

**Climate Change and Norman Daniels' Theory of Just Health: An Essay on
Basic Needs**

by

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Introduction¹

John Rawls formulated his theory of justice for a democratic society under reasonable resource constraints, that is, a society in a state of “moderate scarcity”. For the purposes of simplicity, he presupposed a society of individuals who are in full health over the course of a normal life-span. However, in the real world, the state of moderate scarcity is liable to fail and human illness is a reality for every society. In *Just Health: Meeting Health Needs Fairly*, Norman Daniels incorporates into Rawls’ account of justice the idea that citizens can cease to function normally because of ill-health. By doing this he hopes to go some way to establishing what citizens of liberal-egalitarian societies owe one another, as a matter of justice, in the protection and promotion of population health.² Rawls’ idealization of society as consistently in a state of moderate scarcity is unquestioned by Daniels and thus remains as a presupposition in his application of Rawls’ theory of justice to the issue of health. In the first part of this essay, my aim is to understand the consequences for Daniels’ theory of just health when we incorporate into Rawls’ understanding of justice the idea that the condition of moderate scarcity can fail. Some of the primary threats to the condition of moderate scarcity are environmental degradation, depletion of crucial energy resources and demographic shifts.³ For the purposes of this paper, I focus my attention on one kind of environmental degradation that is becoming an increasingly serious threat to the state of moderate scarcity in many societies, namely global warming or climate change.⁴ This brings me to the second part of the essay, which aims to demonstrate how a reformulated version of Daniels’ conception of just health can help to justify action on climate change and guide climate policy within liberal-egalitarian societies. I now proceed to part one.

¹ An earlier draft of this paper was presented at the KU Leuven/Louvain La Neuve joint seminar on Ethics and Public Policy in April 2010. I thank organisers Antoon Vandavelde and Phillippe Van Parijs, not to mention the participants, for their stimulating discussion and valuable insights.

² N. Daniels. 2008. *Just Health: Meeting Health Needs Fairly*, 1, 11. NY: Cambridge University Press. Henceforth, all references to this work will be made in the main body of the text with the page number only.

³ To be more concrete, environmental degradation could make food, water and other essential resources scarce; rapid depletion of energy resources, like oil, on which the global economy currently depends could undermine the provision of essential goods and services; and demographic shifts, such as unsustainable population growth or global ageing, could push essential goods into scarcity. One could add to the list of threats to moderate scarcity things like war and catastrophic events.

⁴ I use the term global warming to refer to the increase of average temperatures at the Earth’s surface, which today is largely caused by human activities that involve greenhouse gas emissions. The primary consequence of global warming is climate change, which is a term I use to refer to the way in which weather patterns are shifting on a global level due to rising temperatures.

I

My first aim in this paper is to assess the impact on Daniels' theory of just health when we incorporate into Rawls' understanding of justice the idea that the condition of moderate scarcity can collapse. I begin by presenting an outline of Daniel's account of just health. This includes some critical remarks which point to the vagueness of his thesis on the special moral importance of health, while positing that health should be reconsidered for inclusion in Rawls' list of primary goods. Following this, I expose Daniels' failure to account for the fact that the state of moderate scarcity on which health depends is environmentally determined. Arguing that Daniels has a fundamental interest in protecting the state of moderate scarcity, I go on to investigate how a liberal-egalitarian theory of justice could deal with threats, like climate change, to the state of moderate scarcity. This discussion hinges on a reading of Rawls that advocates a generation-neutral principle of basic needs that is lexically prior to his more familiar principles of justice. Having incorporated into Rawls' theory of justice the idea that the condition of moderate scarcity can breakdown, I reformulate Daniels' account of just health to accommodate for the resulting shift in Rawls' principles of justice. Specifically, I return to my earlier argument that health should be thought of as a primary good, adding that Rawls' principle of basic needs makes health a good of even greater moral importance than Daniels himself admits. After attempting to achieve my first aim in this way, I then move on to the second part of this essay which is to show how my reformulation of Daniels' theory has relevance for the issue of climate change.

Daniels on Just Health

Three Focal Questions

I begin my outline of Daniel's conception of just health with his definitions of health, health needs and healthcare. Health he identifies as 'the absence of pathology', that is, when an individual can be said to function as a member of his species normally functions (37). Importantly, for Daniels, health is a natural good that is largely determined by social goods (13). That is to say, he recognises that the health of individual citizens generally depends on how the goods of income, education, safe working conditions, etc. are distributed in a society. For this reason, he suggests that any theory of just health must concern itself with the *social determinants of health* and how they are distributed. Health needs, Daniels suggests, are those things that we

require to maintain normal species functioning over the course of a lifetime (37). In this category of needs he emphasises healthcare, as distinct from the social determinants of health, which he understands as medical services and public health measures aimed at individual and population health (12).⁵ Daniels' strategy for composing a complete theory of what we owe one another, as a matter of justice, in the protection and promotion of population health is to divide his inquiry into three focal questions: 1) Is health and therefore healthcare and the social determinants of health of *special* moral importance? 2) When are health inequalities unjust? 3) How can we meet health needs fairly when we can't meet them all? (11). I briefly discuss each of these in turn.

Addressing the first focal question, Daniels insists that people tend to attribute special moral importance to health itself and thereby those factors that affect health (77). The reason, he suggests, is that meeting health needs significantly contributes to normal species functioning and thereby helps to protect the 'normal opportunity range'. This he defines as the spectrum of life plans that citizens can reasonably expect to follow, given their talents and skills and the society within which they find themselves (43). He believes that citizens have a basic interest in protecting their health insofar as it maintains their capacity to pursue life plans within the normal opportunity range.⁶ In an effort to justify the special moral status generally attributed to meeting health needs, Daniels turns to Rawls' theory of justice, focusing on the principle of fair equality of opportunity. According to this principle, justice requires protecting individual access to the normal opportunity range by ensuring things like equal access to education, jobs and offices (52-53). Daniels proposes extending this principle to include institutions that protect normal functioning or health and thus opportunity (57). Put differently, Daniels sees health, and indeed those factors that effect health, to be of special moral importance for a theory of justice because they protect people's fair shares of the normal opportunity range.

Daniels states his solution to the second focal question as follows: 'a health inequality is an inequity if it is the result of an unjust distribution of the socially controllable factors affecting population health and its distribution' (101). Formulated differently, he holds that health

⁵ Public health services, for Daniels, concern themselves with preventative health measures such as food protection, waste disposal and public information. Medical services, on the other hand, provide rehabilitative services that restore individuals as close as possible to a state of normal species functioning (62).

⁶ Elsewhere Daniels stresses that we must avoid misunderstanding this claim to mean that people should have as many opportunities as possible, according to their talents and skills. Rather, he insists that protecting the normal opportunity range means that individuals should have those opportunities they would have if they were in good health in that context [N. Daniels. 2009. 'Just Health: Replies and Further Thoughts'. *Journal of Medical Ethics* 35: 36-41, 37].

inequalities are unjust to the extent that the social determinants of health are distributed in a way that does not conform to Rawls' principles of justice. Let me explain further. Appealing to the basic findings of social epidemiology, Daniels claims that we find a social gradient of health in every society that operates right across the socioeconomic spectrum (83).⁷ What this means, he relates, is that population health depends not only on levels of income but also on how individuals fare with regard to social organization and government policies (84).⁸ In light of this, Daniels insists that it is only by achieving social justice that there can be justice in health. In this regard, he pays special attention to Rawls' difference principle which states that justice permits inequalities in social organisation and government policies only insofar as they make the worst-off groups in society as well-off as possible (93).⁹ By permitting social inequalities, Daniels recognises that there will be inequalities in health across society. However, he maintains that so long as such inequalities are to the benefit of the worst-off they are not unjust.

The third focal question proposed by Daniels arises because of resource constraints. Although he emphasises the special moral importance of health and its determinants, he recognises that these are not the only goods that we value or are of special moral importance for a liberal-egalitarian theory of justice (22). Basic liberties, for instance, are special moral values central to Rawls' theory of justice. Since there are always competing values in a society, Daniels avers that there is a consistent limitation on available resources for meeting health needs (104). This leads him to outline what he considers to be a fair deliberative process that can supplement general principles of justice in allocating the available resources to meet health needs. For the purposes of this essay, it will suffice to summarise that Daniels believes such a fair process will

⁷ One intriguing example to support this contention comes from the Whitehall Study, a study conducted on British civil servants over the course of their careers which revealed that life expectancy improved at the higher echelons of the civil service. As Daniels suggests, this indicates that the degree of control that one has over one's work is related to stress and thereby has an impact on health (88).

⁸ In 1995, for instance, Costa Rica had a similar GNP to Iraq but had a life expectancy that was over 17 years greater. In 2005, to take another example, Greece had an average income of US\$34,000 and a life expectancy of 76.9 years while Cuba's had a life expectancy of 76.5 years despite an average income of US\$10,000 [M. Marmot. 2005. 'Social Determinants of Health Inequalities'. *Lancet* 365: 1099-1104, 1100]. What such examples show, for Daniels, is that income levels are of limited importance when it comes to determining the health of a population. He argues that levels of population health are largely explicable by the degree of justice achieved by the social organisation and government policies of these countries (83-4). In particular, he underlines the importance of investing in human capital (e.g. education) and public health generally (87-8) when it comes to determining population health.

⁹ Inequalities can be of benefit to the worst-off in society, for Rawls, because such inequalities can make the socioeconomic pie greater than it would otherwise have been. In other words, on Rawls' account, unequal shares of a large pie are better than equal shares of a small pie so long as the larger pie is divided in such a way that the worst-off get more than they otherwise would from equal shares of the small pie (92-3).

have four primary features: public transparency, reasonableness, a system for revising and appealing decisions, and a regulative body to ensure that the deliberative process remains fair (118-19). According to Daniels, in answering these three focal questions he has established a theory of what we owe each other when it comes to health. Simply put, he contends that we owe each other various actions (like designing institutions and distributing important goods in particular ways), both inside and outside the health sector that help to protect normal functioning and therefore opportunity (146). Furthermore, he insists that decisions on how to meet health needs fairly must be the result of a fair deliberative process (147).

Some Critical Remarks

For the purposes of this paper, I limit my critical remarks on the coherency of Daniels' theory of just health to his thesis on the special moral status of health, health-care and the social determinants of health. By criticising this thesis I hope to first demonstrate its vagueness; and second, to suggest with James Wilson how it might be clarified. Summarily, my first criticism consists in the observation that Daniels fails to specify what it means for health and those factors affecting health to be special. In the absence of such an account, Shlomi Segall contends that referring to some good as special is to take it in "isolation" from all other goods.¹⁰ For example, Segall understands the claim that healthcare is of special moral importance to mean that however other goods are distributed in a given society everyone should have equal access to healthcare.¹¹ Although this interpretation of Daniels' idea of specialness might work if he was to attach it only to the idea of healthcare, it fails for the following two reasons. First, he considers not simply healthcare but also health and its social determinants to be special. And second, he understands that health is not the only good of special moral importance for a liberal-egalitarian theory of justice. Given these features of Daniels' theory, it is clear that he sees the role of health, healthcare and its social determinants to be part of an integrated (non-isolationist) theory of justice where different goods must be weighted against one another in terms of their relative moral importance. The central problem with Daniels' account is that he has offered us little guidance as to just how special health and those factors affecting health are over and against other goods in a liberal-egalitarian theory of justice – goods, like education, that are special

¹⁰ S. Segall. 2007. 'Is Health Care (Still) Special?' *Journal of Political Philosophy* 15 (3): 342-61, 348.

¹¹ *Ibid.*

regardless of their impact on health. One thing we can deduce is that Daniels is necessarily committed to the view that health is less special than the basic liberties outlined by Rawls since he argues for the specialness of health on the fair equality of opportunity principle, which is lexically posterior to the principle of equal basic liberties. Beyond this, however, Daniels' gives us few clues as to how health, healthcare and the social determinants of health weigh against other socially important goods in Rawls' theory of justice.¹² Lacking such a picture, it is hard to attach a great deal of meaning to Daniels' thesis on the specialness of health.

This brings me to a second critical point. Like me, Wilson views Daniels' thesis on the special moral importance of health as vague. Wilson believes that if Daniels' is really committed to the view that health should be given a special place within a theory of justice, then he should make the stronger claim that health is special because it is – like opportunity, basic liberties, income and wealth, etc. – a social primary good or that kind of good which is integral to Rawls' theory of justice.¹³ To change the expression, by making health a social primary good to be pursued for its own sake and not simply because it protects a social primary good, namely opportunity, Wilson holds that the idea of health being special will have greater meaning. This runs counter to Rawls' contention that human health, albeit of fundamental importance for a well-functioning society, is a *natural* primary good since it cannot be socially distributed.¹⁴ As Wilson and others correctly point out, research on the social determinants of health since the publication of *A Theory of Justice* have demonstrated that health can be socially distributed to a very large extent and can therefore be considered a social good.¹⁵ As such, there is apparently no reason why Rawls would object to health being included in a list of social primary goods.¹⁶

¹² It might be argued that it is no failure on Daniels' part for neglecting to explain the precise sense in which health is special. Rawls, for instance, gives few indications of how the basic liberties might be weighed against one another. As he explains, to provide such an account would stand in the way of individual societies flexibly adapting the principles of justice to their socio-historical circumstances [J. Rawls. 2003. *A Theory of Justice Revised Edition*, 54. Cambridge MA: Harvard University Press]. Similarly, it might be claimed that Daniels' is under no theoretical obligation to suggest how health as a good might be weighted against others. However, unlike Rawls, Daniels is insisting on a specialness thesis which is a claim that must be more thoroughly explained and justified if it is to have much meaning.

¹³ J. Wilson. 2009. 'Not so special after all? Daniels and the Social Determinants of Health'. *Journal of Medical Ethics* 35: 3-6, 5.

¹⁴ J. Rawls. *A Theory of Justice Revised Edition*, 54

¹⁵ J. Wilson. 'Not so special after all? Daniels and the Social Determinants of Health'. *Journal of Medical Ethics*, 5; R. Manning. 1988. 'Environmental Ethics and John Rawls' Theory of Justice'. *Environmental Ethics* 3 (2): 155-66, 159; D. P. Thero. 1995. 'Rawls and Environmental Ethics: A Critical Examination of the Literature', *Environmental Ethics* 17 (1): 93-106, 106.

¹⁶ Daniel P. Thero makes a fair point when he claims that despite the influence of social factors, certain aspects of health remain as simply natural contingencies. As such, he briefly states that appropriate aspects of health should be

Daniels, however, rejects such a move on the grounds that the greater the list of primary goods 1) the harder it will be to maintain amongst citizens a shared political conception (overlapping consensus) of the needs of the citizen and 2) the more difficult it will be to work out how to appropriately weigh or index goods so as to determine who is worst-off in society (56-57). Wilson correctly deems these arguments, stated with surprising brevity in *Just Health*, unconvincing. In the first instance, he avers that adding health to the list of primary goods would not threaten overlapping consensus since it is uncontroversial as a need for citizens. In the second case, he holds that problems of indexing already occur for Rawls' list of primary goods, as they do anytime we try to reconcile incommensurable goods, and that it is unclear how adding health to this list would significantly complicate things.¹⁷ This essay does not attempt to fill out a theory on the specialness of health. Nevertheless, my discussion of basic needs below has significant consequences for how Daniels' conceives the special moral importance of health. Simply put, I argue that health is a primary good with two levels of specialness, tiered by a principle of basic needs and the difference principle. Before moving on to the idea of basic needs, however, I must draw a connection between health and the natural environment.

Environmentally Determined Health

Having provided a basic outline of Daniels' theory of just health and made some critical remarks on his thesis that health is special, I now explain why his account should pay attention to the fact that health is *environmentally determined*. Just as Daniels uses evidence from social epidemiology to inform his concept of just health, I employ the literature of environmental epidemiology to support my claims. Daniels briefly indicates his assumption that some of the most basic social determinants of health, such as shelter, food, water, clothing, etc. are already covered by a fair distribution of income and wealth (57). However, he does not sufficiently acknowledge the fact that these basic social determinants of health, and therefore his entire theory of just health, relies upon stable environmental conditions that produce a state of moderate scarcity necessary for the construction and maintenance of a liberal-egalitarian society.

included in both natural and social primary goods [D. P. Thero, 'Rawls and Environmental Ethics: A Critical Examination of the Literature', *Environmental Ethics*, 96]. For the purposes of a theory of justice concerned with the equitable distribution of goods, however, we must focus on the profound determination of human health by social circumstances.

¹⁷ J. Wilson. 'Not so special after all? Daniels and the Social Determinants of Health'. *Journal of Medical Ethics*, 5-6.

In other words, Daniels does not explore the fact that the social determinants of health are themselves environmentally determined by the biosphere. This becomes an issue when we realise that the natural environment can breakdown.¹⁸

Let us take the problem of global warming to illustrate my point. Global warming is a serious ongoing threat to the biosphere because of the drastic manner in which it is changing the world climate. Although naturally occurring climate change is recognised as meteorologically typical, there is widespread agreement that the current period of climate change is primarily due to anthropogenic influences. Specifically, there is overwhelming evidence to suggest that the release of heat-trapping gases into the Earth's atmosphere, largely due to human activities involving fossil fuel combustion and deforestation, is amplifying the naturally occurring greenhouse effect and thereby causing the planet to warm.¹⁹ Impacts typically associated with worsening climate change include increased droughts, heatwaves, floods and hurricanes with consequences ranging from food and water shortages to loss of property and forced migration. According to the Intergovernmental Panel on Climate Change (IPCC), climate change can affect human health directly (e.g. death/injury from floods or heatwaves) and indirectly (e.g. through changes in water, air, food quality and quantity, ecosystems, agriculture, livelihoods, infrastructure and the geographical range of diseases like malaria).²⁰ As of the year 2000 the World Health Organization (WHO) estimated that climate change was responsible for the loss of over 150,000 lives and 5.5 million Disability Adjusted Life Years.²¹ Although the short-term effects of climate change have been largely limited to socioeconomically developing regions in the planet's equatorial regions, failure to slow down the rate of global warming is likely to far

¹⁸ Derek Bell claims that if we extend Rawls' principles of justice to include health, they must therefore extend to environmental policy since environmental circumstances, such as air pollution and access to open spaces, impact human health [D. Bell. 2004. 'Environmental Justice and Rawls' Difference Principle'. *Environmental Ethics* 26 (3): 287-306]. Indeed, Daniels appears to support this view when he includes certain environmental conditions, like those just mentioned, amongst the determinants of health (12, 42-3). In the following sections, I could be seen as arguing for a version of this view. It is a view, however, that's quite distinct from that of Daniels or Bell since it is derived from an important consideration neglected by both authors: specifically, that the relatively well-balanced natural environment on which society depends can become unstable and ultimately collapse.

¹⁹ WHO, WMO, UNEP. 2003. *Climate change and Human Health: Risks and Responses. Summary*, <http://www.who.int/globalchange/environment/en/ccSCREEN.pdf>. Accessed, 18/03/2010.

²⁰ U.B. Confalonieri et al. 2007. 'Human Health'. *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, 393. Cambridge: Cambridge University Press, 391-431.

²¹ Ibid, 407. WHO defines Disability Adjusted Life Years as the sum of a) years of life lost due to premature death and b) years of life lived with disability [WHO, WMO, UNEP. *Climate Change and Human Health: Risks and Responses. Summary*, 18].

outstrip the coping capacities of even developed nations before the end of the century.²² To put it in the terms of this essay, the current rate of global warming is a serious danger to essential resources in almost every society, jeopardizing the state of moderate scarcity where it exists and further limiting access to resources where much greater degrees of scarcity exist.²³

By threatening to drastically undermine those resources required for sustainable social organization, global warming could impact the social determinants of population health in such a way as to undercut our ability to meet even the most basic of health needs. It is, therefore, safe to assume that Daniels' theory of just health has a fundamental interest in addressing the problem of global warming. The question is to what extent is Daniels' theory of just health capable of dealing with threats to the state of moderate scarcity in liberal-egalitarian societies? I attempt to answer this question by analysing how the theory of justice presupposed by Daniels can cater for threats to the condition of moderate scarcity. This brings me to a discussion of Rawls on a principle of basic needs.

A Rawlsian View of Basic Needs

Since Daniels relies on Rawls' idea of justice as fairness for his account of just health, it is important that we understand how Rawls' theory might deal with threats, like global warming, to the condition of moderate scarcity. Rawls hardly addresses this issue explicitly, and so, through dialogue with Thomas Pogge and Clark Wolff I attempt to construct a way in which his view of justice might be able to deal with threats to moderate scarcity. Arguably, Rawls first major work – *A Theory of Justice* (1971) – failed to sufficiently account for basic needs. By making the protection of basic rights and liberties the first priority of justice, Rawls theory was accused of allowing great losses in socioeconomic welfare for minor gains in basic liberties.²⁴ In the context of this essay, we might say that Rawls' early statement of his theory of justice committed him to the view that it is better for a liberal-egalitarian society to pursue improvements in basic liberties than it is to protect the state of moderate scarcity, and thereby our basic needs. As Pogge points

²² M.E. Mann. 2009. 'Do Global Warming and Climate Change Represent a Serious Threat to our Welfare and Environment?' *Social Philosophy and Policy* 26 (2): 193-230, 221.

²³ We find a parallel claim in a 2009 WHO report stating: 'In the long run, the greatest health risks may be not from natural disasters or disease epidemics, but from the slow build-up of pressures on natural, economic and social systems that sustain health. These are already under stress, particularly in the developing world.' [WHO. 2009. *Protecting Human Health from Climate Change: Connecting Science, Policy and People*, 12, http://whqlibdoc.who.int/publications/2009/9789241598880_eng.pdf. Accessed, 20/05/2010].

²⁴ T. Pogge. 2007. *John Rawls: His Life and Theory of Justice*, trans. M. Kosch, 102. NY: Oxford University Press.

out, it is hard to see how a society can be deemed more just for having some starving individuals with a full host of basic liberties than a society where everyone was economically privileged but lacking in some basic liberties.²⁵ In light of such criticism, Rawls made the following proposal in *Political Liberalism* (1993): ‘the first principle covering the equal basic rights and liberties may easily be preceded by a lexically prior principle requiring that citizens’ basic needs be met...Certainly any such principle must be assumed in applying the first principle’.²⁶ In other words, Rawls concedes that the most important requirement of justice is that the basic needs of a population be met. And furthermore, he provides us with a criterion for determining what counts as a basic need, namely that which ‘is necessary for citizens to understand and to be able fruitfully to exercise those rights and liberties [covered by the first principle of justice]’.²⁷ Let us try to make this claim more concrete. What could be so important for citizens to be able to understand and productively employ their basic liberties guaranteed by the first principle of justice? In another passage, Rawls could be taken as briefly indicating an answer to this question when he states: ‘below a certain level of material and social well-being, and training and education, people simply cannot take part in society as citizens, much less as equal citizens.’²⁸ Although a certain minimum level of education and training is undoubtedly important, I propose that his allusion to ‘material and social well-being’ essentially points to the significance of health for basic citizenship. That is to say, I maintain that the primary goal of providing citizens with a minimum of material and social well-being is to promote health or normal functioning in a society.²⁹ In this way, sufficient nutrition, clean water, appropriate clothing, adequate shelter, etc. count as basic needs largely because they are crucial for human health.³⁰ Bearing in mind the

²⁵ Ibid.

²⁶ J. Rawls. 2005. *Political Liberalism*, 7. NY: Columbia University Press.

²⁷ Ibid.

²⁸ Ibid, 166.

²⁹ Like Daniels (34-4), I am not making the claim that normal functioning is required for happiness and therefore of fundamental importance for justice. Nor am I saying that disability precludes citizenship. What I am suggesting is the relatively uncontroversial claim that a certain minimum of health is required to fruitfully exercise one’s basic liberties and that there is a strong tendency towards citizens being better able to exercise their liberties if they are healthy.

³⁰ According to Daniels, ‘health needs are paradigmatic among an important category of basic needs’ (46). Although he does not develop his account of just health on a theory of basic needs, this strong claim on the important status of health in the context of basic needs serves as appealing evidence that he would have some sympathy for the view I am setting forth.

centrality I have given to health on Rawls' principle of basic needs, let us try to further specify the nature of this principle.

While Pogge takes Rawls' comments on basic needs seriously, he suggests that there is no need to establish a lexically primary principle of basic needs. Instead, he avers that the first principle of justice securing basic liberties could be extended to include basic needs. His rationale is that since both basic needs and basic liberties are necessary for individuals to fully participate in democratic society they should be taken together on par.³¹ Although Pogge is undoubtedly correct to suggest the importance of both basic needs and liberties for citizenship, I insist that a lexically primary principle of basic needs is necessary. On the one hand, Rawls' believes that meeting basic needs is required to meaningfully hold basic liberties. But, on the other hand, his prioritisation of basic needs reasonably suggests that basic liberties are not necessarily required for meeting basic needs. These claims, if true, make any suggestion to parity between basic needs and basic liberties difficult to sustain.³²

Wolff takes a similar position to Rawls in giving lexical priority to a principle of basic needs. He formulates such a principle thusly: 'Needs Principle [NP]: The first priority for just institutions is to minimise deprivation with respect to fundamental needs'.³³ Wolff hastens to point out, NP is negative consequentialist and should not be confused with the positive consequentialist theories, like utilitarianism, which Rawls and other liberal-egalitarians have spent much effort debunking as unjust.³⁴ The crucial difference, according to Wolff, is that positive consequentialist theories have no upper limit since they aim at maximising some good, while negative consequentialist theories are satiable as they cease to exert obligations once the

³¹ T. Pogge, *John Rawls: His Life and Theory of Justice*, 103-04.

³² Let's take a simple case where basic needs and basic liberties conflict in order to exemplify how prioritising a principle of basic needs could impact real world decisions. Suppose a society in a state of significant scarcity is concerned by the welfare of its population in two districts. In one district mortality rates from malnutrition are rapidly increasing, while in the other, substantial minorities are deprived many of their basic liberties (but none of their basic needs) by fascist groups. Now suppose, given the limited resources, the state could either invest in food and agricultural programmes to meet the needs of the starving or it could invest in a stronger police force to meet the needs of oppressed minorities. I maintain that the principle of basic needs gives voice to our intuition that meeting basic needs, such as food, take priority over securing basic liberties.

³³ C. Wolff. 2009. 'Intergenerational Justice, Human Needs and Climate Policy', ed. A Gossiers and L.H. Meyer, *Intergenerational Justice*, 364. Oxford: Oxford University Press.

³⁴ A positive consequentialist principle would move contrary to the direction of liberal-egalitarianism – which seeks the best advantage for the worst off – since such a principle would justify sacrificing the advantage of the worst off for the greater advantage of society at large.

relevant negative features have been eliminated.³⁵ In this case, NP makes no further demands once the basic needs of a population are secured and can *continue* to be secured. Indeed, Wolff rightly emphasises the requirement that NP protects basic needs over time when he posits that such a principle should be generation-neutral. That is to say, in accord with Wolff, I hold that NP must be blind to the generation within which the hypothetical needy citizen lives. Such a view is supported by Rawls' understanding of intergenerational justice, which he elaborates with the idea of "just savings". Since Rawls sees the just society as a fair system of cooperation between generations over time, he insists on the need for savings or accumulation of wealth.³⁶ He avers that each generation that lacks the wealth to establish just institutions must accumulate wealth to the best of its ability such that future generations will not have the same difficulty. Once a point of accumulation is reached where just institutions have been established, he insists that the burden of saving is lifted but that the obligation to sustain just institutions for future generations remains.³⁷ Given the privileged place of NP, it stands to reason that on Rawls' understanding of intergenerational justice the first institutions to be established and sustained must be those that protect basic needs. Now, since the ability to meet basic needs is dependent upon access to a certain minimum of resources, I maintain that the primary requirement of NP is to protect and promote such resources. Put differently, one might say that a central demand of this principle is to protect a minimum level of moderate scarcity where it exists and to try to establish such a condition where it doesn't. NP has significant implications for how to justly approach the problem of climate change, which I explore in the second part of this paper. Presently, I move on to a closer analysis of NP in the context of just health.

Just Health Revisited

Having outlined NP, I now wish to consider two issues regarding this principle in the context of just health. First, I analyse the impact of this principle on Daniels' thesis that health is of special moral importance. Second, I explain the problem of the "bottomless pit" that arises for NP when we accept healthcare as a basic need, and I offer a solution by slightly modifying this principle. At this point, it is evident that the theory of just health stated by Daniels is inadequate when it

³⁵ C. Wolff, 'Intergenerational Justice, Human Needs and Climate Policy', *Intergenerational Justice*, 358.

³⁶ J. Rawls, *Political Liberalism*, 14, 274.

³⁷ J. Rawls, *A Theory of Justice Revised Edition*, 255.

comes to dealing with threats to the state of moderate scarcity. In order to have the theoretical flexibility to deal with this issue, it was necessary to introduce NP into the Rawlsian account of justice which Daniels' presupposes. What we must now ask is how does the introduction of NP affect Daniels' understanding of just health? Most significantly, I believe that NP demands a reformulation of Daniels' thesis that health, healthcare and the social determinants of health are of special moral importance. One thing becomes immediately evident in this regard: by highlighting human health as a central concern of NP, it follows that health and its most basic social determinants are of even greater moral importance than Daniels himself suggests. But in what does this specialness consist? Clearly, as a good attached to NP, it is no longer satisfactory to follow Daniels in justifying the special moral status of health simply on the lexically posterior principle of fair equality of opportunity. Instead, like Wilson above, I propose that the special moral importance of health should be expressed by accepting it as a primary good, that is, a good of fundamental importance for a theory of justice.

At this point, however, we must distinguish between the moral importance of *health under NP* and the moral importance of *health under the difference principle*. As already indicated, NP is satiable in the sense that it ceases to exert obligations when the basic needs of a population are secured over time. But once the basic health needs of a population are secured under NP there is a whole array of *less* basic health needs that remain, demanding to be met justly. To these less basic needs we can willingly apply Daniels' view that health needs are met justly when the goods determining health are distributed in accord with the difference principle. What we have arrived at then is a two-tiered view of the special moral importance of health as a primary good, where health needs on NP are more special than health needs on the difference principle. Is this formulation of the special moral importance of health any less vague than Daniels' contention that health is special for its role in protecting fair equality of opportunity? In a limited way, I believe that it is. In the first place, to restate Wilson's earlier argument, if we accept health as a primary good then we have elevated its status to a good that is of fundamental importance for a liberal-egalitarian society, as opposed to a good that is to some extent important but only for its contribution to protecting opportunity. Secondly, by recognising health as central to NP, it is clear that meeting basic health needs must be amongst the top moral priorities for a theory of justice. It is immaterial to and beyond the scope of this essay to present an account of how special health is under the difference principle by outlining the appropriate way in which

such health needs must weigh against other goods governed by that principle. In this sense, I have not gone beyond Daniels in specifying the idea that health is special. Nothing I have said means that we should jettison Daniels' insight that health protects fair equality of opportunity. What I have argued is that the special moral importance of health consists first and foremost in its status as a primary good and its centrality to NP.

Daniels, however, may object to NP by observing that it falls into the problem of the "bottomless pit" that his theory successfully avoids. This difficulty arises when one good is prioritised to such an extent that it starves other valuable goods of the resources necessary for their successful pursuit. By recognising a multiplicity of goods as morally important Daniels' does not prioritise health at the expense of other special goods (63). As I already pointed out, basic health needs must be of central importance to any formulation of a needs principle. On NP it is always unjust for a citizen's basic health needs to go unmet so long as society has the capacity to meet those needs. This appears to be a reasonable claim when we consider that basic needs – defined by Rawls as that which is required for citizens to fruitfully exercise their basic liberties – tend to be satiable. However, since there is good reason for thinking that healthcare qualifies as a basic need under Rawls' definition, Wolff's formulation of NP runs into the problem of the bottomless pit. To explain this, no matter how well basic health needs are secured in a society there will always be sick people who can claim that their basic needs are not being met if their potentially treatable illnesses prevent them from fruitfully exercising their basic liberties. As it stands, NP would have to accept such claims as legitimate and pour resources into building the best possible healthcare system at the expense of developing institutions that protect and promote important goods like basic liberties and opportunity. Such an idea is counterintuitive given the significance we attach to these other goods and the limited contribution of healthcare – estimated to be responsible for only one-fifth of life expectancy gains in the twentieth century³⁸ – to population health.

To address this issue, I modify NP as follows: The first priority for just institutions is to minimise deprivation with respect to *satiabile* fundamental needs. This differs from Wolff's previous formulation in only one respect. Contrary to his external assumption that all needs covered by NP are satiable, I have presented satiability as an internal condition of NP such that no basic needs can excessively drain the resources required for developing the full range of just

³⁸ D. Brock. 2000. 'Broadening the Bioethics Agenda'. *Kennedy Institute of Ethics Journal*, 10 (1): 21-38, 31.

institutions. Does this mean that healthcare, as apparently insatiable, cannot be considered a basic need? It does not. What it does mean is that there must be a determinate cut-off point for healthcare entitlements at the level of basic needs. Such cut-off points, according to Rawls, must be relative to the society in question.³⁹ Although there is much more that can be said about the relationship between health, healthcare and NP, I am now in a position to move on to the second part of this paper where I attempt to demonstrate the relevance of my reformulation of Daniels' theory of just health for the issue of climate change.

II

At this point, I have achieved the first goal of this essay which was to assess the impact on Daniels' account of just health of incorporating into Rawls' understanding of justice the idea that the state of moderate scarcity can breakdown. I claimed that the inclusion of NP into Daniels' theory of just health was required if his account was to deal with threats to the state of moderate scarcity. By doing this we discovered that basic health needs were of fundamental importance for a theory of justice and that Daniels' thesis on the specialness of health required substantial revision. Once we incorporate NP into Daniels' theory of just health in the way that I have indicated, I believe we have a theory of just health that can inform liberal-egalitarian societies on the nature of their primary obligations when it comes to addressing the problem of climate change. In this part of the paper, I concern myself with extrapolating this claim. First, I explain how NP, as generation-neutral, demands that liberal-egalitarian societies deal with climate change today as a priority of justice and why it makes population health of paramount importance for climate policy.⁴⁰ In this discussion, I indicate how recent climate policy has prioritised human health, thereby offering some support for my claims. Second, I investigate how my interpretation of Daniels' ideals of preventative health can fairly guide the two key strategies available to climate policy, namely mitigation and adaptation. In my final discussion, I point out that if my appropriation of Daniels' theory is to have bearing on the problem of climate change

³⁹ J. Rawls, *Political Liberalism*, 166. For example, in a poor country access to a trained midwife might be considered the limit of basic healthcare needs, while in wealthy nations they are likely to be more comprehensive. Indeed, we must also decide the cut-off point for goods like *sufficient* food and *adequate* shelter when it comes to basic needs. Daniels' account of how priority setting decisions can be made through a fair deliberative process is easily applicable to the issue of determining the fair cut-off point for basic needs in a given society.

⁴⁰ By climate policy I mean decisions to combat climate change through mitigation or adaptation strategies. I explain the meaning of these terms shortly.

in the international context, then it must be developed beyond the limits of liberal-egalitarian societies into a theory of global justice.

Climate Policy and Just Health

Human Health – the Centre of Climate Policy

I now discuss how NP obligates a liberal-egalitarian society to address the problem of climate change and why it places human health at the centre of climate policy. As I have already argued, a central demand of NP is to protect those resources minimally required to meet basic needs. Since climate change is a serious threat to such resources, it stands to reason that institutions covered by NP will include those that seek to manage the problem of climate change. Importantly, regardless of whether or not the impact of climate change on an individual society's resources is likely to be felt today or in the future, the generation-neutral caveat of NP demands that institutions designed to address the problem of climate change be established *today* as a priority of justice. This obligation is particularly pressing given the likelihood of certain global warming "tipping-points" in the near future, that is, those points at which global warming leads to irreversible environmental damage and begins to rapidly accelerate due to positive feedbacks from the natural world.⁴¹ In this way, failure to limit global warming to safe levels today could make it impossible for future generations to do it for themselves, potentially undermining their capacity to meet basic needs and sustain just institutions. Such inaction would therefore be a stark violation of a) NP, which is blind to the generation in which the needy citizen lives and b) Rawls notion of just savings which requires that each generation contribute to the construction and maintenance of just institutions.

Since human health is of central importance to NP, and NP demands that we address climate change, it is my proposal that health be given paramount consideration when it comes to dealing with and justifying action on climate change. That is to say, NP demands that human health be given central importance when it comes to making climate policy. Indeed, in the fields of environmental epidemiology and climate policy my proposal finds substantial support. Over

⁴¹ M.E. Mann, 'Do Global Warming and Climate Change Represent a Serious Threat to our Welfare and Environment?', *Social Philosophy and Policy*, 196. A clear example of this is the melting of polar ice. The fear is that beyond a certain level of global warming, polar ice will tip into unstoppable melting. Significant melting of polar ice is likely to act as a positive feedback to global warming, as this would reduce the reflectivity of the Earth's surface thereby allowing more solar radiation to be absorbed by the Earth's surface [Ibid].

the last two decades there has been a growing comprehension of the complex relationship between climate change and human health.⁴² Although WHO has emphasised the impact of climate change on human health for a number of years, continued developments in the field of environmental epidemiology have led this global organisation to take up the following position in a 2009 report: ‘Protecting human health is the “bottom line” of climate change strategies.’⁴³ That is to say, throughout this report WHO recognises human health as the fundamental good to be protected from the threat of climate change. Such a view finds strong support from the IPCC in its latest assessment report (2007)⁴⁴ and it is one that resonates with the moral importance I have given to health on NP. It is worth mentioning that some countries are already using human health as the primary justification for climate policy. Most dramatically, in 2009 the USA’s Environmental Protection Agency (EPA) declared greenhouse gases such as carbon dioxide to be bad for human health, insofar as they are the primary cause of the current period of climate change.⁴⁵ By connecting population health with climate change in this way (under legislation referred to as the Clean Air Act),⁴⁶ the EPA has legally justified and mandated the regulation of greenhouse gas emissions in the USA. Having explained how NP makes human health the primary concern of climate policy and cited some examples where the importance of health to climate policy is recognised, I move on to investigate in more precise terms how a liberal-egalitarian theory of just health might guide climate policy.

Preventative Health: Mitigation and Adaptation

Climate policy primarily has two broad strategies at its disposal to combat climate change, mitigation and adaptation. Mitigation tactics essentially involve reducing greenhouse gas emissions with a view to limiting the severity of climate change. Adaptation schemes accept a certain amount of climate change to be inevitable and focus on implementing ways in which

⁴² WHO, WMO, UNEP, *Climate Change and Human Health: Risks and Responses. Summary*, 10.

⁴³ WHO, *Protecting Human Health from Climate Change: Connecting Science, Policy and People*, 3.

⁴⁴ U.B. Confalonieri et al., ‘Human Health’, *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, 418.

⁴⁵ Environmental Protection Agency. 2009. ‘Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act; Final Rule’, *Federal Register* /Vol. 74, No. 239 / Tuesday, December 15, 2009, 66,497, http://www.epa.gov/climatechange/endangerment/downloads/Federal_Register-EPA-HQ-OAR-2009-0171-Dec.15-09.pdf. Accessed 30/03/2010.

⁴⁶ *Ibid*, 66,500.

communities can adapt to climatic changes.⁴⁷ It is generally agreed that most societies (especially the biggest emitters of greenhouse gases) must engage in rigorous mitigation strategies if the worst consequences of climate change are to be avoided. And while adaptation schemes are already necessary in many societies, the worse climate change is allowed to get the more important adaptation will become worldwide.⁴⁸ The question for us is what does a theory of justice have to say about the fair employment of mitigation and adaptation strategies within a liberal-egalitarian society?⁴⁹

Since I have argued that the protection of human health should be the primary concern of climate policy, I suggest that climate policy can be guided by Daniels' formulation of the ideals of justice in preventative health. He states these as: '(1) reducing the risks of disease and disability and (2) seeking an equitable distribution of those risks' (141).⁵⁰ I consider these ideals of preventative health to be consistent with my understanding of health as a primary good with two-tiers of specialness. To clarify this, NP and the difference principle each demand in their own way that we reduce the risks to health and distribute those risks equitably. On NP, as I have already indicated, reducing and equitably distributing the risks to basic health needs is a first priority of justice.⁵¹ Where *basic* health needs are not threatened, the difference principle will exert less demanding obligations when it comes to reducing and distributing health risks.

⁴⁷ M.E. Mann, 'Do Global Warming and Climate Change Represent a Serious Threat to our Welfare and Environment?', *Social Philosophy and Policy*, 221.

⁴⁸ *Ibid*, 221-222.

⁴⁹ An anonymous reviewer has insightfully pointed out that we must not forget that mitigation and adaptation measures are not exhaustive when it comes to tackling climate change. When mitigation and adaptation strategies fail there will be serious consequences for human health, potentially leading to humanitarian disasters. In these cases, emergency aid would be required. Although we could add this third category of disaster relief to the strategies available to combat climate change, I focus on mitigation and adaptation both for the sake of simplicity and because they are currently the dominant concerns of climate policy. However, the more acutely climate change is felt the more emphasis will need to be placed on disaster relief strategies. And, indeed, NP would demand this so long as short-term disaster relief does not drain the resources of mitigation and adaptation strategies such that it puts future generations at even greater risk than those in the present.

⁵⁰ It is important to note that while I am endorsing Daniels' formulation of the ideals of preventative health, these ideals have a somewhat different meaning for both of us. That is to say, for Daniels', (1) and (2) are justified on the principle of fair equality of opportunity whereas for me health is a primary good and therefore (1) and (2) have to do with NP and the difference principle.

⁵¹ Although it is evident that NP demands that risks to basic health needs be reduced, the sense in which it requires these risks to be distributed equitably is perhaps less clear. Applying Wolff's line of thought to the issue of risk reduction, the aim of NP is to minimise risk for the society at large, not to protect the most threatened first. If the latter was the case then society would have to look after the most threatened no matter what the cost to other citizens. The equitable nature of NP is that the risks to basic health needs must be reduced for *all* citizens insofar as

As this is an essay concerned with basic needs, in what follows I interpret Daniels' ideals of preventative health with regard to NP only. I propose that (1) can guide climate policy by requiring that mitigation and adaptation strategies be used to reduce the risks to population health from climate change. Whether it is mitigation or adaptation strategies that should be prioritised in a given society depends on how climate change is likely to affect that society in both the short-term and the long-term. NP, as negative consequentialist and generation-neutral, would demand that a liberal-egalitarian society invest in those measures that are likely to have the greatest reduction and fair distribution of risks to basic health needs across generations. For societies where climate change is unlikely to seriously threaten basic health needs for some decades, for instance, this could mean the short-term prioritisation of mitigation strategies and the long-term prioritisation of adaptation schemes. Daniels' other ideal of preventative health, (2), has nothing to do with mitigation strategies because we cannot fairly distribute the impacts of climate change anymore than we can control the climate. (2) can only guide adaptation strategies insofar as they attempt to offer at risk communities the means to cope with the impacts of climate change. What an equitable distribution of health risks from climate change would mean on NP is that adaptation measures should focus on those members of society most at risk to the impacts of climate change, whether these members belong to existing or future generations. This could involve erecting flood barriers to protect a nation's coastal population from rising sea levels or providing affordable mosquito nets to those living in areas badly affected by the spread of malaria. WHO emphasises the importance of improving healthcare as an adaptive measure to climate change. It argues that in order to deal with impacts of climate change, like the spread of certain diseases and increased frequency of extreme weather events, healthcare services in many countries will require improvement and expansion.⁵² Despite the usefulness of Daniels' formulation of the ideals of preventative health for guiding climate policy, we find that the theory of just health that I have been developing is limited in its ability to direct how climate change is tackled. In the next section, I explore this claim further and explain why I agree with Daniels' on the need for a theory of global justice.

that is possible. Where not all risks can be adequately reduced, NP will permit that the most threatened groups are left vulnerable since reducing their risks would make it impossible to address other urgent threats [C. Wolff, 'Intergenerational Justice, Human Needs and Climate Policy', *Intergenerational Justice*, 357].

⁵² WHO, *Protecting Human Health from Climate Change: Connecting Science, Policy and People*, 3, 24.

Remarks on Global Justice

Now that I have connected my reformulation of Daniels' theory of just health with climate policy in liberal-egalitarian societies, I move on to explain why the account of just health that I have been advocating must be situated in a global context. Daniels recognises that his theory of just health, as limited to liberal-egalitarian societies, is inadequate when it comes to answering questions of just health on the transnational stage (333-34). In other words, his theory does not specify what distinct nations owe one another as a matter of justice in the protection and promotion of health. This means that my reformulation of Daniels' theory to include NP can only justify action on climate change and direct climate policy within liberal-egalitarian societies. However, climate change is a global problem that requires a global solution. It is recognised that the only practicable way in which catastrophic climate change can be avoided is through global international agreements where states set ambitious targets to reduce their greenhouse gas emissions through various mitigation strategies. If this is the case, then it may be argued against my account that a domestic theory of justice cannot effectively guide the mitigation side of climate policy within a liberal-egalitarian society. More specifically, lacking a global agreement on shared targets for reducing greenhouse gas emissions, the inevitability of disastrous climate change would seem to discount any obligations for a liberal-egalitarian society to engage in mitigation.⁵³ To this, I make the following reply. Recall that Daniels' first ideal of preventative health is to reduce the risks of disease and disability. This ideal can be elaborated more fully by saying that when the conditions to reduce serious health risks do not exist it is a requirement of justice for a liberal-egalitarian society to make every effort to create such conditions, so that it might then go about actually reducing those risks. What this means in the context of climate policy is that it's a top-priority for any liberal-egalitarian society to strive for a global agreement on emissions reduction targets such that it might then employ effective mitigation measures, and thereby reduce the risks to its population's health from climate change.

The need for a global agreement on climate change to make domestic emission reductions effective requires a comprehension of global climate justice since it must be determined how the terms of such an accord can be fairly set between nations. Daniels final chapter in *Just Health* is concerned with proposing a 'concluding challenge' to his audience, suggesting the need to develop a theory of global justice that can address issues of health

⁵³ I thank an anonymous reviewer for raising this insightful objection.

inequalities between nations. I echo this challenge, but add that a theory of global justice applied to health must consider not only the findings of social epidemiology but also of environmental epidemiology. In this regard, I submit that my reformulation of Daniels' account of just health, insofar as it can deal with threats to the state of moderate scarcity, offers a plausible theory of just health at the level of the nation-state which could help to forge a path towards dealing with global concerns of just health and climate justice.

In his concluding challenge, Daniels tries to roughly map out the terrain for a new generation of theorists on global justice. He suggests that the task for a theory of global justice generally should be to find a middle ground between strong statism (which limits concerns of justice to citizens as they are institutionally related in the nation state) and strong cosmopolitanism (which considers principles of justice to have universal application, regardless of how states or individuals are related institutionally) (346). On one hand, he wishes to avoid statism because globalization has led to the development of institutions that place citizens and nations across the world in various modes of socioeconomic relationship, which necessarily gives rise to questions of international justice (350). On the other hand, he resists cosmopolitanism since it abstracts from the fact that obligations of justice are constituted by how individuals and states are institutionally related (348). Positing a middle-ground between these two positions, he holds that a theory of global justice should be conceived in terms of the global institutional relationships that are still developing between states (354). Although there is some merit to this claim, it is clear from the case of climate change that not all demands of justice arise from institutional relationships. Consider that it is developed nations who are largely responsible for climate change, given their historically high greenhouse gas emissions, yet it is developing countries with historically low greenhouse gas emissions that are likely to suffer most.⁵⁴ This consideration raises a serious issue of international justice, regarding what developed nations owe developing countries in combating climate change. However, it is an issue that does not originate from how particular societies are institutionally related. Daniels' understanding of the new terrain for a theory of global justice must therefore be expanded to include issues of justice, such as those posed by climate change, that do not arise from institutional relationships. Making

⁵⁴ UNDP. 2007. *Human Development Report 2007/2008 – Fighting Climate Change: Human Solidarity in a Divided World*, 4, 8. NY: Pelgrave McMillan.

this move will certainly not bring his position any closer to a statist view, though it may push him towards a somewhat more cosmopolitan perspective.

Conclusion

The aims of this essay were twofold. In the first instance, I hoped to assess the impact on Daniels' theory of just health when we incorporate into Rawls' understanding of justice the idea that the state of moderate scarcity can breakdown. In the second case, I was concerned with demonstrating how a reformulated version of Daniels' conception of just health can help to justify action on climate change and guide climate policy within liberal-egalitarian societies. With a view to achieving my first goal, I outlined and criticised Daniels' thesis on the special moral importance of health, emphasising that health should be given the status of a primary good. I then explained why Daniels' theory of just health should account for the fact that the social determinants of health depend on a state of moderate scarcity which is environmentally determined. In order to understand how Daniels' theory of justice could deal with threats to the condition of moderate scarcity, it was necessary to introduce into the Rawlsian theory of justice presupposed by Daniels a generation-neutral principle of basic needs (NP) that is lexically prior to the first principle of basic liberties. The primary consequences of NP for Daniels' conception of just health were that health can no longer be considered special simply because it protects fair equality of opportunity, but instead has two tiers of specialness which are relative to NP and the difference principle.

By reformulating Daniels' theory of just health in this way, I was able to move on to the second part of this essay. Here I argued that my rearticulation of Daniels' conception of just health could justify action on climate change insofar as health is central to NP and NP demands that the state of moderate scarcity be protected as a priority of justice. I also suggested that Daniels' ideals of preventative health could fairly guide the main strategies open to climate policy, namely mitigation and adaptation. Before concluding, I hastened to point out that my reformulation of Daniels' theory of just health can guide climate policy only in liberal-egalitarian societies, which must strive for a global agreement on greenhouse gas reduction targets to make their mitigation strategies effective. Such a global agreement, I argued, must draw upon a theory of global justice that is not limited simply to the developing institutional relationships in which different nation-states find themselves. Summarily, by incorporating into Daniels' theory of just

health the idea that the state of moderate scarcity can fail, I have attempted to demonstrate three main things: 1) environmental epidemiology is crucial for any conception of just health 2) a theory of just health must be able to prioritise protecting the state of moderate scarcity and 3) such a theory can have great relevance for how to justify and fairly deal with the problem of climate change, at least, in liberal-egalitarian societies.

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