation-state can be justified by reference to principles of *global* justice when that distribution involves surpluses of ecological space as used, occupied or commanded. Therefore, any theorizing about principles for distributing a surplus other than to the victims of radical inequality cannot be directed to what *global* justice requires. Furthermore, I shall suggest, there is a deeper objection to advocating any principle other than equality. We cannot know what a world without radical inequality and ecological overshoot will look like until we have one, since this could be a world with very different institutional conditions from those operating globally at present; therefore we do not have enough contextual information to decide what justice might then require. We need such information, I argue finally, because a decontextualized, or 'non relational' account of justice would not be fitting as an account of *global* justice For *global* justice necessarily has as its reference the circumstances of the global biosphere and the normative ordering of human relationships within them.

1. Ecological space as a locus for claims of global justice

Ecological space is still a rather unfamiliar idea, and what it may have to do with normative argument is not a matter that has been very widely discussed. In this section, accordingly, I

briefly set out a workable understanding of the concept such as is necessary for appreciating its role in an account of what global justice requires.[1]

Ecological space, in the most general terms, refers to the space in which complex interrelationships between organisms and their environments occur. Noteworthy is that it is defined more by function than by physical dimension, magnitude or location. Ecological space – the generic concept – has as its concrete manifestation what is provided for each species by its particular ecological *niche,*[2] that is, the functional space that furnishes the sum of habitat requirements that allow members of the species to live and produce offspring. The niches of several species may be realized in the same physical location. A distinctive characteristic of the human species is that we have expanded our *realized*[3] niche – i.e. the niche that we actually use on this planet – quite considerably. We have not fundamentally altered the human organism's need for nutrition, hydration, a certain air temperature and pressure range, and so on (i.e. the conditions that together define what ecologists refer to as our *fundamental*, as opposed to realized, niche); we use technological devices to provide what is needed when the immediate natural environment does not. Our relation to the rest of nature has become highly mediated, with very complex technological and social constructions providing settings for individual human organisms, communities, populations and – ultimately – the whole species to live in, and in ever changing ways. These more complex and mediated relations between human beings and their environment are, nevertheless, supervenient on the direct relations that all human beings – as organisms –

[1] The following summarises the more extended discussion in Hayward, 2013a.

[2] Definitions of the ecological idea go back to the early twentieth century, but it was influentially formulated by the zoologist G. Evelyn Hutchinson (1958) when seeking to account for how there can be so many different types of organisms in any one habitat. Hutchinson conceptualised the niche in terms of a 'hypervolume', a multi-dimensional 'space' of resources and environmental conditions (e.g., light, nutrients, structure, etc.) that are available to (and specifically used by) the organisms that require them.

[3] Ecologists distinguish between the fundamental niche of a species – the general conditions functionally required for its persistence and reproduction – and its realized niche. The latter refers to the actual, realized, circumstances that pertain for a given population (see e.g. Hutchinson, 1958; Freedman, internet resource).

always and necessarily continue to have with ecological space. Therefore, if we are to think about norms for regulating access to ecological space, out thinking needs to be sensitive to differences in modes of attaining or enjoying that access; and these need to be connected to the various ways the access can be controlled by human beings through the norms that they enforce.[4]

Let us consider some of the key differences in the ways that human beings can relate to ecological space.

The most basic relation of human beings to ecological space is the kind that is common to all species and involves its direct *use*: as an organism in an immediate biophysical environment, an individual human being directly interacts with ecological functionings to maintain itself in life. This endosomatic use is the most elemental manifestation of the 'human metabolism with nature'. Ecological space can also be used exosomatically by a human being as an intentional agent, consciously, for productive purposes that are not for the immediate sustenance of the human body.[5] Through technologies of all kinds (from the most rudimentary tools to vastly complex configurations of infrastructure) – and in consort with others of our kind (as well as through the secondment of creatures of other kinds) – our bodily power can be greatly amplified so that we are enabled to do all sorts of things that otherwise would be impossible. Such interventions enable us to interact with nature at a distance and to use ecological functionings from various places in various ways. Thus the food we eat and the products we use, however physically intimate they might become, can originate from external metabolic transactions with the natural world in far-flung places.[6]

[4] The present is part of a larger argument that involves distinguishing between norms that have the status of human rights and those that have the status of mere rights of property. (On that distinction, see Hayward 2013b)

[5] On the exosomatic, and archetypically social, utilization of ecological space see the seminal contributions to ecological economics of J. (Hans) B. Opschoor (e.g. Opschoor, 1995).

[6] It is this general idea that is conveyed – at least in part – by the idea of an ecological footprint (Wackernagel and Rees, 1996). The idea of the footprint being two-dimensional, and operationalized through a specific set of

But there is also a further distinct dimension to consider in relation to how ecological space may be used by people in one geographic location that is physically located in another geographical location. This is a distinctly social dimension that does not necessarily imply anything directly to do with use.[7]

Occupation of ecological space can occur without the actual use of any of its constituent functionings. This possibility, however, can only be described from a social perspective, not a purely ecological one, for it depends on shared acceptance of particular social norms. An analogy would be the situation in which an empty theatre seat is said to be occupied: the convention of reserving seats gives sense to what would, under a purely physical description, be a self-contradictory proposition – 'the empty seat is occupied'. When one occupies a physical space in this manner, one retains the option for oneself to use it while excluding others from exercising such an option, as long as they share a commitment to the salient normative expectations. Likewise, occupying ecological space is an idea that does not necessarily represent any facts about the *natural* world; it can be understood as a purely social, *normative*, category, one that only applies when norms with the effect of *property* incidents are recognized as valid.[8] For this reason, though, it is highly relevant when we think about claims of property and right that involve access for some and exclusion for

indicators, themselves based on various assumptions of both factual and evaluative kinds, means it only does capture an aspect of ecological space – rather like a particular photograph can only capture a particular aspect of a scene. But also like a photograph, the footprint analysis can still portray a good deal.

[7] I am thinking of occupation in its normative dimension: about who has the right to use, preserve or destroy the elements of the ecological space in question.

[8] On the idea of property incidents see the seminal contribution of Honoré, 1961.

others.[9] It is a crucial part of understanding how people can acquire and control more ecological space than they could ever actually make use of.[10]

But there is a further kind of relation that is abstracted still further from directly ecological interactions. The acquisition of expanded property rights can bring about the possibility of their affluent owner commanding significant amounts of ecological space without actually occupying them. Such command can be manifest as a power to create, transfer or extinguish rights of exclusion.[11] One *commands* ecological space to the extent that one has the power to make decisions that determine who is entitled to use or occupy ecological space. This power can be – and in an increasingly financialized world typically tends to be – represented by the holding of assets of recognized value, (including money, bonds, promissory notes, and so on, that physically manifest no ecological space at all,) to take possession, through a transaction, either of goods or services that do embody ecological space, or of rights of occupation of ecological space. At any moment, a holder of money wealth could convert the money into holdings that embody actual ecological space. Command of ecological space does not have to take the form of financial wealth, however, and nor do property rights have to be private or individual. It is possible for property rights – and this especially applies to those incidents (and combinations thereof) that come closest to providing full *dominium* with respect to their object – to be held by a people or a sovereign, for instance. Ecological

[9] To take a simple illustration: a fishing community might have exclusive rights over a stretch of coastal water that they and only they are permitted to enter to fish. There is no physical impediment for a stranger to sail in and cast nets; the prohibition is purely normative.

[10] The requisite normative understanding can build on suggestive traditions of conceptual analysis of normative thought from e.g. Ockham ([1332]) to Ostrom (e.g. Schlager and Ostrom, 1992).

[11] In the illustration above I spoke of the normative permissions enjoyed by a fishing community; for those permissions to have legitimacy in the eyes of people beyond the community, they must have a source of authority that transcends the mere will of the community itself. Here our considerations link up with accounts of *territorial* rights. Command of ecological space cannot be equated with a territorial rights or sovereignty, because ecological space is not to be equated with territory, but the normative position is in essentials comparable. For more on these linkages see especially the work of Avery Kolers – e.g. Kolers, 2012.

space, in fact, due to its inherent territorial extension, can, with appropriate caveats, be commanded within a regime of territorial rights too.[12] Here, command of it is manifest not as monetized claims but in the form of ultimate powers of control over rights of physical access to it. In virtue of commanding what Avery Kolers refers to as geospace, a political authority can also control the use of the ecological space that is located within it. So too, of course, in some circumstances, might a warlord. What is clear in all cases, though, is that the very different realities of lives lived in affluence or in poverty make tangible the effects of differential capacities to command ecological space.

It is thus in light of the different kinds of natural and social relation involving ecological space that human beings can have that we must consider the question of what equality with regard to it might mean. We should keep in mind, particularly, that the initial claim of a basic right of access to sufficient ecological space to maintain a minimally decent life would in principle be fulfilled by the simplest forms of use of ecological functionings, but that in practice we typically – because humankind's realized niche so far exceeds what nature would otherwise have bounded us within – rely on exosomatic interactions to leverage far more from nature than it spontaneously makes available to us on a simple evolutionary basis. Where we are today is the result of a distinctive *history* of social relations. If our relations with – and within – ecological space are complex, then we should expect our normative governance of them to be able to accommodate this complexity.

2. Conceptualising Equality in relation to Ecological Space

[12] This is something that Avery Kolers (2012) has highlighted when pointing out that a political regime governing a territory can make various kinds of exploitative 'use' of its ecological resources without actually consuming them.

The just governance of access to ecological space can make reference to a basic right of sufficient access for a minimally decent life for every individual. But even if this is accepted, there are reasons – both normative and conceptual – for questioning why this would imply anything about *equality*. On the one hand, the proposition stated refers to what is *sufficient*, and sufficiency is not the same as equality, so why try and extend the normative argument to support a conclusion that just does not appear likely to follow? In fact, on the other hand, an argument to that effect may even seem conceptually incoherent: if ecological space is not fungible 'stuff', it cannot be shared out like slices of a cake, so there cannot be equal shares in such a sense. The two challenges – normative and conceptual – will be met by framing them as two aspects of the overarching question: *in what sense can different individuals' justified claims on ecological space be regarded as equal?*

The pre-emptive normative challenge, as revealed from an analytical perspective on my argument, is that there are reasons to doubt whether rights to ecological space ought to be *equal* given that their rationale is to assure *sufficient* access for a minimally decent life. Equality and sufficiency are conceptually distinct normative goals, and insofar as ecological space may be deemed a valid concept for normative debate, the concern around it is captured by sufficiency rather than equality. This argument, which has been advanced, for instance, by Edward Page (2007) and Simon Caney (2012), can appeal to a statement of conceptual logic as its first premise:

1. Equality does not mean the same as sufficiency.

It is evident that two individuals might each have an equal share of something but that does not mean that the share of both, or either, is sufficient (e.g. to meet their needs, interests, or whatever other criterion might define this parameter). It therefore follows, for any practical goal, and quite generally:

2. Pursuit of sufficiency for each individual in a distributive scheme does not (necessarily) mean pursuit of equality among all the individuals.

A policy, for instance, that is aimed to secure for all individuals a supply of some good that is sufficient to their individual needs would not necessarily aim to give an equal amount to each – since individual needs may vary. The parenthetical qualification in (2) is required, of course, because in practice the material means deployed in the pursuit of logically distinct objectives might sometimes coincide: it would be false to assert without qualification that the goal of sufficiency is in some necessary way materially incompatible with any goal of equality.

Critics can then claim that such general reasoning would apply also to the particular case of ecological space:

3. An equal share of ecological space is not necessarily the same as a sufficient share of ecological space.

And therefore:

4. Aiming to secure individuals the enjoyment of a sufficient share of ecological space does not necessarily mean aiming to secure each an equal share.

Granting that this argument would appear, in its own terms, to be sound, what I want to consider more closely is whether and how it applies as a criticism of the argument I am here advancing.

Let us first make more fully explicit which claims the critical argument would pre-empt while also making clear what scope it leaves open for other kinds of egalitarian argument. The notion of equality that is quite evidently pre-empted is one conceptualised in terms such that some given quantity of some good would be matched against the entitlements of individuals to whom it must be distributed. Call this the equal slices of cake conception.

There are evident reasons why, on this conception of equality, its aims need not coincide with those of sufficiency. Edward Page, for instance, illustrates two kinds of reason to doubt whether rights to ecological space ought to be *equal.* One is that '[t]hose living in colder climates, for example, may require more ecological space than others to maintain a decent quality of life', and the other is that 'a person's ecological footprint has no connection to disadvantages grounded in conditions such as chronic pain, depression or generalised anxiety that cannot always be traced to environmental problems.' (Page 2007, 461) We could also anticipate a wider range of variations between different individuals in different circumstances. Thus Simon Caney, endorsing Page's discussion, sums up the point by suggesting that it is false to suppose people have equal basic needs regarding ecological space (Caney, 2012: 286n70).

My position, however, is that we can say for sure neither that it is false nor that it is true that people have equal basic needs regarding ecological space. That is because on both sides of the putative equation – both in describing what needs a person has, and in describing what objects or processes would satisfy them – we encounter complex and qualitatively different phenomena that could only arbitrarily be commensurated and thereby regarded as either 'equal' or otherwise. The overarching difficulty is that there is an indefinitely wide range of ways in which different configurations of ecological space might satisfy people's basic needs.[13] Thus the variations Page and Caney point to as objections to the case for equality should more appropriately be viewed as illustrations of why equality is simply not a

[13] To illustrate, consider Page's indicative criteria for showing people to have different needs for ecological space. He suggests that a person in a cold climate might require more fuel to be burned for winter warmth than an African does – a practice that represents greater use of ecological space. That might be so, but we can also observe that there are Arctic peoples, for example, who have largely managed without burning fuel. So if, say, Scandinavians quite reasonably feel a need to burn wood for warmth this can be regarded as a (culturally embedded) lifestyle choice. The need was produced as a response to living in a forested environment. My general point here is that the whole set of ecological needs of any individual, in any location, in any climate, is going to be so qualitatively complex that attempts to say whether one individual needs more than another are necessarily going to raise more questions than they answer.

fully intelligible goal, if expressed in the terms they have in mind.[14] If we want to talk about equality in relation to ecological space, in short, this is not a plausible way of doing it – i.e. proceeding from the presumption of a one-to-one relation between uniformly constituted humans and universally similar ecological means to satisfying them.

So is there another way of conceptualizing equality in relation to ecological space that can allow us to avoid such problems? I want to suggest there is. It involves a methodologically holistic approach to understanding people's needs in relation to ecological space and a resultant view of equality in relation to ecological space that has the character of an overarching normative target rather than any sort of analogue of an accountant's balance sheet. We need to appreciate that due to the nature of ecological space and our needs with respect to it, neither can be well captured by means of an investigation whose assumptions and framing are those of methodological individualism.

Knowledge of what is 'enough' ecological space for human beings is not achievable with any great precision or certainty at an individual level. Methodological difficulties for that approach apply on the sides of both 'demand' and 'supply'. On the demand side, human needs are seldom if ever entirely individualized because, normally, they are culturally, socially and even technologically inflected (if not, indeed, *constructed*); on the supply side, the way in which the world supports organisms of any kind, humans included, is extremely complex, with ecological processes operating to provide that support in myriad different ways. More than this, ecological 'supply' and 'demand' do not develop independently of each other. There is an inherently holistic aspect to this.

[14] Furthermore, as Rafael Ziegler (2007) has rightly pointed out, we should not think of ecological space as one single homogeneous space, or we should at least recognize that the ecological functionings that occupy and constitute that space are certainly not homogeneous. Given that I have said elsewhere that as a point of methodological principle, one portion of ecological space is as good as another, I need to clarify here. How that point should be understood is in terms of *sufficient* access to ecological space in one context necessarily being 'as good' as in any other; the criteria satisfied are the human needs for it; I am not implying a physical description of homogeneous things.

Let us consider the purely ecological dimension of this matter before then incorporating also the social and institutional dimension. Ecological phenomena are mutually constituting: every organism is also the environment, or part of the environment, for other organisms. The needs of an individual organism can normally only be fulfilled by the individual being part of a population that successfully realizes a niche in practice. What an organism *needs* in reality depends to some extent on what its immediate predecessors have been able to *get*, when what they succeeded in getting has enabled reproduction to occur. Because of this necessary holism, there is also a methodological point to note about identifying needs and, therefore, criteria of sufficiency. This point can be brought out by considering how we might know if a nonhuman organism has enough ecological space. To find out, the most appropriate method of inquiry would not involve first removing it from its environment. Rather, it would involve empirical investigation of the realized niche available to the particular population the organism is part of. Ecology is about complex relationships, and their study has to allow them to operate as they do, rather than arbitrarily curtail some to focus analytical intention on others. Thus a scientific ecologist would observe whether a population of the organism is maintained over time in a given habitat; this means determining that members of the population are not wiped out faster than they reproduce due to lack of nutrients or other threats to their survival like disease or predation. In the nonhuman case, then, the question is not a simple one of looking at individual organisms and asking whether each has 'enough' of this or that; what is functional for an individual's survival depends on how others of its own, and other, kinds fare. There is inherent complexity in ecological relationships, and it would not even make much sense to try and figure out what one individual organism alone might need by way of ecological space; nor would it make sense to think of the constituent elements needed by any organism as in some sense convertible to a quantity such that we could know when one organism's needs 'equalled' those of another.

Let us turn then to the human case. The methodological point retains its relevance, I claim, since to imagine that matters might be simpler for human organisms would be to take an implausibly individualistic, anti-naturalist and ahistorical view of them. In the human case, in fact, where we must consider not only its endosomatic use but also the various ways ecological space can be exosmatically used, as well as occupied and commanded, such indeterminacies become unimaginably greater. There is more dramatic variability between human beings that arises from socio-historical developments (and is crystalized in normative regimes of rights of control and access) than ever does from individuals' natural endowments. Our relations with ecological space are highly mediated by technology and social organisation. Thus, for instance, the ecological space available to the 1.6 million inhabitants of the small island of Manhattan is at present greater than that available to many inhabitants of much more physically spacious and sparsely populated regions of the world. An individual human's effective access to ecological space – even its use, let alone its occupation or command – cannot be reduced to or equated with their organic territorial environment. To measure what ecological space, or how much of it, any particular individual 'has', therefore, is a rather abstract and imponderable sort of question. To trace fully all the ecological space used, occupied or commanded by any given individual in Manhattan would probably be an unrealistic task. Similarly it would involve many imponderables to try and specify 'how much' ecological space an individual needs. The idea that an individual human may have identifiable ecological needs that can somehow be measured and contrasted with those of other representative human individuals is an abstraction too far.

What we can be much more definite about is when individuals or populations of human beings have *insufficient* ecological space. This has certain implications for the conceptualisation of equality: if *everyone* has a right of access to sufficient, then this is as much to say that they equally have the right. An equal right of access to sufficient ecological

space, being a basic human right, implies an equal right not to be deprived of sufficient, to be protected in the enjoyment of sufficient, and positively assisted in the event of deprivation; and it implies the corresponding duties on others.[15] So when we speak about equality in relation to claims of access to ecological space, it is not the quanta or qualities of ecological space that are specified as sufficient or equalised; what is equal is the claim of right to enjoy sufficient access, however that might be quantified or described. What is equal in the sense of identical for all is the right not to have to suffer inadequate access.

That, then, is the normative concept stated. Now we turn to the normative argument being advanced with it.

3. Formulating the argument for equality as a normative goal

Equality in this argument is not conceptualized in opposition to sufficiency; rather, the claim is that sufficiency under present circumstances implies equality. The moral case for the proposal, stated at its simplest, is that until everyone has sufficient – which means that the conditions of radical inequality will have been eliminated, and on an ecologically sustainable basis – there can be no application for any principle that might otherwise be invoked as a justification for inequality. The case for equality is premised on, and responds to, consideration of the concrete circumstances of global justice today. Insufficient access to ecological space is a constitutive factor in global poverty. To remedy this has to be a prime objective of global justice, one that takes moral precedence over concerns about how to distribute what may be surplus to sufficiency, assuming, indeed, that there is scope for such further distribution at all.

[15] This is an adaptation of reasoning familiar from Henry Shue (1980).

What the ecological perspective impresses on us is that we live on a crowded planet. The planet's biosphere is crowded in the sense that the demands placed by the world's human population on its ecological space are such that some members do not have adequate for their health and well-being. This problem, as was noted at the outset, has two major aspects. One is the finitude of the earth's aggregate biophysical capacity such that can support a finite amount of organisms in general and human organisms in particular. The other aspect of the problem is that some humans make vastly more use of the planet's ecological space than others do. We have reached circumstances, globally, that manifest a problem of both ecological overshoot and radical inequality.

In this circumstance, there are two overarching normative imperatives: if global ecological overshoot and radical inequality define the problem, then necessary parts of the solution are contraction and convergence in the global use of ecological space. The elimination of ecological overload, on the one hand, implies there must be a reduction in aggregate demands made on ecological functionings. The elimination of radical inequality, on the other hand, implies some form of redistribution of resources – relative to the current situation – whereby those who occupy or command more than they need are required to cede from that surplus something to those who have access to less than they need.

The goal can be regarded as a single one, with a dual aspect, for there is a practical need to conceptualise the implications of their joint necessity – a conceptualisation that is thus in a significant sense holistic. We have to avoid the way of thinking that holds that the globally advantaged can 'compensate' the globally disadvantaged without really ceding any of their advantage. This way of thinking is not adequate to the problem as I believe we should understand it. We need to understand, in particular, that if wealth represents access, occupation or command of ecological space, the only way to redistribute wealth is to redistribute access, occupation or command of ecological space. If mooted compensation

takes monetary form, then it either represents those real relations regarding ecological space or it does not. (I make this point because the ways in which monetary transactions can obfuscate real relations are legion, and it is always worth at some point asking what realities are involved when money features in an argument about justice of distributions.) Here I just want to emphasise the general point, that it is not satisfactory to 'solve' a problem by simply shifting it. Ecological overshoot and radical inequality are aspects of one big problem in that the measures typically advocated to address the one tend to exacerbate rather than alleviate the other. Strategies for enabling the poor to become better off usually rest on the default assumption that aggregate income and wealth have to increase, but the economic growth relied on typically tends to exacerbate the problem of ecological overshoot; on the other hand, attempts to reduce resource use and environmental impacts can only further exacerbate the ecological marginalisation of the worst off which is the most basic manifestation of radical inequality.

Now there is a clear sense in which pursuit of the dual goal of contraction and convergence implies a *prima facie,* but non-conclusive, case for equality with respect to the use of ecological space. If everyone is entitled to enough (as affirmation of the basic right asserts), and if fulfilment of this entitlement takes priority over any other distributive principle (as the status of a basic right implies), then no one is entitled to more than enough (at least until everyone has enough); meanwhile, as long as everyone is entitled to enough and no one is entitled to more than enough, then there is a *prima facie* case for saying everyone is entitled to equal. However, that case depends on the assumption that what is enough for each is equal to what is enough for every other, and since that assumption cannot simply be granted, the argument as stated is not conclusive. In what follows, however, I shall suggest that it can be given a more conclusive formulation.

The argument to be developed here for 'Ecospace Egalitarianism', as it has been dubbed, is a principled version of a pragmatic consideration I have previously offered for taking the demands of sufficiency to require equality under the circumstances that prevail today. That pragmatic consideration, essentially, was that since it is doubtful whether there would be any surplus to distribute if everyone on the planet were secured sufficiency (under conditions of ecological overload), it is accordingly doubtful, too, 'whether the philosophical distinction between equality and sufficiency has any pressing practical implications in this context.' (Hayward 2007, 450n22) Here I shall develop a more principled version of that pragmatic argument.

Central to the argument is the claim that ensuring everyone has *enough* ecological space is a requirement that takes (something like) lexical priority over any other principle relating to the distribution of access to ecological space. What this means is that, under conditions of radical inequality and ecological overshoot, no other principle of global distributive justice can be justified for allocation of resources among those who have more than sufficient. If there are some possible justifications for such principles, these do not stem from or apply to *global* justice.

Equality is the goal in the sense of blocking any principle that would support inequalities; it blocks, in particular, any principle intended to distribute a *surplus* of resources that co-opt ecological space. Yet there are some theorists, whether sympathetic to the ecological perspective (Peeters et al, 2014) or less so (Caney, 2012; Page, 2007), who suggest that even if we care about the distribution of sufficient ecological space, we should have a view to principles for the distribution of a surplus. Before responding to this suggestion, I should first just differentiate it from another that is also sometimes made. The other suggestion is that there are issues of justice or normative concern involving all sorts of goods that individuals and societies may pursue that cannot be reduced to and do not significantly depend on access to ecological space or its distribution. In response I would simply point

out that insofar as the situation thus described does indeed pertain, it will occasion no particular challenge to my argument. For it is only insofar as issues *do* give rise to significant questions about resource distribution of some kind, and thus in some – even indirect and complex way – about ecological space too, that they fall under the terms of my argument. Where there might be disagreement is with regard to judgements about matters of fact and explanation.[16]

The kind of suggestion I resist, then, is that which proposes principles for the distribution of a surplus to the resources that would need to be redistributed in order for everyone, globally, to have sufficient access to ecological space for a minimally decent life. My argument is that we cannot morally even entertain the idea of a surplus as long as radical inequality persists.[17] Indeed, I shall further argue, we cannot even conceptualize what principles of justice might govern the distribution of a surplus before sufficiency for all has been achieved.

We can distinguish three distinct sorts of context in which it might be argued against me that discussion of principles for the distribution of a surplus is morally defensible and even

[16] In the case of Page, for instance, a concern about claims relating to ecological space is dismissed because 'it seems to share the weakness of other resourcist currencies in that it is too indirectly connected to human well-being to be a coherent focus of our distributive concerns. Having a greater (or lesser) impact on the environment does not, for example, translate particularly closely into greater (or lesser) levels of well-being.' (Page, 2007: 461) In Page's view, then, we are presented with discrete sets of problems, some regarding resources, some regarding the environment, and some regarding human well-being. To articulate such a compartmentalised view is not to criticize the position I have advocated but simply to disregard it. Caney, by contrast, has grasped that my position is, in his terms, 'strongly integrationist' and his reasons for declining to accept the ecological framing I advocate are based, at least in part, on some misunderstandings that I seek to diagnose later in the present discussion.

[17] In case it is helpful in appreciating the moral force of my argument I share a stark analogy. There can be no just or fair distribution of the food at a feast when the food has to be shared exclusively among the guests while there are hungry people outside who are entirely excluded from access to it; the more food there is, the less we should ask questions about how those with full bellies should distribute the surplus amongst themselves, and the more we should feel morally disturbed by the very posing of such a question. The sorts of question we should ask is how is it that some people are in a position to live so well and others are destitute? How did the house come to be built, how did some come to be invited and some excluded, and where, actually, did the food come from?

necessary. One is that of a contemporary well-ordered society; a second is a society in the process of development; the third is that of an envisaged future in which all societies enjoy the benefits of development.

My first contextualized response is to say that when a given society has securely assured basic rights for its citizens, its focus with regard to matters of justice can then quite reasonably extend to less basic imperatives. Within a scheme of social justice in a well-ordered and affluent democratic state, there are all sorts of matters of social policy that do not directly concern ecological space. Dealing with them will require drawing on normative principles beyond that of a right to adequate ecological space. Nevertheless, insofar as resource issues are relevant, these necessarily have some, however apparently indirect, connection to ecological space. What I would therefore emphasise is that any distributive principles worked out in conjunction with such issues have a validity of purely *domestic* scope. In circumstances where there are radical inequalities globally, no distribution within an affluent nation-state can be justified by reference to principles of global justice when that distribution involves manifest surpluses of ecological space as used, occupied or commanded. Therefore, any theorizing about principles for distributing a surplus other than to the victims of radical inequality cannot be directed to what *global* justice requires. So we can grant that there can be a need for other principles than equality of ecological space to govern the affairs of the affluent; but we can also straightforwardly maintain that important as these may be to the affluent, they have no relevance to a theory of *global* justice. For if a locally just distribution is premised on a globally unjust distribution then the former is *only* just from the restricted local perspective.

A methodological point worth is registering here, particularly in view of the familiar argument amongst cosmopolitans that global justice can or should be conceptualized in terms of domestic social justice writ large. This has been an influential line of argument since Charles Beitz's (1979) seminal statement of a case for 'extending' Rawls's domestic

principles to the global level. Independently of statist or nationalist responses to that line of argument, there is an objection to it that flows from within cosmopolitanism itself. Cosmopolitans are – or ought in all consistency to be - committed to not thinking of domestic questions in isolation and abstraction from global questions of morally relevant kinds. If what happens within a nation-state is in part determined by, and in turn contributes to determining, how socio-historical relations develop at international and global levels, as cosmopolitans generally accept when they reject explanatory nationalism or statism, then how just is any distribution within such a nation-state can only be ascertained by making due reference to relations globally. From this it would follow that rather than global justice being understood as an extension of principles arrived at domestically, what counts as justice domestically should be inherently conditioned by an account of what justice requires globally. At present, the reference to universal human rights in theories of justice fulfills that function of a global reference, but it generally does so in an abstract way that leaves moral questions about our position in the scheme of global inequalities as purely academic ones. The idea that we should examine the realities of global political economy and our part within them, as an inherent aspect of theorizing about justice, has been touched on by some, like Thomas Pogge (e.g. 2002), but not pushed to its logical conclusion (as I argued in Hayward, 2008).[18]

Questions about when and how to distinguish domestic justice from global justice arise, too, in relation to the second kind of context that might be thought to generate a justification for departures from equality. This is the context where certain populations are in the process of

[18] The fact that Pogge merely gestures towards the need to challenge the explanatory paradigm of liberal political theory without seriously rethinking its assumptions allows him also to assume that radical inequality is amenable to eradication by somewhat modest means while business, for the most part, continues as usual. My own assumption – to be explained in the text here – is that we will not know exactly what it takes to eradicate inequality – i.e. to completely and decisively *uproot* it – in advance of actually doing so. For we have good reason to suppose that achieving it will require a radical alteration in the normative framing of international political economy and a transformation of its institutional structure.

developing out of poverty. As this occurs, it can be necessary to start making not only judgements about satisfaction of sufficiency but also more fine-grained discriminations regarding distributions. This could be so not only for the internal benefit of the newly flourishing societies, but also in order to know whether a society has in fact reached a position of sufficiency or not, and therefore where it stands in relation to global redistributive obligations. For instance, those with a new, marginal and possibly tenuous grip on sufficiency are surely in a different position from those with a substantial established surplus. We need to be able to talk about such differences, and that means saying at least something about what justice requires regarding the surplus. My response to the question of principle here, though, is simple: what justice requires of the surplus up to the point that radical inequalities are overcoming is 100% redistribution. Any practical difficulty concerns identifying how well people are doing, not what they ought to do once we know that. A further important point to note in this connection is that populations are seldom homogeneous: some within them will be rich and some poor. The criterion of sufficiency, as that of a human right, is a test that requires all individuals to enjoy it; so while a poor society is undergoing development that benefits part of its population only, the principle of sufficiency retains lexical priority and no other principle is justified as a principle of global justice. Global justice may require redistribution within the borders of a state as much as across them.

The third context for thinking what justice might require over and above universally sufficient access to ecological space is that of a future in which universally sufficient access to ecological space has been secured. It can be argued that if we are to be talking about normative goals – as my argument is – then we need to understand fully what goals we have in mind. In this spirit, other theorists develop arguments concerning the just distribution of access to goods – which can be or are expressly conceptualized in terms of ecological space – that apply to a surplus left after everyone is assured sufficient. It might be supposed that

such theorizing, even if it is somewhat moot at present according to my position, can at worst do no harm; and if I am wrong, then it will have a genuinely useful purpose.

My argument, however, is that such theorizing could in fact do harm, and is anyway misguided. To show this, I shall now state a deeper objection to advocating any principle other than equality in relation to the distribution of resources. This is that we will not know what a world without radical inequality even looks like until we achieve it; and since we do not know this, we cannot know what a world with a realized surplus might look like; and if we do not know this, then we really do not have enough contextual information to decide what justice might then require.

What do I mean by saying we will not know what equality even looks like? To see this, let us reflect a moment on my initial response regarding the indeterminacy of 'equality' with respect to individuals' respective needs. The point of equalizing access to ecological space is not grasped by thinking of equality on the model of sharing out equal slices of cake. It is about setting the institutional conditions under which radical inequality and global ecological overshoot can both be impeded. I do not think anyone can claim to know what conditions will need to be in place for these goals to have been achieved.[19] That is one of the reasons I think that the influential argument of Thomas Pogge (2002), for instance, is unduly optimistic about the prospects of eradicating global poverty by means of some relatively modest institutional reforms (see Hayward 2005; 2008; 2009).

[19] It might be replied that I overstate the difficulties or underestimate the power of our knowledge. My rejoinder would be that an opposing view may underestimate the extent of future change - not only that which would be required to fulfill our normative goals but also those that which will shape the unchosen contexts of humans' future activities. This disagreement clearly cannot be settled by further arguing about the collective human capacity to predict and control the future. The further thought I would add, though, is that whatever humanity as a whole may have a capacity for, the primary moral question concerns the structural inequalities between different people and peoples. To deal with this means doing something, and at present it is not evident who exactly is going to do what.

An objection to my argument might be anticipated from those who do not think that what justice requires is a matter that depends on what institutions happen to be available to implement it. Simon Caney, for instance, thinks we can reason about what justice requires even in circumstances where implementation of it is impossible. His is a 'non-relational' conception of justice. The only point I would make here is that whatever else might be said for a non-relational conception of justice, we cannot say that it is a conception of *global* justice in any determinate sense. Non-relational justice is not global, for 'global' does have a reference, namely, the globe that is constituted by the planet's biosphere; that global biosphere itself is constituted by the real ecological relations within it that maintain it in life and support human beings in everything they do; and those relations are held in place as normative orders by real social institutions. So while ideas of justice that are unconnected with issues of access to ecological space may be discussed in whatever way a theorist chooses, my argument is that such discussions would lack purchase on precisely the problems we should be addressing as the most basic ones of global justice.

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