Ecological Limits and the Meaning of Freedom: A Defense of Liberty as Non-Domination

Augustin Fragnière

It is now widely acknowledged that global environmental problems raise pressing social and political issues, but relatively little philosophical attention has been paid to their bearing on the concept of liberty. This must surprise us, because the question of whether environmental policies are at odds with individual liberty is bound to be controversial in the political arena. First, this article explains why a thorough philosophical debate about the relation between liberty and environmental constraints is needed. Second, based on Philip Pettit's typology of liberty, it assesses how different conceptions of liberty fare in a context of stringent ecological limits. Indeed, a simple conceptual analysis shows that some conceptions of liberty are more compatible than others with such limits, and with the policies necessary to avoid overshooting them. The article concludes that Pettit's conception of liberty as non-domination is more compatible with the existence of stringent ecological limits than the two alternatives considered.

Introduction

Normative debates over liberty have been going on for centuries, if not for longer, and they constitute an important subfield of social and political philosophy.[1] However, conceptions of liberty have rarely been assessed against the backdrop of global environmental issues. This article investigates the way assumptions about the finiteness of the ecological context in which human societies are embedded might influence our appraisal of different conceptions of freedom. It starts from the increasingly popular view that there are ecological limits that should not be transgressed by any means, if humanity is to avoid major harmful consequences. Furthermore, it assumes that keeping humanity's global impact within the boundaries of such a 'safe operating space'[2] with a reasonable chance of success, entails the necessity to reduce significantly the material and

[1] Ian Carter, Matthew H. Kramer, and Hillel Steiner (Eds.), *Freedom: A Philosophical Anthology* (Malden: Blackwell Publishing, 2007).

[2] Johan Rockström *et al*., 'A Safe Operating Space for Humanity', *Nature* 461:7263 (2009a), pp. 472–475.

energy consumption of wealthy nations. In this article, I take these empirical facts for granted and focus on the consequences of respecting such limits in terms of liberty.

A thorough philosophical debate about the relation between liberty and environmental constraints is needed for various reasons. First, philosophers interested in environmental issues have written extensively about a wide array of topics, ranging from distributive justice in environmental goods to the value of the non-human world to our obligations toward future generations. Comparatively, the question of individual liberty as such has so far attracted surprisingly little attention.[3] Second, the concept of liberty has been a core component of major political debates for a long time,[4] and I take it that its role in debates about environmental policy is likely to grow in importance as these problems become more pressing. This is made clear by the fact that from the early days of environmentalism, some ideological groups have been quick to oppose environmental regulations in the name of liberty.[5] Third, and relatedly, there is currently a widespread intuition in the public that respecting stringent ecological limits is at odds with individual freedom. I suggest that this intuition is backed by two particular views. The first one holds that unless one assumes a technological breakthrough in the coming decades, a transition to sustainability would mean fewer goods and services available to individuals, which translates into less liberty for everyone (call this the *liberty vs scarcity* view). The second one builds on the idea that liberty functions as a check on the state's power to constrain individual actions. It holds that there are certain kinds of coercive policies that governments are not legitimately allowed to impose on their citizens, and that strict environmental regulations are precisely of that kind (call this the *liberty vs state* view). As a result of either of these views, it might indeed seem that states face a dilemma between protecting individual freedom and achieving strong sustainability.

[3] Mike Hannis, the author of the only monograph devoted to the issue of freedom and the environment to my knowledge writes: 'This has left the relationship between freedom and sustainability per se (…) significantly under-theorized' Michael Hannis, *Freedom and Environment. Autonomy, Human Flourishing and the Political Philosophy of Sustainability* (New York: Routledge, 2016), p. 4. Exceptions include Marius de Geus, 'The Environment versus Individual Freedom and Convenience', in *Liberal Democracy and Environmentalism*, edited by Marcel L. J. Wissenburg and Yoram Levy (London: Routledge, 2004), pp. 87–99; Richard Dagger, 'Freedom and Rights', in *Political Theory and the Ecological Challenge*, edited by Andrew Dobson and Robyn Eckersley (Cambridge University Press, 2006), pp. 200–215. The question of liberty has been mentioned in early environmentalist writings, but without in-depth discussions of the concept itself; see Garrett Hardin, 'The Tragedy of the Commons', *Science* 162:3859 (1968), pp. 1243–1248; Donella H. Meadows, Dennis L. Meadows, Jørgen Randers, and William W. Behrens III, *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind*, 2nd edition (New York: Universe Books, 1974). There is also a growing literature on liberalism and the environment as well as on republicanism and the environment, but neither of them focuses on freedom in its own right.

[4] Think of the debate over liberty between the Royalists and the Parliamentarians during the English civil war in the 17th century; or more recently of the debate over effective and formal conceptions of freedom between Marxists and Capitalists. See respectively: Quentin Skinner, 'Rethinking Political Liberty', *History Workshop Journal* 61:1 (2006), pp. 156–170 and Ian Carter, 'Debate: The Myth of "Merely Formal Freedom"', *Journal of Political Philosophy* 19:4 (2011), pp. 486–495.

[5] Naomi Oreskes and Erik M. Conway, *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming* (New York: Bloomsbury Press, 2011); Naomi Klein, *This Changes Everything: Capitalism vs. The Climate* (New York: Simon & Schuster, 2014).

However, these views reflect particular definitions of liberty, and other conceptions might change substantially our appraisal of what the state can or cannot do to address ecological problems. Hence, my aim here is to assess how different conceptions of liberty fare with respect to pressing environmental issues. In other words, I investigate and try to debunk the claim (often made by opponents of strong environmental policies) that meeting such ecological requirements is always detrimental to individual freedom.

The article is organized as follows. In section 2, I briefly introduce the notion of ecological limits and the constraints on economic growth and individual consumption that might follow from it. In section 3, I give some conceptual clarification about what is at stake. In sections 4 and 5, I consider different conceptions of liberty analyzed by Philip Pettit, and assess them comparatively in light of environmental constraints. I conclude that liberty as non-domination is more compatible with the notion of environmental limits than the two other conceptions considered.

2. Sustainability, Ecological Limits and Economic Growth

Since the first, rather vague, definition of sustainable development as the 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs',[6] various interpretations of the concept have been put forward. For instance, the 'weak' interpretation of sustainability holds that losses of natural capital (natural resources, biological diversity, habitats, climate stability, etc.) can be indefinitely offset by the creation of manufactured capital over the long term.[7] Conversely, a growing body of evidence suggests the existence of stringent limits to the exploitation of the natural environment. These limits can be roughly divided into two groups: those stemming from the exhaustion of natural resources (renewable and non-renewable), such as fresh water, arable land, fossil fuels and precious metals,[8] and those stemming from the limited carrying capacity of the earth system.[9]

The carrying capacity perspective in particular holds that human impact on the biosphere should stay within some identifiable limits if we are to avoid abrupt shifts in its functioning and the loss of valuable life-support services. This approach has been pioneered by the Meadows report in the late 1970s,[10] and is now represented by the 'planetary boundaries' model. Proponents of this approach identify nine biophysical

[6] World Commission on Environment and Development, *Our Common Future* (Oxford and New York: Oxford University Press, 1987).

[7] Werner Hediger, 'Reconciling "weak" and "strong" Sustainability', *International Journal of Social Economics* 26:7/8/9 (1999), pp. 1120–1144.

[8] See for example UNEP. 'GEO 5 - Global Environment Outlook' (Nairobi: UNEP, 2012), available online at http://web.unep.org/geo/assessments/global-assessments/global-environment-outlook-5 (accessed 2017-01-31); Kristin Vala Ragnarsdottir, 'Rare Metals Getting Rarer,' *Nature Geoscience* 1:11 (2008), pp. 720–721; G. Maggio and G. Cacciola, 'When Will Oil, Natural Gas, and Coal Peak?', *Fuel* 98 (2012), pp. 111–123.

[9] Kenneth. Arrow *et al*., 'Economic Growth, Carrying Capacity, and the Environment', *Science* 268:5210 (1995), pp. 520–521.

[10] For an updated version see Donella Meadows, Jørgen Randers, and Dennis Meadows, *Limits to Growth: The 30-Year Update* (White River Junction: Chelsea Green Publishing, 2004).

thresholds (corresponding to domains of human influence over the earth system) that should not be transgressed. These include biodiversity loss, climate change, biochemical flows, land-system change, and so on.[11] Staying within these limits would help secure the stability of the earth system in a state as close as possible to the favorable Holocene conditions, which is of paramount importance for the flourishing of human civilizations. Hence the suggestion that these limits define a 'safe operating space for humanity'.[12] According to this increasingly popular view, sustainability amounts to keeping human influence within these boundaries, which requires a significant departure from the current functioning of developed societies.[13]

Now, if we take seriously the ideas that our environment is finite and that human societies must operate within the constraints of carrying capacity and resource availability, it follows that indefinite material (and maybe economic) growth is not possible. Originally, the cornerstone of sustainable development was the idea of decoupling economic growth from material consumption and environmental impacts, mainly by means of technological innovation. However, after thirty years without meaningful results in this direction, more and more people doubt that this is possible at all.[14] This remains a debated issue, but in any case environmental policies sufficiently stringent to limit irreversible and potentially catastrophic degradations of the Earth system would imply the existence of laws regulating material and energy flows. This can be achieved by means of taxation, allowances markets or norms on the production and use of technical devices. Such regulations can all be seen as coercive to a certain extend and would very likely constrain individual consumption patterns.[15]

Hence, without delving further into this fast growing literature, I take the three following assumptions for granted:

1. There are stringent limits to the exploitation of the environment. Transgressing them could cause unpredictable shifts in the functioning of the earth system, with dire consequences for human societies.

[11] Johan Rockström *et al*., 'Planetary Boundaries: Exploring the Safe Operating Space for Humanity', *Ecology and Society* 14:2 (2009b), p. 32; Anthony D. Barnosky *et al*., 'Approaching a State Shift in Earth's Biosphere', *Nature* 486 (2012), pp. 52–58; Will Steffen *et al*., 'Planetary Boundaries: Guiding Human Development on a Changing Planet', *Science* 347:6223 (2015), DOI: 10.1126/science.1259855.

[12] Rockström *et al*., 'A Safe Operating Space for Humanity'.

[13] According to the proponents of this approach, human influence over four of the nine boundaries – climate change, genetic diversity, land-system change and biochemical flows – is already beyond the 'safe zone'; see Steffen *et al*., 'Planetary Boundaries'.

[14] See Tim Jackson, *Prosperity Without Growth? Economics for a Finite Planet* (London: Earthscan, 2011); Joan Martínez-Alier *et al*., 'Sustainable de-Growth: Mapping the Context, Criticisms and Future Prospects of an Emergent Paradigm', *Ecological Economics* 69:9 (2010), pp. 1741–1747; Giorgios Kallis, Christian Kerschner, and Joan Martínez-Alier, 'The Economics of Degrowth', *Ecological Economics* 84 (2012), pp. 172–180.

[15] Jackson, *Prosperity without Growth?*; Susanne Menzel and Tom L. Green, 'Sovereign Citizens and Constrained Consumers: Why Sustainability Requires Limits on Choice', *Environmental Values* 22:1 (2013), pp. 59–79; Wouter Peeters, Jo Dirix, and Sigrid Sterckx, 'The Capabilities Approach and Environmental Sustainability: The Case for Functioning Constraints', *Environmental Values* 24:3 (2015), pp. 367–389; Jean-Louis Martin, Virginie Maris, and Daniel S. Simberloff, 'The Need to Respect Nature and Its Limits Challenges Society and Conservation Science', *PNAS* 113: 22 (2016), pp. 6105–6112.

2. In order to avoid that, societies will need to achieve a transition toward sustainability (that is, staying within the limits), which will require top-down regulations.[16]
3. This will affect the level of material and energy consumption and ultimately economic growth.

The rest of the article focuses on assessing the consequences of this prospect for individual liberty.

3. What Liberty?

The concept of liberty that I will discuss in the rest of this article is political liberty in a broad sense. In this sense, a conception of liberty must enable us to determine who is free and on what conditions, within a society that is itself embedded in an ecological context. As such, liberty is considered here a political value, that is, a good the state must protect and promote.[17] Thus the question I will try to answer is: which conception of liberty should be favored when fostering the ecological transition?

I propose that such a conception must meet two general criteria. The first one is *compatibility*. Among the many different conceptions of liberty that exist in theory and practice today, some seem indeed to be more compatible than others with the ideas of ecological limits and ecological transition. Thus, a first task consists in identifying which ones. By 'compatible' I mean that a given conception of liberty can thrive and be promoted despite the existence of stringent ecological limits or the absence of economic growth. Notice that this is slightly different from asking whether restrictions of liberty are justified or not. What I am after, here, is a conception of liberty that would not see ecological limits as an existential threat (justified or not).[18]

Yet, being concerned with compatibility is not enough. The second criterion is that of *desirability*. On top of being compatible with ecological limits, a conception of liberty compatible with sustainability must be appealing and plausibly achievable in the context of contemporary western societies. In other words, it must be sufficiently in line with these societies' current political culture. For example, an ascetic conception that identifies liberty with self-abnegation (which, in the words of Isaiah Berlin, amounts to stopping desiring what one cannot get[19]) is surely compatible with ecological limits, but it is unlikely to become an appealing political ideal in the foreseeable future.

[16] I will not attempt to justify this assumption here and redirect the reader toward the literature on collective action problems.

[17] This approach differs from the metaphysical debate about free will and determinism, which I will put aside in what follows.

[18] The fact that my analysis is intentionally restricted to political liberty, to the exclusion of all other political values, is a methodological choice that does not commit me to holding that liberty is the most important political value. In my view, it is totally conceivable to hold at the same time that liberty is an important value and that it can be overridden by the need to promote other values (such as justice or security for example) under certain circumstances.

[19] Isaiah Berlin, 'Two Concepts of Liberty', in Isaiah Berlin, *Liberty*, edited by Henry Hardy (Oxford: Oxford University Press, 2002), pp. 166–217.

This being said, delving into the very rich philosophical debate about which conception of liberty is normatively the most desirable is beyond the scope of this article, as is a comprehensive analysis of all the existing conceptions of liberty in light of environmental issues. By way of simplification, I will focus on the compatibility criterion and draw on Philip Pettit's typology of liberty. This typology provides us with categories that are admittedly fairly broad, but that are prototypical of the current debates about liberty. My aim here is rather modest. First, it is to show that all conceptions of liberty are not equal in the face of ecological limits. Second, it is to argue that non-domination inspired accounts of liberty constitute strong candidates with respect to the compatibility criterion. At this early stage of the debate, such a coarse-grained level of analysis seems suitable.

4. Option-Freedom

Philip Pettit's typology of liberty includes two broad perspectives and three specific conceptions of liberty he considers representative of the most predominant schools of thought in philosophical debates about liberty. The two perspectives, *option-freedom* and *agency-freedom*, are two different ways to understand what it commonly means to be free or what one focuses on when talking about liberty. As we will see, these two perspectives can also plausibly be interpreted as two *dimensions* of liberty. The three conceptions he delineates are liberty as *non-limitation*, liberty as *non-interference* and liberty as *non-domination*.[20] In this section, I present option-freedom and the two first conceptions. In the next section, I describe agency-freedom and liberty as non-domination.

According to the option-freedom understanding, liberty is a property of options. In other words, the liberty of an individual is a function of the number of options at their disposal, as well as of their diversity and significance. It also depends on the character of the access the individual has to their options. Access might be physically blocked, or burdened by difficulties or penalties. This broad focus on options can however accommodate various different conceptions of liberty. This appears more clearly when we consider the nature of the influences that can affect the pool of options of an individual. These option-limiting influences can be *impersonal* (e.g. natural facts such as impassable mountains, laws of nature, sickness, etc.) or *interpersonal*. And within the category of interpersonal influences, these can be *intentional* (e.g. physical violence, threats, laws, etc.) or *positional*, that is due to one's position (or feeling) of inferiority in society (e.g. self-limiting behaviors). Now, depending on which types of influence count as freedom-restricting, different conceptions of liberty can be defined.[21]

Liberty as Non-Limitation

This is the simplest case, because according to this conception every option-limiting influence counts as a restriction on freedom, whatever its origin. Here, being free in the relevant sense means not only the absence of natural impediments, but also the absence of prohibition or other interpersonal hindrances, intentional or not. In other words, the source of the limitations is irrelevant. In its simplest sense, liberty as non-limitation is a

[20] Philip Pettit, *A Theory of Freedom: From the Psychology to the Politics of Agency* (Polity Press, 2001); and 'Agency-Freedom and Option-Freedom', *Journal of Theoretical Politics* 15:4 (2003), pp. 387–403.
[21] Pettit, 'Agency-Freedom and Option-Freedom'.

purely quantitative version of option-freedom (only the sheer number of options counts), which means that maximizing liberty amounts to maximizing the size of each individual's set of options.[22] Two things are worth mentioning here in connection with environmental issues.

The first one is that liberty as non-limitation has a tight connection with economic growth. Indeed, economic growth usually results in an increased number of options at the disposal of economic agents (admittedly with huge discrepancies). It provides them with a fuller set of consumption goods and services for a lower relative price, including numerous means to move around, get informed, and the like. As such, economic growth can be considered a vehicle for liberty, and this seems to be consistent with the widespread idea that a larger set of options to choose from on the market is generally a good thing for the consumers (even though various social scientists have argued that this intuition is in fact an illusion, or that it is culturally and historically situated).[23] The corollary of this view, on the other hand, is that every hindrance to economic growth is at the same time a hindrance to the development of freedom.

The second comment follows from the first one. It is that environmental issues, at least as they are approached in this article, might conflict with liberty as non-limitation, in line with the *liberty vs scarcity* view.

Environmental degradations may indeed lead to a drastic decrease of the number of options at our disposal, either through the exhaustion of natural resources, or through damaging weather events such as droughts, tornados, heat waves, and so on. From the perspective of the transition to sustainability, the goal is of course to prevent these consequences from unfolding, by staying at safe distance from the planetary boundaries. However, as we saw in the first section, doing so might well necessitate to implement policies curbing the economic output (e.g. the regulation of production and consumption), which would have the effect of reducing the quantity and diversity of options at the disposal of individuals. For instance, driving an SUV might be prohibited or simply become too expensive for most people, the availability of exotic and luxury foods might be limited, and more generally, the variety of items available in stores might be severely reduced. Hence, it seems fairly clear that environmental regulations of that kind would be conflicting with liberty as non-limitation. We must thus conclude that this conception of liberty is not compatible with the aim of the ecological transition as I understand it in this article.

Nevertheless, what seems possible with liberty as non-limitation is to justify environmental policies, and the ensuing limitations on choice, as a way to avoid even more stringent limitations in the future as a result of an ecological collapse. In this case, liberty would be limited in the name of liberty itself, in line with an established liberal principle. This *prudential justification* is, however, vulnerable to the usual objections against environmental policies. For one thing, the individuals facing a reduction of their

[22] According to Pettit, this conception of liberty is advocated by economists concerned with showing how the market performs in enhancing freedom (see Robert Sudgen, 'The Metric of Opportunity', Economics and Philosophy 14:2 (1998), p. 307) and left-libertarians (see Hillel Steiner, *An Essay on Rights* (Oxford: Blackwell, 1994); Peter Vallentyne, 'Left-Libertarianism and Liberty', in *Contemporary Debates in Political Philosophy*, edited by Thomas Christiano and John Christman (Malden and Oxford: Wiley-Blackwell, 2009), pp. 137–151).

[23] Barry Schwartz, *The Paradox of Choice: Why More Is Less* (New York: Harper Perennial, 2005); Sheena Iyengar, *The Art of Choosing* (New York: Twelve, 2011).

liberty as non-limitation due to environmental regulations (members of the current generation) would not be the same as those benefiting the most from these regulations (the global poor and future generations). For another, environmental regulations would have immediate effects with a high degree of confidence, whereas their benefits would be subject to considerable uncertainty. Furthermore, given the maximizing tendency of this conception of liberty, the acknowledgement of limits to growth, be it for a worthy cause, would translate into a permanent frustration of expectations. Hence, the prudential justification takes the shape of a politics of sacrifice and is likely to be seen as inherently coercive, which does not sound very appealing politically. As already mentioned, what we need instead is a conception of liberty that can thrive in a context of relative scarcity.

Liberty as Non-Interference

Let us turn now to another conception that is common among liberals and advocates of the free market. The background idea is that *interpersonal* interferences in the option set of individuals are morally worse than *impersonal* interferences, which seems plausible at first glance insofar as political liberty is at stake. According to liberty as non-interference, the only option-limiting influences that count as restrictions on freedom are of human origin and intentional (or at least negligent).[24] This conception goes back to Thomas Hobbes and has been put forward by Jeremy Bentham in the 18th century.[25] More recently, it has been endorsed by many liberal political thinkers. For instance, Isaiah Berlin writes: 'You lack political freedom only if you are prevented from attaining a goal by human beings. Mere incapacity to attain a goal is not lack of political freedom'.[26] This distinction between lack of freedom and incapacity to act has two upshots. First, liberty in this sense is a purely formal concept, insofar as individuals can be said to be free to do things they do not have the means to carry out. As Joel Feinberg writes: 'Both the rich and the poor in our free country are equally at liberty to buy Cadillacs'.[27] Second, according to this definition of liberty, legitimate and democratic laws are themselves considered impediments to freedom.[28]

As should be clear by now, liberty as non-interference is less exclusively focused on the sheer number of options at the disposal of individual than liberty as non-limitation. In that, it strays somewhat from a pure option-freedom perspective and allows for greater emphasis on the social and political relations within society. At first glance, this seems to be an advantage in ecological terms, since liberty is not directly proportional to the amount of consumption goods and services available. The existence of ecological limits seems thus to have less bearing on freedom understood this way.

[24] Pettit, 'Agency-Freedom and Option-Freedom'.

[25] Philip Pettit, *Republicanism: A Theory of Freedom and Government* (New York: Oxford University Press, 1997). John Locke's theory of liberty is more ambiguous. Some parts of his writings seem to match this conception, whereas others seem to be closer to a republican conception of liberty.

[26] Berlin, 'Two Concepts of Liberty', p. 169.

[27] Joel Feinberg, *Harm to Others* (New York: Oxford University Press, 1984), p. 8.

[28] Which of course does not mean that limitations of liberty cannot be justified. But recall that we are exclusively interested in the compatibility criterion here, not in the justification of political coercion. Also, there are variations within the family of non-interference that might not be best captured by this general account. As already mentioned, going into the details of each conception is beyond the scope of this article.

However, the problem with liberty as non-interference is different. It is that it makes it more difficult to regulate collective action problems.

This appears clearly in the case of global environmental issues. Most contemporary environmental problems, from resource scarcity to the disturbance of ecosystem functioning to climate change, will have large impacts on the set of options of individuals. These constraints are however impersonal in character in that they are either of natural origin or the unintended side-effect of the current socioeconomic system (most plausibly a mix of the two). In any case, environmental impacts on societies do not fit the definition of a liberty-limiting influence according to liberty as non-interference. However, whereas these impacts do not count as infringements of liberty, the policies aiming to prevent these impacts, such as described in section 2 (e.g. the regulation of production and/or consumption practices), do count as such. There is thus an asymmetry against regulation. Moreover, and as a result of this asymmetry, this conception of liberty is insensitive to the prudential argument. It does not allow to justify losses of liberty now for the sake of preventing more important losses in the future, because the latter would actually not count as losses of liberty. In that respect, liberty as non-interference acts as a brake on the transition to sustainability. Like liberty as non-limitation, but for other reasons, this very influential conception of liberty does not seem to be fully compatible with the goal of a transition toward sustainability.

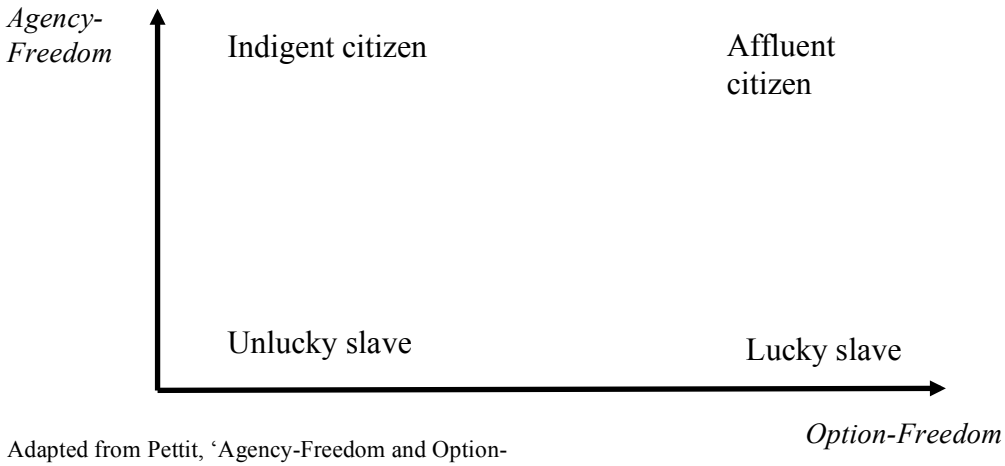
At this stage, the following objection might be raised. Historically, Western democracies have always been able to curtail liberty when necessary, for the purpose of achieving a goal of greater importance. The historical facts contradict my analysis and inaction toward environmental problems must therefore be due to some other reasons. However, first, I do not claim that the mainstream conception of liberty is the only reason explaining the current lack of motivation to tackle environmental problems.[29] My aim is much more modest. It is to investigate the implications of endorsing one conception rather than another. It is also to suggest that the currently predominant conception of liberty might play a role, among other factors, in our reluctance to act. Second, as already mentioned, I isolate the analysis of liberty for methodological reasons, but do not reject value pluralism. If it is true that a widely held conception of liberty is biased against regulation, it does not follow that regulation is outright impossible – other values might override liberty –, but only that the burden of justification becomes more demanding. Finally, I am not totally convinced that this historical argument is accurate. It seems that most limitations of liberty in western societies are either rather lax (e.g. taxation policies for social security or foreign aid) or instituted for the benefit of current citizens (e.g. security norms, criminal law, etc.), or were established in the face of an imminent threat and for a short period of time (e.g. rationing during wars or after natural disasters). The ecological transition will, however, involve new norms of production and consumption in the long term, and mainly for the benefit of future generations. As a result, it is arguably something quite different from what has happened in the recent past.

[29] For an analysis of moral and motivational issues in connection with climate change, see for example Stephen M. Gardiner, *A Perfect Moral Storm: The Ethical Tragedy of Climate Change* (New York: Oxford University Press, 2011).

5. Agency-Freedom

Let us turn now to the other broad perspective on freedom put forward by Pettit. Contrary to option-freedom, agency-freedom is a perspective that sees liberty as a property of the agent, and not of the options that they have at their disposal. This view draws on an ancient understanding of liberty, where being free is opposed to being a slave. As Philip Pettit puts it, agency-freedom amounts to 'not having to depend on the grace or mercy of others, being able to do one's own thing without asking their leave or permission'.[30] Liberty in this sense is the opposite of servitude and vulnerability. It is a kind of status, that of being protected against the arbitrary interferences of other individuals or the state. This can be achieved by providing constitutional and legal protections to individuals, along with institutions to which they can appeal in case of unlawful treatment, or by reducing important inequalities (that is, asymmetries of power). Importantly, this protection must be equally effective for all members of a society. Agency-freedom is thus an eminently political and relational kind of liberty that would mean nothing to an isolated individual.

To a certain extent, option-freedom and agency-freedom can vary independently from each other. This can be grasped easily when illustrated by a few fictional cases. Pettit enjoins us to consider the case of someone fully protected from the arbitrary interferences of others, say a citizen of some ideal democratic country. However, this person is so limited by poverty and physical disability that their set of options is very limited. This typically constitutes a case of agency-freedom without option-freedom (call it the *indigent citizen*). The symmetric case is that of a slave with a benevolent master. This slave is free to live his daily life as he sees fit, and enjoys a wide array of options (arguably like some imperial slaves in ancient Rome). Nevertheless, he remains vulnerable to a reversal of fortune at the whim of his master, who can decide at any moment to take everything back from him. This is a case of option-freedom without agency freedom (call it the *lucky slave*). These two examples, although sociologically unlikely, show that the two understandings of freedom do not always wax and wane together. They also show that both are plausibly valuable in their own right.



Adapted from Pettit, 'Agency-Freedom and Option-Freedom', p. 396.

[30] Pettit, 'Agency-Freedom and Option-Freedom', p. 394.

This distinction is of direct relevance when it comes to evaluating the impact of environmental limits on personal freedom. As we saw earlier, deprivations resulting from environmental degradations, or from regulations aimed at preventing them, have above all an impact on option-freedom. This can be the result of resource scarcity, extreme weather events or the need to avoid overshooting the carrying capacity of our planet. Yet, what Pettit's analysis of liberty shows is that there are other ways to understand what it is to be free than maximizing the quantity of options at the disposal of individuals. Moreover, as we will see shortly, agency-freedom is not hindered by laws and regulation when these meet certain criteria. This gives liberty as non-domination an advantage over the two other conceptions, from an environmental point of view.

Liberty as Non-Domination

There is at least one school of thought that has historically put emphasis on agency-freedom rather than option-freedom. It is the republican tradition, or at least a certain interpretation of it. According to this school of thought, what counts when it comes to liberty is not the absence of interference in itself, but the absence of domination. Here, being dominated means being vulnerable to the unchecked power of interference of others. In this sense, the fact that arbitrary interferences are merely *accessible* to the dominating agent counts as lack of liberty, even if interferences do not actually materialize (as in the case of the lucky slave). Accordingly, being free amounts to being protected from the arbitrary power of others. If this is not the case, an individual could have to resort to servility, flattery or self-censorship to avoid upsetting the person she depends on (husband, employer, teacher, government, etc.). These attitudes are symptoms of domination and are considered harmful to the dignity of human beings.[31]

This conception of liberty goes back to roman thinkers such as Cicero and Livy, and has been taken over during the Renaissance by Machiavelli and other political theorists. English republicans in the 16th century and authors of the *Federalist Papers* have also endorsed a similar conception, before it got overshadowed by liberty as non-interference in the 18th century.[32] Today, liberty as non-domination is usually referred to as neo-roman or neo-republican.[33]

According to this account, liberty as non-domination is primarily concerned with agency-freedom, which constitutes the very substance of liberty. Once again, freedom is above all a status. However, option-freedom constitutes a secondary concern and cannot be completely ignored, for at least two reasons. First, the laws and policies aiming to

[31] Pettit, *Republicanism*.

[32] *Ibid*.; Quentin Skinner, *Liberty before Liberalism* (Cambridge : Cambridge University Press, 1998); Skinner, 'Rethinking Political Liberty'.

[33] See also Maurizio Viroli, *Republicanism* (New York: Hill and Wang, 2001); Cécile Laborde and John Maynor (Eds.), *Republicanism and Political Theory* (Malden, MA: Blackwell, 2008). There is now a small literature devoted to the republican tradition and its relation to environmental problems. However, this literature usually focuses on issues such as republican constitutionalism, citizenship and the common good, and rarely tackles the question of liberty more than in passing. See for example: Steven Slaughter, 'The Republican State: An Alternative Foundation for Global Environmental Governance', in *The State and the Global Ecological Crisis*, edited by John Barry and Robyn Eckersley (Cambridge: MIT Press, 2005), pp. 207–227; John Barry, 'Towards a Green Republicanism: Constitutionalism, Political Economy, and the Green State', *The Good Society* 17:2 (2008), pp. 3–11.

protect citizens against the arbitrary interferences of others are themselves blocking a certain number of options, which means that the two perspectives are in fact not totally independent from each other.[34] Second, agency-freedom without any options at one's disposal, if it means something at all, would be a purely formal ideal. This seems to be politically rather unappealing, as the indigent citizen example shows. Expanding the range of (undominated) choices brings benefits in terms of liberty in that it broadens the scope of free agency. Hence, being free always comes down to not being dominated *relative to* a given set of options.[35]

As a result, an advocate of liberty as non-domination must answer two questions:

1. What are the formal criteria that allow us to identify domination?
2. What set of options should be protected from domination?

As we will see, the answers to both of these questions highlight the greater compatibility of liberty as non-domination with stringent ecological limits, and hence it superiority over the two other conceptions when it comes to transitioning toward sustainability.

1. As already mentioned, being dominated amounts to being *vulnerable* to the *arbitrary* interferences of other individuals, collectives or governments. First, the vulnerability criterion indicates that the mere possibility of arbitrary interference is sufficient to constitute domination, and hence a loss of freedom. It is enough for my purpose to describe vulnerability very generally, as at the same time a lack of external protection and an imbalance of power between an agent and the others. Second, the arbitrariness criterion allows to distinguish between domination and mere interference. Interferences that are non-arbitrary, even though they affect the set of options of individuals, do not constitute domination, and therefore do not count as a loss of liberty. According to Pettit, an act of interference is non-arbitrary 'to the extent that it is forced to track the interests and ideas of the person suffering the interference'.[36] Thus, in order for a State not to dominate its citizens, its decision-making procedures must allow for an effective and equally shared control of the citizens on decisions, or offer avenues for decision-makers to be held accountable. If a law is backed by such an institutional context, it is non-dominating and can be enacted without harming the liberty of the citizens.

There are thus three possible scenarios:

a. Domination with interference (e.g. the harsh master of the unlucky slave)
b. Domination without interference (e.g. the benevolent master of the lucky slave)
c. Interference without domination (e.g. the non-arbitrary law of a democratic state)[37]

[34] Pettit, *Republicanism*, pp. 104–105.

[35] *Ibid*., p. 76; Philip Pettit, *Just Freedom: A Moral Compass for a Complex World* (New York: W. W. Norton & Company, 2014), Ch. 3.

[36] Pettit, *Republicanism*, p. 55.

[37] Notice that in society 'neither interference nor domination' is not really possible, insofar as at least some interferences are necessary to protect individuals against domination.

From the point of view of liberty as non-domination, only a. and b. are genuine cases of non-liberty, with a. being worse than b. In other words, interference is an ill only when it is accompanied by domination. According the republican tradition, not only is the law not at odds with liberty, it is also constitutive of it. There can be no liberty where there are no laws and institutions, because they provide (when properly designed) the most effective protection against domination.

This constitutes a first advantage over liberty as non-interference, with respect to environmental issues. Provided that a non-dominating institutional arrangement is in place, liberty as non-domination is indeed not biased against regulation as liberty as non-interference typically is, which is especially useful when it comes to solving collective action problems. The shift of emphasis that the republican view proposes, to agency-freedom and away from option-freedom, means that it is possible to remain free under stringent environmental policies, in an appealing and meaningful sense. Once again, this is true only as long as these policies and their implementation are subject to open accountability and contestation.

There is however at least one potential difficulty here. If some particular environmental policy mainly benefits future people to the detriment of currently living citizens, the argument goes, it is hard to see why it would be deemed non-dominating. Indeed, it seems that this policy would not be 'forced to track the interests and ideas' of the people it directly affects (that is present people). Here, for reasons of space, I can only briefly sketch an answer.

The response has to do with the definition of arbitrariness. The literature usually distinguishes between two types: substantive arbitrariness (laws are arbitrary when they are enacted without taking the relevant interests, ideas, and worldviews, of affected parties into account) and procedural arbitrariness (laws are arbitrary when there is simply no procedural constrains imposed on their making). Now, from a purely substantive point of view, stringent environmental policies would arguably not be dominating the current generation, if ecological values and justice toward future generations were an important part of their worldview. However, most advocates of republicanism include at least a procedural component in their definition of arbitrariness.[38] In Pettit's work this takes the form of procedures allowing for a certain level of control by the citizenry on the making of laws.[39] In that respect, if regulations aiming to achieve sustainability meet this criterion they are not dominating, even if they are prejudicial to current citizens' immediate interests.

2. The second question a theory of liberty as non-domination must answer is that of what set of options the State ought to protect from domination. As already mentioned, increasing the quantity and variety of non-dominated choices at the disposal of individuals amounts to enhancing the use they can make of their agency-freedom. Option-freedom is therefore of importance, although only secondarily. However, there is no principle of maximization at work here, as is the case with liberty as non-limitation. The number and variety of options is not valuable in itself, but only instrumentally as a way for citizens to enjoy fully, and equally, their status of free persons.

[38] Frank Lovett, 'What Counts as Arbitrary Power?', Journal of Political Power 5:1 (2012), pp. 137–152.

[39] Pettit, *Republicanism*, p. 55; *Just Freedom*, pp. 111–115.

The ultimate goal of a republican polity is to allow individuals to 'walk tall' and be able to lead an independent and meaningful life.[40] Agency-freedom plays an important role in achieving this, but as we saw, it has to span across a set of options that is itself meaningful. However, there is no indication that maximizing the number of options is the right means to achieve liberty. On the contrary, two aspects of the republican perspective are arguably of importance here. The first one is relational equality and the second one is a kind of sufficiency threshold. Let us briefly discuss them in turn.

Recall that for freedom as non-domination to prevail, the protection from domination must be equally effective for all members of society. This points to a relational conception of equality, rather than equality of condition (wealth, resources, etc.) that allows individuals to relate to each other as free and equal citizens.[41] It suggests that what is important here is not having as many options as possible, but that a set of *particularly important* choices be protected and provided equally to everyone. Pettit's method to identify these important options more precisely is to derive them from the requirement that everybody must be able to enjoy them at the same time. Even though the exact content of this minimal set of options (he calls them 'basic liberties') depends on the cultural, technological and economic context of each society, some general categories can be proposed, such as liberty of thought, speech, association, and the like; or the liberty to move, change occupation or choose one's leisure activities.[42]

Now, individuals need resources to enjoy their basic liberties, but these resources can become scarce under certain circumstances. In the context of the ecological transition, for instance, access to some natural resources (such as fossil fuels, materials and food products) might be restricted. Similarly, an economy without growth would plausibly have fewer goods and services to offer. Under these conditions, the ability of citizens to move, to change occupation or to spend their leisure time as they see fit, might be limited. From a republican point of view, this is arguably not a problem as long as citizens have a decent amount of choice with respect to their basic liberties. The aim is nothing more than providing each individual with the means to live a meaningful life, on an equal footing with their peers. Doing so in a society that strives to stay within stringent ecological limits might require giving priority to fundamental needs and important options such as basic liberties over more trivial options such as consumption choices.[43] However, as should be clear by now, this does not prevent individuals from enjoying fully their liberty as non-domination.

As a result, the answer to the second question shows that liberty as non-domination has two decisive advantages over liberty as non-limitation. First, unlike

[40] This corresponds to what Pettit calls the *eyeball test*, namely that everyone should be able to look the others in the eyes 'without reason for fear of deference' (Pettit, *Just Freedom*, p. 99).

[41] See Elizabeth S. Anderson, 'What Is the Point of Equality?', *Ethics* 109:2 (1999), pp. 287–337.

[42] Pettit, *Just Freedom*, Ch. 3. This same idea also applies to states within the international order. In this case, Pettit calls the minimal set of options that must be protected from domination 'sovereign liberties'. Interestingly, for him, this system of co-enjoyable sovereign liberties implies that the exploitation of national and common resources must be constrained by a set of international rules ensuring the sustainability of practices (*ibid*., pp. 162-165).

[43] This shows that liberty as non-domination is plausibly highly compatible with capabilities floors and ceilings. For an excellent analysis of basic capabilities and autonomy in the context of environmental issues, see Hannis, *Freedom and Environment*.

liberty as non-limitation, it has no maximizing tendency that ties it to economic growth. Moreover, it provides a plausible explanation for why it is appealing, despite this lack of maximization (in short, because the option-freedom component is only instrumentally valuable, as a way to support the agency-freedom component). Second, it establishes a hierarchy between the options that are central to the functioning and dignity of individuals in society, and the options that are more trivial. In sum, liberty as non-domination is more compatible with the existence of ecological limits than both liberty as non-limitation and liberty as non-interference.

Conclusion

Humanity is confronting various environmental issues – climate change, biodiversity loss, resource exhaustion, etc. – that represent serious threats to the well-being and the stability of numerous societies. As the planetary boundaries model shows, tackling them all would mean significantly curbing anthropogenic material and energy flows, which could in turn stall economic growth. On this basis, it has been argued that environmentalism was at odds with individual liberty. However, this is not true of every conception of liberty.

A simple conceptual analysis shows that liberty as non-domination is more compatible with ecological limits than the two other conceptions considered. Adopting it as a political ideal would thus facilitate the transition from the high-energy profile of current societies towards sustainability. On the one hand, unlike liberty as non-interference, liberty as non-domination is not biased against the regulation of collective action problems. On the other hand, it does not conflict with a reasonable reduction of the sheer quantity of choice available on the market. Liberty as non-domination is primarily social and political in nature, in that it is defined by the type of relation that ties individuals with one another and with their government. Consequently, it can flourish even in a context of stringent ecological norms and limits, provided that these allow for institutional stability and reasonable individual agency.[44]

Augustin Fragnière, University of Washington
afragne@gmail.com

Bibliography

Anderson, Elizabeth S. 'What Is the Point of Equality?', *Ethics* 109:2 (1999), pp. 287-337.

Arrow, Kenneth., Bert Bolin, Robert Costanza, Partha Dasgupta, Carl Folke, *et al*. 'Economic Growth, Carrying Capacity, and the Environment', *Science* 268: 5210 (1995), pp. 520-521.

[44] An earlier version of this paper was presented at the ISEE annual meeting in New York City, in June 2016. I would like to thank the audience of this conference and two anonymous reviewers for their helpful comments. I also gratefully acknowledge support from the Swiss National Science Foundation (Grant P300P1_161110).

Barnosky, Anthony. D., Elizabeth A. Hadly, Jordi Bascompte, Eric. L. Berlow, *et al*. 'Approaching a State Shift in Earth's Biosphere', *Nature* 486 (2012), pp. 52-58.

Barry, John. 'Towards a Green Republicanism: Constitutionalism, Political Economy, and the Green State', *The Good Society* 17:2 (2008), pp. 3–11.

Berlin, Isaiah. 'Two Concepts of Liberty', in Isaiah Berlin, *Liberty*, edited by Henry Hardy. Oxford: Oxford University Press, 2002, pp. 166–217.

Carter, Ian. 'Debate: The Myth of "Merely Formal Freedom"', *Journal of Political Philosophy* 19:4 (2011), pp. 486-495.

Carter, Ian, Matthew H. Kramer, and Hillel Steiner (Eds.). *Freedom: A Philosophical Anthology*. Malden: Blackwell, 2007.

Dagger, Richard. 'Freedom and Rights', in *Political Theory and the Ecological Challenge*, edited by Andrew Dobson and Robyn Eckersley. Cambridge: Cambridge University Press, 2006, pp. 200-215.

Feinberg, Joel. *Harm to Others*. New York: Oxford University Press, 1984.

Gardiner, Stephen M. *A Perfect Moral Storm: The Ethical Tragedy of Climate Change*. Environmental Ethics and Science Policy Series. New York: Oxford University Press, 2011.

Geus, Marius de. 'The Environment versus Individual Freedom and Convenience', in *Liberal Democracy and Environmentalism*, edited by Marcel L. J. Wissenburg and Yoram Levy. London: Routledge, 2004, pp. 87-99.

Hannis, Michael. *Freedom and Environment. Autonomy, Human Flourishing and the Political Philosophy of Sustainability*. New York: Routledge, 2016.

Hardin, Garrett. 'The Tragedy of the Commons', *Science* 162:3859 (1968), pp. 1243-1248.

Hediger, Werner. 'Reconciling "weak" and "strong" Sustainability', *International Journal of Social Economics* 26: 7/8/9 (1999), pp. 1120-1144.

Iyengar, Sheena. *The Art of Choosing*. Reprint edition. New York: Twelve, 2011.

Jackson, Tim. *Prosperity Without Growth? Economics for a Finite Planet*. London: Earthscan, 2011.

Kallis, Giorgios, Christian Kerschner, and Joan Martínez-Alier. 'The Economics of Degrowth', *Ecological Economics* 84 (2012), pp. 172-180.

Klein, Naomi. *This Changes Everything: Capitalism vs. The Climate*. New York: Simon & Schuster, 2014.

Laborde, Cécile, and John Maynor (Eds.). *Republicanism and Political Theory*. Malden and Oxford: Blackwell, 2008.

Lovett, Frank. 'What Counts as Arbitrary Power?', *Journal of Political Power* 5:1 (2012), pp. 137-152.

Maggio, G., and G. Cacciola. 'When Will Oil, Natural Gas, and Coal Peak?', *Fuel* 98 (2012), pp. 111–123.

Martínez-Alier, Joan, Unai Pascual, Franck-Dominique Vivien, and Edwin Zaccai. 'Sustainable de-Growth: Mapping the Context, Criticisms and Future Prospects of an Emergent Paradigm', *Ecological Economics* 69:9 (2010), pp. 1741-1747.

Martin, Jean-Louis, Virginie Maris, and Daniel S Simberloff. 'The Need to Respect Nature and Its Limits Challenges Society and Conservation Science', *PNAS* 113: 22 (2016), pp. 6105-6112.

Meadows, Donella H., Jørgen Randers, Dennis L. Meadows, and William W. Behrens. *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind*. 2nd edition. New York: Universe Books, 1974.

Meadows, Donella, Jørgen Randers, and Dennis Meadows. *Limits to Growth: The 30-Year*

Update. White River Junction, Vt.: Chelsea Green Publishing, 2004.

Menzel, Susanne, and Tom L. Green. 'Sovereign Citizens and Constrained Consumers: Why Sustainability Requires Limits on Choice', *Environmental Values* 22:1 (2013), pp. 59-79.

Oreskes, Naomi, and Erik M. Conway. *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming*. Reprint edition. New York: Bloomsbury Press, 2011.

Peeters, Wouter, Jo Dirix, and Sigrid Sterckx. 'The Capabilities Approach and Environmental Sustainability: The Case for Functioning Constraints', *Environmental Values* 24: 3 (2015), pp. 367-389.

Pettit, Philip. 'Agency-Freedom and Option-Freedom', *Journal of Theoretical Politics* 15:4 (2003), pp. 387-403.

Pettit, Philip. *A Theory of Freedom: From the Psychology to the Politics of Agency*. Cambridge: Polity Press, 2001.

Pettit, Philip. *Just Freedom: A Moral Compass for a Complex World*. New York: W. W. Norton & Company, 2014.

Pettit, Philip. *Republicanism: A Theory of Freedom and Government*. New York: Oxford University Press, 1997.

Ragnarsdottir, Kristin Vala. 'Rare Metals Getting Rarer', *Nature Geoscience* 1:11 (2008), pp. 720-721.

Rockström, Johan, Will Steffen, Kevin Noone, Åsa Persson, F. Stuart Chapin, *et al*. 'Planetary Boundaries: Exploring the Safe Operating Space for Humanity', *Ecology and Society* 14:2 (2009a), p. 32.

Rockström, Johan, Will Steffen, Kevin Noone, Åsa Persson, F. Stuart Chapin, *et al*. 'A Safe Operating Space for Humanity', *Nature* 461:7263 (2009b), pp. 472-475.

Schwartz, Barry. *The Paradox of Choice: Why More Is Less*. New York: Harper Perennial, 2005.

Skinner, Quentin. *Liberty before Liberalism*. Cambridge: Cambridge University Press, 1998.

Skinner, Quentin. 'Rethinking Political Liberty', *History Workshop Journal* 61:1 (2006), pp. 156-170.

Slaughter, Steven. 'The Republican State: An Alternative Foundation for Global Environmental Governance', in *The State and the Global Ecological Crisis*, edited by John Barry and Robyn Eckersley. Cambridge: The MIT Press, 2005, pp. 207-227.

Steffen, Will, Katherine Richardson, Johan Rockström, Sarah. E. Cornell, Ingo Fetzer, *et al*. 'Planetary Boundaries: Guiding Human Development on a Changing Planet', *Science* 347: 6223 (2015), DOI: 10.1126/science.1259855.

Steiner, Hillel. *An Essay on Rights*. Oxford: Blackwell, 1994.

Sudgen, Robert. 'The Metric of Opportunity', *Economics and Philosophy* 14:2 (1998), p. 307-337.

UNEP. 'GEO 5 - Global Environment Outlook'. Nairobi: UNEP, 2012. Online at: http://web.unep.org/geo/assessments/global-assessments/global-environment-outlook-5 (accessed 2017-01-31).

Vallentyne, Peter. 'Left-Libertarianism and Liberty', in *Contemporary Debates in Political Philosophy*, edited by Thomas Christiano and John Christman. Malden and Oxford: Wiley-Blackwell, 2009, pp. 137-151.

Viroli, Maurizio. *Republicanism*. New York: Hill and Wang, 2001.

World Commission on Environment and Development. *Our Common Future*. Oxford and New York: Oxford University Press, 1987.