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## A LEGAL CONVENTIONALIST APPROACH TO POLLUTION

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**ABSTRACT.** There are no moral entitlements with respect to pollution prior to legal conventions that establish them, or so I will argue. While some moral entitlements precede legal conventions, pollution is part of a category of harms against interests that stands apart in this regard. More specifically, pollution is a problematic type of harm that creates liability only under certain conditions. Human interactions lead to harm and to the invasion of others' space regularly, and therefore we need an account of *undue harm* as a basis of assigning legal protections (rights) and obligations (duties) to different agents, which creates standards for holding those agents responsible for harm. Absent such positive standards with respect to pollution at the domestic or international level, it does not make sense to hold agents responsible. This fact has two fundamental implications. First, contrary to what some defenders of environmental justice argue, we cannot hold people responsible for polluting without a system of legal rights in place that assigns entitlements, protections, and obligations, and second, contrary to what opponents of environmental regulation claim, the lack of moral entitlements to pollute creates room for quite extensive legal restrictions on people's ability to pollute for the sake of the environment and human health. Indeed the scope of those restrictions is wide and open-ended.

There is no right to pollute. The advocates of environmental regulation proclaim this loudly, and they are right to do so. They are right in the sense that there is no pre-political, natural right to use our liberty to harm other people. But they are wrong to conclude that therefore those who pollute bear full responsibility for the effects of their activities. While they bear some responsibility, how much depends on regulations established by communities that define

and protect both rights to engage in activities that may cause pollution, and to be protected against the harms of pollution.<sup>1</sup>

Thus, there are no moral entitlements with respect to pollution (for or against) prior to legal conventions that establish them, or so I will argue. While some moral entitlements precede legal conventions, pollution is part of a category of harms against interests that stands apart in this regard. This fact has two fundamental implications. First, contrary to what some defenders of environmental justice argue, we cannot hold people responsible for polluting without a system of legal rights in place that assigns entitlements, protections, and obligations, and second, contrary to what opponents of environmental regulation claim, the lack of moral entitlements to pollute creates room for quite extensive legal restrictions on people's ability to pollute for the sake of the environment and human health. Indeed the scope of those restrictions is wide and open-ended.

First I describe the thought experiment of a common pasture to provide a model for how to think about pollution and boundary crossing in the absence of a developed legal system. The purpose of the thought experiment is to show that absent clear legal rules, we lack rules of thumb for knowing how much interference is justified, *if any*, with pollution causing activities, and how much protection from harm, *if any*, people are entitled to. The following section defends the model by drawing a distinction between different kinds of harms and interests against being harmed. I then present a contrast with existing approaches to pollution that presuppose strong pre-existing moral entitlements against being harmed or against being interfered with one's actions. I consider some classic libertarian views on pollution as well as more standard accounts provided by Robert Goodin, Peter Singer and Simon Caney. The final sections defend legal conventionalism as a politically negotiated solution to the problem of pollution and draw further implications.

## I. ENTITLEMENTS IN THE COMMON PASTURE

Pollution is a specific type of harm. In the absence of positive laws, we have no basis to judge whether someone has imposed undue harm that constitutes a rights violation on others. To capture this

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<sup>1</sup> By pollution I mean the release of fumes, air particles, chemicals, and contaminants into the air, land, and water with the potential to damage property, the environment, and human health.

point, imagine a little isolated village of a couple dozen families. They all have houses adjoining a large pasture that they use in common to raise livestock. The main water source of the village is a river that meanders through the pasture. In the beginning, the villagers raise a small number of cattle, horses and sheep. The pasture is large enough so that the effects of their use are hardly noticeable.

But as the village grows, and as the use of the pasture diversifies, so does the pressure on common resources. One villager builds a blacksmith shop next to the river so he can have ready access to the water. Another villager opens a business tanning cowhides to sell leather locally and to far-off villages. The waste from these shops is sometimes dumped in the river, harming the health of some of the people in the village who use the water downstream. More animals means more manure that also seeps into the river, creating additional health risks for the village inhabitants. The ones affected start to complain and ask that something be done.

There are different ways to think about what the best solutions are to the village's emerging problems. Some villagers will demand a stop to the use of commons resources as a dumping ground. Others will argue that no interference with people's industrious use of the land is warranted. Both such reactions seem rash and unwarranted. At this stage of the social life, it is premature to know how much interference with some people's actions is justified for the sake of preventing harm to others. The villagers cannot claim rights to pollute or against being polluted, or so I will argue. Talk of rights, obligations, and responsibilities will not make sense until the villagers gather evidence, evaluate competing interests, and make new rules to solve the problems confronting them.

Perhaps they will choose to keep the pasture in common, but create rules about its use, such as how many cattle each person is allowed to graze, where to dump the waste, and so on. Or perhaps they will choose to divide up plots of land among the villagers and adopt a strict 'no spillage' rule from one plot to the next that also applies to common areas, so that villagers who produce waste will have to find a remote dumping ground. In the process of coming up with solutions to their problems, the villagers will have to define what counts as harm, the rules for permissions and restrictions, and to elaborate on the consequences of not obeying those rules and on

the mechanism for addressing conflicts. The rules and their arbitration system will produce judgments about whether one is entitled to engage in certain activities, what kind of precautions one must take so that those activities do not have harmful effects on others, and what redress measures are available in cases of non-compliance.

Whatever their options, the villagers will have created positive rules that (further) regulate their common life together. If they can enforce those laws with the backing of a legal system, they will have created in effect rights and obligations relating to polluting activities. Perhaps in some instances they will allow certain kinds of pollution (cows using the pasture) if the outcome (the seepage into the river) is below a certain harmful threshold for human health. Or perhaps they will prohibit certain kinds of activities completely, such as dumping chemicals into the water stream, because they pose the risk of severe damage to human health. The process of creating common rules to define and manage harm will generate permissions/liberty rights to pollute and protections/claim rights against being polluted. The lines drawn will be different for different activities, and the villagers will use them as the basis for holding people responsible for their actions.

Notice a few things about this thought experiment. First, there are no obvious, uniquely correct ways of assigning permissions and protections. While some solutions will make more sense than others, there are various *right ways* of addressing the problems that arise in the village. Commons create opportunities for multiple equilibria.<sup>2</sup> The equilibrium the villagers will settle on will depend on prior patterns of compliance, history, and local norms about appropriate behavior.

Second, this means that the balance of permissions and restrictions will be different in different villages even under similar circumstances. A justifiable balance will be reached when all the interests at stake are given their due and the procedures for reaching agreements are acceptable to most inhabitants in the community.<sup>3</sup>

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<sup>2</sup> Elinor Ostrom discusses the many practical solutions people in different parts of the world have adopted to deal with commons problems, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge University Press, 1990).

<sup>3</sup> We need not agree what the interests are, how to give each interest its due, and what procedural hurdles policies must pass in order to agree that policies that fail to protect significant interests of the people affected, or which are adopted arbitrarily, will not be justifiable on one or more dimension.

The variation may very well be wider than what would be reasonable to expect under the circumstances. For example, some villages will choose not to regulate environmental pollution at all, because say, those affected downstream are of lower socio-economic standing, and their problems do not count for much in the eyes of the village elites. Or they will choose not to regulate because they believe that while there are bad things happening in the village, they are not caused by pollution, but by the evil eye, or the sinfulness of the locals.

At the other extreme, some villages might choose to impose drastic restrictions which in effect end up prohibiting productive occupations and activities, and therefore closing economic opportunities for some, with repercussions to all. Such restrictions would deprive individual villagers of occupations that the community as a whole has an interest in being pursued. Furthermore, the restrictions would interfere with a general liberty interest everyone has in having a choice whether to pursue the prohibited occupations and activities.<sup>4</sup> This interest is affected every time options are closed or made prohibitively expensive by regulation. In between these two extremes, lies a range of sensible, moderate approaches that take everybody's interest into account and attempt a delicate balancing act between reducing harm from environmental damage and allowing people to engage in productive activities.

Third, in the common pasture there is no pre-political standard for assigning blame, responsibility for compensation, or entitlements to being compensated for harm caused by pollution. This is true even if villagers enjoy various pre-political, moral rights, such as rights to property or rights to bodily integrity, that offer protections against standard threats such as theft or physical assault. A moral right against physical assault protects a fundamental interest that people have in physical security, and there is no *balancing interest* served by people being allowed to assault each other. The case of harm caused by pollution is different. The difference consists in the fact that pollution can affect a person's fundamental interest in bodily integrity or in her property, but the case for restricting it must

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<sup>4</sup> Joel Feinberg, *Harm to Others* (Oxford University Press, USA, 1987), 206. In Feinberg's words: 'Whenever a person's interest in X is thwarted, say by legal prohibitions against anyone doing, pursuing or possessing X's, an interest in liberty is also impeded, namely, the interest in having a choice whether to do, possess or pursue X or not'.

be balanced against legitimate interests people have in engaging in some of the pollution-causing activities. There are examples of pollution that come close to physical assault, such as when someone poisons a water source with the sole intent of causing harm, and there is no other, *legitimate* interest at stake, but the pollution problems the villagers confronted were (and typically are) not of this kind. What explains this difference?

## II. LEGAL CONVENTIONALISM AND POLLUTION

Regulating pollution entails regulating a class of harms with the same structure. This class comprises tragedy of the commons problems and other scenarios in which people have an interest in engaging in activities that cumulatively have a tendency to cause harm, but prohibiting these activities causes harm to the people who have an interest in engaging in them. To clarify people's rights and responsibilities in these situations, communities must resort to the balancing of conflicting interests. In most cases, there is no obvious way to strike the balance between allowing activities that people have an interest in pursuing, and limiting the effects those activities have on others, as I will show below. Therefore communities must rely on legal conventions about what is permissible, what counts as harm, what kinds of protections are needed, and for whom or what (people? animals? the rainforest?).<sup>5</sup>

Not all rights are like this. Some moral rights protect interests that are so important no balancing is required to determine if we enjoy those protections as legal rights. I will assume for the sake of the argument a standard account of moral rights. According to this account, moral rights are rights that protect vital welfare interests against standard threats.<sup>6</sup> We have pre-political rights to bodily integrity, to property, and to the liberty to shape our lives as we see fit.<sup>7</sup> We require legal conventions to adequately determine the

<sup>5</sup> Intellectual property rights have a similar structure. Although people's views about the desirability of intellectual property rights cover the full spectrum, a conventional approach seems to offer the best solution to balancing the authors' interest in benefiting from their ideas and creations with the public's interest in putting those ideas to different and productive uses.

<sup>6</sup> James Nickel, *Making Sense of Human Rights*, 2nd ed. (Wiley-Blackwell, 2007); Charles R. Beitz, *The Idea of Human Rights* (Oxford University Press, USA, 2009); Henry Shue, *Basic Rights* (Princeton University Press, 1996).

<sup>7</sup> Property rights are pre-political if one adopts the original appropriation justification of property claims.

proper boundaries of those rights, that is, *to specify* them correctly. We do not require legal conventions to tell us whether we have those rights in the first place. Entitlements to pollute and protections against pollution are different. In the process of assessing the proper balance between conflicting interests, communities both *create and specify* rights and obligations with respect to pollution, usually via specifying other rights whose exercise is impeded by pollution.

Conventionalism is the view that certain phenomena arise out of conventions, that is, explicit or implicit agreements, promises, contracts or decisions made by a community.<sup>8</sup> By extension, legal conventionalism is the view that certain duties and rights, such as in our case permission to pollute or protections against pollution, arise out of legal conventions, that is legal decisions made by the community or the relevantly situated people in that community (judges, legislators). One can be a thoroughgoing legal conventionalist and assert that all rights and responsibilities arise this way. I endorse no such sweeping view here. On the contrary, I take on the view that we have rights and obligations to treat each other in certain ways by virtue of our common humanity that both precede and transcend political communities. Among them are the right to bodily integrity and certain (but not all) forms of property in material objects. Such a position is compatible with a restricted legal conventionalism, one that sees certain rights and obligations arising solely out of processes of social agreement, widely construed. My view is also compatible with, but does not require, social agreement arising out of a state's legal institutions. Legal conventions can arise in communities with dispersed and decentralized systems for the creation of legal rules. Communities whose legal systems are based on common/customary and treaty law, such as the international community, qualify.

Pollution as a type of harm is a violation of people's interests. While all harms are violations of interests, not all harms are *important enough* violations of someone's interest to warrant either moral opprobrium or legal censure. This is indeed the distinction that Joel Feinberg draws in *Harm to Others*. The interests of different people will inevitably come into conflict. Legally we can try to minimize the

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<sup>8</sup> For a solid introduction to conventions and conventionalism see Michael Rescorla, 'Convention', *The Stanford Encyclopedia of Philosophy* (Spring 2011 Edition), Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/spr2011/entries/convention/> (accessed July 8, 2014). As distinct from conventionalism that arises out of agreement, a form of conventionalism is generated by *conventional use* (the value of money, or the meaning of words), meaning shared practices that over time imprint meaning or value to objects or activities.

harm by making judgments about the relative importance of different kinds of interests and the trade-offs we are ready to bear.<sup>9</sup> And because there is no manual that assigns exact weights to various interests, we must rely on the fallible judgment of the community legislators. The implication of this legal conventionalism is that (1) not all harms are rights violations, and (2) the law cannot always aim to (and it would be inadvisable to) reduce all harms to zero. In fact, 'virtually every kind of human conduct can affect the interest of others for better or worse to some degree,' and without fine tuning our assessments of the types and degree of harm that merits proscription, we would create a society with a large, illegitimate and inappropriate amount of interference into people's lives.<sup>10</sup>

One implication of the idea that not all harms are rights violations is that for the class of harms that are considered rights violations according to legal conventions, moral responsibility and legal responsibility are entangled. 'Wrong' or 'harmful' is that which goes above a legal threshold. Thresholds set standards for allocating permissions, protections and liabilities. This is the case with activities that have a tendency to cause harm, but whose prohibition would also cause harm to the people who have an interest in engaging in them.<sup>11</sup> The standard for responsibility for harm is set by the legislator who judges the relative importance of conflicting interests. The point is not simply that there are pre-political rights against pollution that lack specificity. Rather, harms caused by pollution are of a different kind, and rights to be protected arise only out of positive conventions that create, define, and specify them.

The common pasture example seeks to clarify our intuitions about pollution as precisely the kind of harm for which the standard for moral responsibility cannot be disentangled from legal responsibility as judged by a set of positive rules. Pollution is produced by people pursuing their interests through a variety of activities that individually or in the aggregate have a tendency to cause harm to the people who are affected by them. On the one hand, there is nothing fundamentally wrong or rights violating (in the moral sense) in driving cars, running factories or producing energy.<sup>12</sup> On the other

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<sup>9</sup> Feinberg, *Harm to Others*, 35.

<sup>10</sup> *Ibid.*, 12.

<sup>11</sup> *Ibid.*, 203.

<sup>12</sup> *Ibid.*, 230.



hand, many of these activities have consequences that damage common resources, such as the air we breathe and the water we drink. An interest in a healthy life is a fundamental human interest that can be invaded by activities with negative environmental consequences. Protections, restrictions, and permissions create legal entitlements and obligations related to pollution causing activities, and they can be determined after a careful balancing of these different interests. Standards for imputing harms and responsibility must be based on such legal entitlements and prohibitions.

The balancing of interests will vary with activity and type of effects. Some will be judged so harmful as to justify outright prohibition, regardless of the benefits. The use of asbestos in construction materials, or lead in paint are among the activities that have been prohibited due to their serious consequences to human health. For other kinds of harmful pollution, the effects will be so small as to lack a justification for restrictions, even when the interest of engaging in those activities is relatively minor. Smoke crossing fences from neighbors barbecuing in their backyard is such a case. And we can also distinguish between different contexts or spaces in which the activity in question takes place. Barbecuing indoors has different effects than smoking outdoors.

Other existing moral and political rights will serve as inputs to help structure reasoning about what constitutes harmful pollution and how to apportion responsibility for its effects. For example, pre-existing moral rights may serve as a justification that the community takes action to rectify perceived harm. Or they may serve to characterize the harm being caused. Additionally, there will be a variety of moral ideals beside rights that will serve as guideposts in reasoning about the boundaries of pollution, such as fairness, proportionality, equality, inclusiveness, and human flourishing. Moral reasoning is an unescapable part of law and public policy, and this is as true of pollution regulation as is of other policy areas.<sup>13</sup>

Nonetheless, the fact that we have some moral rights, and a moral language to describe and reason about harms more generally, does not entail that we have moral entitlements with respect to pollution (rights to pollute or rights against pollution). Yet this is not what prominent views on environmental justice argue. On the

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<sup>13</sup> I thank an anonymous referee for emphasizing this point.

contrary, some assert strong, pre-political entitlements to protections against pollution, and pre-political benchmarks for the responsibility to compensate.

### III. AGAINST CONVENTIONALISM?

Libertarians draw strong invisible lines around private property and believe that few, if any, encroachments on individuals' right to use their land as they see fit are ever justified. Property rights as natural rights are considered relatively inviolable because they protect an extensive sphere of personal freedom from social intrusion and because such protection is essential for individual welfare and for economic and social progress.<sup>14</sup> Murray Rothbard, a prominent advocate of libertarianism, says that 'the central core of the libertarian creed, then, is to establish the absolute right to private property of every man: first, in his own body, and second, in the previously unused natural resources which he first transforms by his labor.'<sup>15</sup> Property rights should not be limited or redistributed for short-term gains. Not only would such imitation violate individual rights, but they would also reduce the ability of individuals to flourish and to engage in a mutually beneficial system of social cooperation.

Rothbard makes clear that private property regulation is unwelcomed: 'since the libertarian also opposes invasion of the rights of private property, this also means that he just as emphatically opposes government interference with property rights or with the free market economy through controls, regulations, subsidies, or prohibitions'.<sup>16</sup> Ostensibly, regulations aimed at curbing pollution are part of unjustified 'invasions' of private property.

The language of 'absolute' property rights would seem to license individual and industrial polluters alike to soil the water, dirty the air, and harm other people's bodies.

It would be easy, but mistaken, to infer from this strong defence of private property rights and opposition to social regulation that libertarians are in favor of allowing individuals and corporations to

<sup>14</sup> Robert Nozick, *Anarchy, State, and Utopia* (Basic Books, 1977), 26–53; Milton Friedman, *Capitalism and Freedom: Fortieth Anniversary Edition*, 40 (Chicago: University of Chicago Press, 2002), 7–21.

<sup>15</sup> Murray Newton Rothbard, *For a New Liberty: The Libertarian Manifesto* (Ludwig von Mises Institute, 1978), 47.

<sup>16</sup> *Ibid.*, 27–28.

use their land and their natural resources as they see fit, and therefore engage in unlimited, unregulated pollution.

This is not the kind of license that libertarians believe property rights grant people. Here is Rothbard again: ‘The vital fact about air pollution is that the polluter sends unwanted and unbidden pollutants – from smoke to nuclear radiation to sulfur oxides – *through* the air and into the lungs of innocent victims, as well as onto their material property. All such emanations which injure person or property constitute aggression against the private property of the victims.’<sup>17</sup> Far from giving blanket permission to property owners to pollute to their heart’s desire, libertarian rights create quite stringent constraints on the permissible ways in which people can enjoy their property. Such restrictions are so severe, that even very small, non-consensual boundary crossing of smoke, air particles, or chemicals can be considered as an unjustified interference with one’s property and are therefore liable to be made illegal. It would seem that libertarian property rights are at once too permissive and too restrictive. This is a point made forcefully both by David Sobel and Matt Zwolinski recently.<sup>18</sup>

How then to reconcile the idea of property as unfettered license with the idea of property as a shield, including a shield against pollution and bodily harm? Libertarians believe the solution lies again with property rights. Fully privatizing natural resources, by extending the existing system of property rights in land to all existing common resources, such as mineral reserves, highways, air, and water, including the oceans, will lead to a system that encourages the internalization of costs, and the reduction or elimination of harmful effects on others. The authors of the sophisticated *Free Market Environmentalism*, Terry L. Anderson and Donald R. Leal, describe the free market approach to pollution as one that ‘establishes rights to clean air or rights to dump into the air, and allows the holders of those rights to bargain over the optimal mix of competing uses, in this case clean air and garbage disposal’.<sup>19</sup> Thus they would object to my interpretation of the primitive common pasture example on the

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<sup>17</sup> *Ibid.*, 319.

<sup>18</sup> David Sobel, ‘Backing Away from Libertarian Self-Ownership,’ *Ethics* 123, no. 1 (2012): 32; Matt Zwolinski, ‘Libertarianism and Pollution,’ in *The Routledge Companion to Environmental Ethics*, ed. Benjamin Hale and Andrew Light (Routledge Press, 2015), 3, 9–11.

<sup>19</sup> Terry L. Anderson and Donald R. Leal, *Free Market Environmentalism*, Revised edition (New York, NY: Palgrave Macmillan, 2001), 126.

grounds that because property rights are not fully privatized, individuals lack incentives to fully internalize the costs they impose on others.

Many pollution and environmental problems are the result of tragedy of the commons scenarios in which land or resources are typically held in common and end up overexploited and underprotected. Anderson and Leal are right to argue (with convincing examples) that more adequately specified property rights regimes for those commons would lead a long way toward reducing the environmental impact of overuse. It is an underappreciated feature of private property rights and markets that they encourage people to internalize externalities, that is, to bear the costs of the negative effects their actions have on third parties.<sup>20</sup> Yet, a large problem looms in the libertarian treatment of pollution.

There are serious limits to the ability of any system of private property rights to encourage property owners to internalize the effects of pollution and to prevent it from crossing property boundaries. Think of the air or ocean water. Although various libertarians have proposed imaginative ways of creating property rights in the air and homesteading the ocean, and are encouraged by technologically forward environmental entrepreneurs with visionary proposals, it is hard to imagine such solutions to be feasible.<sup>21</sup> As long as the air circulates freely, so will pollution. The implication of this limitation is momentous: when it comes to pollution, a system of property rights must be complemented with restriction on the appropriate use of both private and common property to minimize harm caused to innocent third parties.

Think for example of various forms of intrusion on our bodies and property that Rothbard labels as 'aggression.' To describe any non-consensual property boundary crossing as aggression and to therefore call for it to be prohibited is to take the idea of property as a shield too far. The air a person next to you exhales, which as David Friedman pointed out, contains carbon dioxide, can be considered an

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<sup>20</sup> David Schmidtz, 'The Institution of Property,' *Social Philosophy and Policy* 11, no. 02 (1994): 42–62; Carol M. Rose, 'Liberty, Property, Environmentalism,' *Social Philosophy and Policy* 26, no. 02 (2009): 1–25.

<sup>21</sup> Anderson and Leal, *Free Market Environmentalism*, 107–142. For a measured assessment of the limits and possibilities of such proposals, see Daniel H. Cole, 'Clearing the Air: Four Propositions about Property Rights and Environmental Protection,' *Duke Environmental Law & Policy Forum* 10, no. 1, 103–130.

unwanted interference if it touches your body.<sup>22</sup> The absolutist character of this understanding of libertarian property rights seems to preclude reasonable compromises. Yet assessing what counts as aggression, and what is the threshold above which pollution is damaging and must be curtailed, is why we need conventions in the first place. There is nothing else that could replace conventions for this purpose. Depending on the type of harm and the relative interests that must be balanced against restrictions, the scope of regulation can be quite wide and is indeed open ended. Therefore libertarians must make peace with much more extensive intrusion in property rights for the sake of the environment and human health than they have been ready to accept so far.

Rothbard has granted that not all pollution can be zero, and has argued that we should distinguish between 'visible and tangible' air pollution, which interferes with possession and the use of property, and 'invisible or insensible', which cannot be counted as interference.<sup>23</sup> But what if invisible turns out to be harmful? More generally, who is to make the decision that interference with property is harmful? People will have very different understanding of harm, and in the absence of legally sanctioned norms of right conduct communities will not be able to coordinate their expectations about what counts as undue interference with other people's body or property.

#### IV. RIGHTS AND COMPENSATION

Robert Nozick was aware of the dilemma facing strong property rights. He crystalized a central insight of libertarian views: that property rights act as a moral side constraint on permissible action. 'The rights of others', he said, 'determine the constraints upon your actions'.<sup>24</sup> He thus embraced a view of natural rights which reflects the Kantian principle of respecting individuals as ends and not merely as means. Expressing this respect requires us to not trespass certain boundaries around them (material property, physical body).<sup>25</sup> Physical aggression is one way to disrespect individuals and fail to

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<sup>22</sup> David Friedman, *The Machinery of Freedom: Guide to a Radical Capitalism*, 2nd edition (La Salle, IL: Open Court, 1989), 168; Matt Zwolinski, 'Libertarianism and Pollution,' 11.

<sup>23</sup> Murray Rothbard, 'Law, Property Rights and Air Pollution,' *Cato Journal* 2, no. 1: 82.

<sup>24</sup> Nozick, *Anarchy, State, and Utopia*, 29.

<sup>25</sup> *Ibid.*, 31.

take their rights as side constraints on one's actions seriously. So is stealing from them or interfering with the use of their property.

Nozick was also among the first to realize how inflexible this rule is, and how implausible its implications. The natural rights theorist that insists on strong property rights has no way of selecting a threshold measure below which certain harms or right violations are permitted.<sup>26</sup> And such a system would lead to a world unfriendly to liberty, because it would severely limit the ability of anyone to engage in boundary crossing with significant social benefits. In his view, a society that prohibited actions of unintended harm or intended, but small, border crossings 'would ill fit a picture of a free society as one embodying a presumption in favor of liberty,' presumably because it would prohibit many occupations, hobbies, and activities in which people would like to be at liberty to engage.<sup>27</sup>

Nozick's answer to this problem is to permit boundary crossing and harming with compensation. Since consent is often impossible to negotiate beforehand or too costly when it involves minor crossings and large numbers of actors, Nozick seeks to establish a principle of compensation according to which people can engage in inadvertent, unplanned boundary crossing or harming, when the harm is minor and the benefits large.<sup>28</sup> Thus he proposes what we would call a *modified natural rights approach* to work around the more absolutist implications of taking rights as side constraints.

What Nozick misses, however, is the fact that there is a prior question that he assumes settled, that in fact is not. His question is how to deal with the fact that boundary crossing and harming, while rights violating, is necessary both to secure liberty and to provide socially beneficial outcomes. However, the prior question that a legal conventionalist is in a better position to broach, is what kinds of actions constitute boundary crossings and harms at all? Thus the 'threshold problem' is not about determining the threshold above which rights violations are permitted, but the threshold above which an activity *counts as rights violating*.

Pollution is directly addressed by Nozick and presents an interesting case of the difference between Nozick's modified natural rights approach and legal conventionalism. Since a society cannot

<sup>26</sup> Ibid., 75.

<sup>27</sup> Ibid., 78; David Sobel, 'Backing Away from Libertarian Self-Ownership,' 36–37.

<sup>28</sup> Nozick, *Anarchy, State, and Utopia*, 57–58, 65–85.

prohibit all polluting activities, it should prohibit only those activities 'whose benefits are greater than their social costs'. Furthermore, the test for whether an activity produces more benefits than costs is 'whether those who benefit from it are willing to pay enough to cover the cost of compensating those ill affected by it'.<sup>29</sup> For example, if air transport imposes noise pollution on homes surrounding the airport, then airlines should compensate those who suffer the pollution's effects.<sup>30</sup>

Suffering 'ill effects' is ambiguous between having rights violated and suffering merely unwanted, unpleasant effects. The prior questions that the legal conventionalist can solve but the natural rights theorist cannot are: does any noise pollution trigger compensation? What level of noise pollution is considered harmful and thus rights violating? Unless we answer these questions, anyone living on a busy street where car traffic creates noise or indeed, anyone with neighbors you can hear coming in and out of their homes would be entitled for compensation. Therefore regulation is needed to establish the level of noise that is harmful and the rights people have against noise pollution above that level.

Compensation is thus owed, if at all, not for noise pollution *simpliciter*, but for noise pollution above the level established by regulation, which would take into account the noise produced from normal human activity and the interests of those engaging in noise-producing actions. Legal conventions would thus establish liberty rights that people have in engaging in noise producing activities, and claim rights people have against excessive levels of noise.

An instructive example is *Hinman v. Pacific Air Transport* (1936). A property owner living next to a newly opened military airport sought injunctive relief against planes flying over his property.<sup>31</sup> Hinman argued that the airplanes trespassed on his property and as such were in violation of his rights. The majority opinion in the Supreme Court decision argued that although the air above one's property has been, since Roman law, considered one's property, this was a poorly specified property boundary that must be revisited in light of the needs of modern societies. Hinman can at most claim the rights in the air that he makes use of, say, by erecting structures on

<sup>29</sup> *Ibid.*, 79.

<sup>30</sup> *Ibid.*, 80.

<sup>31</sup> Injunctive relief is a court ordered prohibition of an act.

the land, but not above it. Thus planes flying above his head did not commit any rights violations because the air space into which the planes flew were not Hinman's property to begin with, or if was, such property title was the result of incorrectly specified property boundaries. The case helped to define (or in this case redefine) rights and therefore what counts as harm or right violations.

Libertarians thus either wrongly assume, in more extreme versions, that boundary crossing such as pollution is forbidden, or that it is a rights violation that must be compensated. Both the more extreme Rothbardian version and the more flexible Nozickian version share the idea that the benchmark for rights violations is pre-political. Nozick allows conventionalism in the specification of the level of compensation or the allocation of such compensation to victims of rights violations, but not necessarily in deciding whether rights violations have occurred to begin with. Whether individuals are entitled to compensation and at what level the compensation should be set is related but conceptually distinct from whether rights violations have occurred.

#### V. RESPONSIBILITY, HARM AND THE ENVIRONMENT

There are strong similarities between libertarian views of property rights and a very different defense of claim rights against pollution as human rights. Both either end up with implausible restrictions on people's actions, or with pre-determined benchmarks for compensation. Robert Goodin is in the former category. He argues that to permit pollution is to 'permit the impermissible'.<sup>32</sup> Rights, quotas, and permissions of any kind resemble medieval indulgences because they give 'sinners' a pass to do wrong. The assumption behind the analogy with indulgences is that any amount of pollution is wrong. The implication of this view is that the proper way to deal with this kind of sin is not to create pollution permits or rights, but to prohibit it altogether. Although he does not exactly endorse a 'zero emissions' standard, he believes most arguments against such a standard fail.<sup>33</sup>

Goodin presupposes that the standard for harm is straightforward and devoid of entanglement with legitimate, competing interests.

<sup>32</sup> Robert E. Goodin, 'Selling Environmental Indulgences,' *Kyklos* 47, no. 4 (1994): 578.

<sup>33</sup> *Ibid.*, 575–576.



This kind of approach to pollution is too one-sided, since it considers the harmful effects of pollution to the exclusion of the interests people have in engaging in pollution-causing activities. While Goodin emphasizes that pollution causes great harms, he fails to account for the fact that outright prohibition of polluting activities also causes great harms.<sup>34</sup>

For Goodin, moral and legal responsibility can come apart because we can pass judgments about the value of nature and the costs of environmental damage. Nature 'provide(s) a context ... in which to set our lives', and environmental despoliation 'deprives us of that context'.<sup>35</sup> But it is not enough to point to the fact that certain activities can cause environmental despoliation in order to pass judgment on whether they are wrong *tout court*. To have a context for our lives, we must also engage in life-sustaining pursuits. We must combine our skills with earth's natural resources productively and with a view to improving our wellbeing. There are limits to how much of it we should be able to enjoy given the costs. But the costs cannot be zero.

The many discussions on behalf of the polluter pays principle (PPP) reveal the same problematic assumption. PPP provides a standard of responsibility for harm. Its defenders claim that developed nations have caused most of the atmospheric pollution, and are therefore responsible for cleaning it up. Peter Singer says:

So, to put it in terms a child could understand, as far as the atmosphere is concerned, the developed nations broke it. If we believe that people should contribute to fixing something in proportion to their responsibility for breaking it, then the developed nations owe it to the rest of the world to fix the problem with the atmosphere.<sup>36</sup>

Others echo this attitude. Henry Shue says that those in developing nations who face the unequal burdens of environmental damage without their consent are entitled to compensation from those that have imposed the costs.<sup>37</sup> The partial destruction of the ozone layer and global warming impose unequal burdens on the developing

<sup>34</sup> See also Feinberg, *Harm to Others*, 227 on this point.

<sup>35</sup> Goodin, 'Selling Environmental Indulgences,' 578.

<sup>36</sup> Peter Singer, 'One Atmosphere,' in *Climate Ethics: Essential Readings*, ed. Stephen Gardiner et al. (Oxford University Press, USA, 2010), 190.

<sup>37</sup> Henry Shue, 'Global Environment and International Inequality,' *International Affairs* 75, no. 3 (1999): 533–534.

world. 'Those societies whose activities have damaged the atmosphere ought, according to the first principle of equity, to bear sufficiently unequal burdens henceforth to correct the inequality that they have imposed', Shue says.<sup>38</sup> Although he seeks to distinguish this 'principle of equity' from PPP, both endorse the idea that compensation is proportional to the damage caused.

PPP has been adopted by international agreements as the basis on which to judge the allocation of responsibility to correct the effects of global warming. The Organization for Economic Co-operation and Development (OECD) and the European Union and Council of Ministers have affirmed the principle in their resolutions. It is now part of the common language in which people discuss how to allocate the obligations to reduce environmental pollution.

There are numerous problems with PPP, and Simon Caney has exposed the most serious ones. In particular, he has drawn attention to the fact that the damage to the environment was caused by earlier generations and yet new generations are required to bear the cost. PPP places blame on the wrong agent.<sup>39</sup> Another potential problem is that, for a long time, developed nations were unaware of the negative effects of emissions on a global scale. One cannot hold people responsible if they are not aware of the harmful effects of their actions. Ignorance can mitigate responsibility.<sup>40</sup>

The analysis offered here identifies a different, more fundamental problem with PPP. As I have argued earlier, polluters, strictly speaking, do not have to pay if they are permitted to engage in pollution-causing activities within limits. They are only responsible if they produce effects above a threshold defined in the law. In order to know how to divide responsibility, we need, as Simon Caney puts it, 'an account of persons' entitlements'.<sup>41</sup> Moreover, if the common pasture case is right, that account must come from legal conventions. It is people's legal rights and responsibilities that determine protections against pollution and the level of compensation that polluters must pay.

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<sup>38</sup> *Ibid.*, 534.

<sup>39</sup> Simon Caney, 'Cosmopolitan Justice, Responsibility, and Global Climate Change,' *Leiden Journal of International Law* 18, no. 04 (2005): 756; See also Eric A. Posner and David Weisbach, *Climate Change Justice* (Princeton, NJ: Princeton University Press, 2010), especially 99–118.

<sup>40</sup> Caney, 'Cosmopolitan Justice, Responsibility, and Global Climate Change,' 751.

<sup>41</sup> *Ibid.*, 765.

It is inadequate, therefore, to think of protections against being polluted and permissions to pollute only in terms of the harms or costs that pollution imposes, or of the environment only as a resource that is depleted or abused rather than one that is essential to human survival. So, for instance, it won't do to think of the atmosphere as 'a giant global sink into which we can pour our waste gases', as Singer does.<sup>42</sup> It is more like a common pasture from which we take things out and we put things back in. Zero damage to the pasture is not a plausible benchmark, so the question becomes how much damage are we willing to live with and how to weight the cost of the damage against the benefits of using the pasture.

#### VI. CANEY'S SOLUTION

Caney has helped shift the debate surrounding the issue of allocating responsibilities when he observed that 'to make the claim that someone should pay also requires an account of what their entitlement is'.<sup>43</sup> He then proceeded to give an account of such entitlements. In 'Climate Change, Human Rights and Moral Thresholds', he describes the effects of climate change as violations of human rights.<sup>44</sup> Climate change affects three particular human rights: the right to life, health and subsistence. For example, climate change increases the frequency of events such as tornadoes, flooding, and storm surges that lead to direct loss of life. In Caney's view, 'all persons have a human right that other people do not act so as to create serious threats to human health'.<sup>45</sup> The implication of this view is that 'if, as argued above, climate change violates human rights, then it follows that compensation is due to those whose rights have been violated'.<sup>46</sup>

Elsewhere, Caney reaches the same conclusion: '[P]ersons have the human right not to suffer from the disadvantages generated by global climate change'.<sup>47</sup> In contrast to the PPP, his view does not

<sup>42</sup> Singer, 'One Atmosphere,' 188.

<sup>43</sup> Caney, 'Cosmopolitan Justice, Responsibility, and Global Climate Change,' 765.

<sup>44</sup> Simon Caney, 'Climate Change, Human Rights and Moral Thresholds,' in *Human Rights and Climate Change*, ed. Humphreys Stephen (Cambridge University Press, 2009), 163–166. Simon Caney, 'Climate Change, Human Rights and Moral Thresholds,' in *Human Rights and Climate Change*, ed. Humphreys Stephen (Cambridge University Press, 2009), 163–166.

<sup>45</sup> *Ibid.*, 166.

<sup>46</sup> *Ibid.*, 171.

<sup>47</sup> Caney, 'Cosmopolitan Justice, Responsibility, and Global Climate Change,' 768.

rest on the assumption that climate change is human caused. Even if climate change would not be anthropogenic, the human rights not to suffer from the effects of climate change would hold. Caney then adds an 'ability to pay' principle: the most advantaged have a duty to reduce their greenhouse gas emissions and to address the ill effects of climate change.<sup>48</sup>

This account of person's entitlements is incomplete. There cannot be such a sweeping, general human right 'that other people do not act so as to create serious threats to human health', as Caney claims. This claim is too broad. People have rights against standard threats to wellbeing, but they do not have rights against all threats, even if such threats are serious. They cannot have 'the human right not to suffer from the disadvantages generated by global climate change', because focusing on harm alone does not offer guidance for entitlements related to activities with complex effects where multiple interests are at stake. There cannot be a 'human right to not be polluted'.

Caney himself notes that his account of the division of responsibilities is incomplete, because we still need to ascertain what counts as a fair pollution quota.<sup>49</sup> But, of course, the fact that other people enjoy permissions or rights to pollute by virtue of their quota affects whether those who suffer the effects of their actions have legitimate complaints against them, and thus 'a human right to not be polluted'. Or to put it differently, if people have human rights against being polluted, how can anyone else have a right to engage in activities that violate human rights? The kind of balancing Caney would like to engage in, according to which we first ignore people's human rights not to be harmed, and then we balance that against people's entitlements to pollute, contains one step too many. People's rights against being polluted are determined in the process of determining people's rights to pollute. Legal protections from the harmful effects of pollution are inextricably tied to permissions to engage in activities to pollute.

There is a larger methodological point at stake in this debate. Caney believes that in order to have an account of persons' entitlements, we require a background theory of justice.<sup>50</sup> This is the

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<sup>48</sup> *Ibid.*, 769.

<sup>49</sup> *Ibid.*, 770.

<sup>50</sup> *Ibid.*, 765.

spirit in which he offers his account of human rights against the damaging effects of climate change and of the obligations different agents incur to reduce the damage. But the kind of judgments for fine-tuning different trade-offs required by considering the relative importance of different interests and harms in the case of pollution cannot be the result of abstract moral theorizing. Only communities armed with a proper understanding of the relationships between those interests in context can pass those kinds of judgments. This means that entitlements against pollutions and permissions to pollute must be the result of positive law, not of abstract theorizing about peoples' interests.

Perhaps a human right such as the one Caney deploys would be consistent with varying levels of acceptable pollution. In Caney's defense, one might say that perhaps we can consider the existence of such a right to offer a simplistic threshold, which needs to be further refined by a political or common law process. But then it is unclear what is gained by saying we have such a right in the first place. There cannot be a right apart from the marking and making of the threshold, which defines liberties and protections depending on where the line is drawn. The fact that we have a general right to liberty, or a general interest in being protected against harm, does not tell us where to draw the line.

To sum up, Caney is right that in order to assign responsibility for the damaging effects of climate change we require an account of entitlements. But the idea of a human right against pollution is not a helpful way to specify what those entitlements are, and it precludes the conventionalist legal approach proposed here, which defends the idea that entitlements must result from balancing conflicting interests.

## VII. CONVENTIONALISM AND COMPLEX BALANCING

The two general frameworks that rely on natural rights and human rights to set standards for people's entitlements are not in themselves objectionable. Yet as frameworks that rely on pre-political rights they cannot determine the scope of rights and restrictions with respect to various environmental harms. They can at most serve as inputs into political processes that determine the complex relationships between conflicting interests and harms to those interests, but by themselves,

natural or human rights cannot offer an adequate characterization of liberties and claim rights related to pollution.

The clearest case for legal conventionalism is the case of air particle pollution. From the simple fact that some agent is releasing particles in the air and that those particles cross some physical property boundary or are inhaled by persons we cannot deduce that any rights violations has occurred, contrary to certain libertarian and human rights views about the scope of protection pre-political rights confer against pollution.

The process for determining if any rights violations have indeed occurred consists of assessing and balancing the nature of the interests at stake (for producing air particles as well as against letting them cross certain physical boundaries), how weighty such interests are, what kind of harm is produced if any, how to balance all of these considerations taking into account the existing background of rights and obligations, and so on. In many cases, such judgments will depend heavily on expert analysis about patterns of diffusion of air particles, projections and modeling about future air quality in light of existing trends of emission, likely effects on human health, and on personal property of various sorts. Without such a complex, explicit, publicly endorsed process, our judgments are likely to be premature and highly arbitrary. We would lack a good sense about what the threshold for harm is and how to balance freedom and welfare-enhancing rights to engage in polluting producing activities with protections for human health and property.

Chloroform offers another instructive case. Is an air concentration of 1000 parts per million (ppm) harmful to human health?<sup>51</sup> And if so, do people have rights against chloroform being used at all, only in certain concentrations (under 1000 ppm), or no right at all against companies and individuals that use chloroform? Correspondingly, do companies and private individuals enjoy complete freedom to use it, are allowed to use it only in certain quantities/concentrations, or not at all? Notice that we cannot answer any of these questions based on pre-political property rights or some general human rights against being harmed. We would need to know much more about what its uses are, who has stakes in those uses, if it is toxic and what levels of toxicity are tolerable if at all.

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<sup>51</sup> Parts per million is a standard measure of air particle concentration.

It turns out chloroform is ubiquitous and widely used. Chloroform is used to chlorinate drinking water, swimming pools, wastewater, and is also used in industrial processes in paper mills. It is released into the ambient air as a result of these uses. Based on existing analyses, chloroform is categorized as a toxic air pollutant with significant effects on human health. According to the EPA data, at higher than 40,000 ppm, exposure may result in death, between 1,500 and 30,000 ppm it produces anesthesia, and at lower concentrations of fewer than 1,500 ppm it results in dizziness, tiredness, headaches and other health effects.<sup>52</sup> Estimates for the threshold of chronic exposure are in the neighborhood of 0.05 ppm to 0.1 ppm.<sup>53</sup> The background level of chloroform in the ambient air in the early 1990's was at 0.00004 ppm.<sup>54</sup> So while 1000 ppm concentration in the ambient air is unlikely based on projections derived from past emission patterns, localized concentrations can exceed dangerous levels for certain population subgroups, such as workers in paper mills. Restrictions on water chlorination, industrial paper mills and other industries that rely heavily on chlorination are justified based on estimated thresholds of harm, and unjustified if they go beyond such estimates.

This example goes at the heart of legal conventionalism, the view that I defend here. Legal conventionalism opposes any view that argues that pollution rights and restrictions are in some sense natural, or that natural property rights (or the boundaries of such rights as specified by either original acquisition or positive laws) provide functional guidelines for determining permissions or restrictions against pollution. Pre-political property rights exist and can *inform* how pollution rights and restrictions are distributed, but they do not *determine* such rights and restrictions. Only a political or legal process can.

I contrast conventionalism understood as a social process of rule generation with the view that such rules can be in principle under-

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<sup>52</sup> EPA data <http://www.epa.gov/ttn/atw/hlthef/chlorofo.html> accessed Nov. 13, 2014.

<sup>53</sup> These estimates are concentrations 'at or below which adverse health effects are not likely to occur.' *Idem*.

<sup>54</sup> The EPA has not established a reference concentration for chloroform. A reference concentration is 'An estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure of a chemical to the human population through inhalation (including sensitive subpopulations), that is likely to be without risk of deleterious noncancer effects during a lifetime.' <http://www.epa.gov/ttn/atw/hlthef/hapglossaryrev.html#rfc> accessed Nov 13, 2014.

stood as natural or arising out of pre-political norms and principles. Conventionalism in this sense is broad and covers most types of legislative and judicial action directed at regulating environmental harms. My use is thus a departure from the narrow use of conventionalism in the literature on social norms, which restricts conventions to describe simple coordination problems.<sup>55</sup>

Legal conventionalism as an approach for pollution regulation is the right approach even if it creates the problems that public choice theorists make vivid, such as political capture, rent seeking, and collective action dilemmas facing large numbers of people that are subject to diffuse effects. What legal conventionalism implies in the face of these challenges is not abandoning a publicly negotiated solution due to the high costs of politicization, but legal conventionalism plus efforts to minimize political capture and rent seeking.

#### VIII. IMPLICATIONS

Legal conventionalism is no endorsement of the status quo. Peter Singer may well be right that there is no 'ethical basis' for the current levels of pollution.<sup>56</sup> Although departing in important respects from Singer's view, the conventional approach defended here is compatible with quite extensive restrictions on different agents' abilities to pollute. It also brings a necessary corrective to a view such as Singer's. In order to know what the ethical basis for acceptable levels of pollution is, we must rely on legal conventions of a certain kind, which balance complex combinations of interests rather than on any pre-political intuitions about harm. But not all conventions are made equal.

Thus an important and related question follows given that we have to rely on imperfect, fallible publics, legislators, an acceptable range of legal rules? Some communities will err on the side of being too cautious while others will rest content with massive unregulated harm. Therefore we need an account of legitimacy for legal rules that create entitlements related to pollution, and for the

<sup>55</sup> The dominant use of the term conventionalism in the philosophical literature has been heavily influenced by David Lewis's account, according to which conventions are solutions to simple coordination problems that arise in social life, such as which side of the street to drive on. See for example David Lewis, *Convention: A Philosophical Study* (Blackwell, 2002), 5–51; Cristina Bicchieri, *The Grammar of Society: The Nature and Dynamics of Social Norms* (New York: Cambridge University Press, 2005), 34–41; Geoffrey Brennan et al., *Explaining Norms* (Oxford: Oxford University Press, 2013), 14–19.

<sup>56</sup> Singer, 'One Atmosphere,' 197.



institutions and procedures according to which such rules develop, for both local communities and the globe as a whole. I do not have the space to develop such an account here, but a few preliminary remarks are in order.

First, while there can be legitimate variation across communities and across issue areas in the acceptable ways of balancing conflicting interests when generating positive rules regarding pollution, some possible trade-offs are beyond the pale. Those based in superstition, mistaken beliefs or ignorance of widely available scientific data raise question about the legitimacy of the rules as a whole, regardless of their content. This means that there will be epistemic constraints on the legitimacy of a given legal regime.

Second, in addition to being epistemically defective, legal regimes can fall short by failing to take into account the relevant interests at stake, or the relevant contributions to harm. Communities in which the political or economic elites have an interest in engaging in pollution causing activities may ignore the legitimate interests of significant portions of the population. In doing so, these communities will fail to include in the political calculus of the best rule relevant moral data. Such regimes are morally defective.

Third, and related, regimes whose procedures do not encourage or allow the emergence of information about the relevant interests affected by polluting activities are also problematic. These regimes fall short by not being sufficiently inclusive. Democratic representative procedures are typically judged to do well according to this procedural requirement, but so may other institutional alternatives.

Consequently, the approach defended here departs in important respects from pure conventionalism, the idea that whatever decision a community makes provides the legitimate legal, and therefore moral, standard to assess claims related to pollution. Rather, defensible legal conventionalism must respond to epistemic, moral and procedural constraints. Here too there are trade-offs in fulfilling these requirements. Imagine a global forum that is as inclusive as possible. The likely result is that different constituencies will have vastly different and conflicting interests, not all of which can be adequately aggregated in a policy position. This does not mean that inclusiveness must be abandoned, but that perhaps there is an

optimal amount of inclusiveness for the purposes of decision-making. Optimality will bring its own costs.

Whatever constraints these three requirements place on policy and law-making, individual and collective agents cannot be held responsible in the absence of a set of clear rules that define restrictions, permissions, obligations and rights. Whether such regimes are already in place and are legitimate is, of course, a different matter. Some could point to the Kyoto treaty as a positive agreement that spells out the obligations of different nations of cutting carbon emissions and the permissions they enjoy based on a trading scheme.

But others claim that Kyoto is seriously defective as an international legal regime for failing to assign responsibility to developing countries such as China and India who are on target to become the largest polluters in the world. In the eyes of its critics this fact affects the legitimacy of the regime, and as a result, the acceptability of the entitlements it generates.<sup>57</sup> I do not know whether this criticism is correct or not, but it is difficult to evaluate partly because our ideas about the content of the epistemic, moral and procedural requirements at the global level are still uncertain compared to those at the domestic level. Perhaps we need an account of legitimate global environmental institutions before we can generate legitimate global rules, if we have to insist, as I think we must, that legitimate rules come from legitimate institutions.

This is however beyond the scope of this paper. The main contribution of the argument offered here is to bring clarity with respect to the responsibility for global climate change by describing moral responsibility as a function of legal responsibility. Society evolves, and so does our understanding of what activities people are entitled to engage in or not. When it comes to harm generated by new technologies or by new activities that people have a legitimate interest in engaging, but that also generate harmful effects, we do not have good guidance from pre-political norms or rules of thumb about how to balance conflicting interests. Legal rights are necessary to pass judgment on the right way to balance different interests.

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<sup>57</sup> Richard B. Steward and Jonathan Baert Wiener, *Reconstructing Climate Policy: Beyond Kyoto* (Washington, DC: AEI Press, 2007), 83–95; Posner and David Weisbach, *Climate Change Justice*; Cass R. Sunstein, 'The World vs. the United States and China? The Complex Climate Change Incentives of the Leading Greenhouse Gas Emitters,' *UCLA Law Review* 55, no. 6 (2008): 1682.

Without legal rights in that special group of cases, we cannot make sense of the extent and limits of our liberties.

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