

## Emissions trading ethics

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# EMISSIONS TRADING ETHICS

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## Abstract

Although emissions trading is embraced as a means to curb carbon emissions and to incentivize the use of renewable energy, it is also heavily contested on ethical grounds. We will assess the main fundamental objections and possible counterarguments. Although we sympathize with some of these arguments, we argue that they are unpersuasive when an emissions trading system is well designed: emissions should be accounted ‘upstream,’ on the production rather than the consumer level. Moreover, allowances should be auctioned, and regulatory measures (such as an escalating tax on additional allowances) could instigate the right kind of behavior towards the environment.

## 1. Introduction

Cap-and-trade mechanisms or emissions trading (ET) systems are being established through- out the world<sup>1</sup> as a tool to curb carbon emissions and to incentivize the use of renewable energy. Its emergence is part of the rise of the ‘carbon economy,’ i.e. a broader trend towards the ‘marketization’ of environmental governance. ET fits the ideological stance of neoliberal logic, with its emphasis on the efficiency of emissions reductions (Newell & Paterson, 2009). Cap-and-trade mechanisms usually share the same basic structure: (1) an institutional power places a maximum or cap on the total emissions that are allowed for certain pollutants, covering either polluting countries (as in the case of the Kyoto Protocol) or industries (as in the case of the European Union

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<sup>1</sup> Emissions trading systems are being, or have been deployed in the EU, Australia, California, Alberta, RGGI (ten US states and two Canadian provinces), New Zealand, Mexico, China, Brazil, South Korea, Kazakhstan, UK, Norway, Switzerland, Tokyo, Japan, and India (EDF, 2013).

Emissions Trading System) over a fixed period of time; (2) in correspondence with the cap, allowances are created, which entitle the holder to emit one unit of the pollutant; and (3) these allowances are then allocated to the polluting entities. At the end of each year, each entity must demonstrate that it holds a sufficient number of allowances to cover the total number of units of pollutants that it has emitted during that period (McAllister, 2009). The carbon economy, and ET in particular, is heavily contested. A number of prominent commentators claim that ET is morally reprehensible. In section 2, we will consider their claims in detail and assess possible counterarguments. The objections against ET will be divided into two groups: ‘commodity-centered objections’ and ‘person-centered objections.’ The former group consists of two arguments: ‘the non-ownership argument’ and ‘the price argument.’ The group of ‘person-centered objections’ adds three arguments: ‘the crowding-out argument,’ ‘the fine/fee argument,’ and ‘the civic responsibility argument.’

We will conclude that whether ET is morally defensible depends on the design of the scheme to achieve a justice-based outcome: emissions should be accounted ‘upstream,’ i.e. on the production rather than the consumer level, and allowances should be auctioned so as to create revenue which can fund mitigation, adaptation and compensation initiatives. In an attempt to meet the objections of the opponents, we propose to deploy additional regulatory measures under an ET scheme, so as to make emitters bear a *considerable* sacrifice in abating climate change

## **2. Fundamental objections to ET**

ET is heavily criticized both in academia and civil society. According to some of the critics, ET is inherently unethical. In this section, we will summarize the fundamental objections to ET that have been put forward in the debate and we will investigate the strength of these objections. Following Caney (2010, p. 203), we shall divide the a priori objections into two groups: commodity-centered objections and person-centered objections.

### ***2.1. Commodity-Centred objections***

The commodity or asset-centered objections share a rejection of the commodification or putting into private ownership of the atmosphere, which the buying of allowances allegedly would result in. Following Page (2011, p. 58–59), we will outline two lines

of argument that claim that ET creates false commodities: the non-ownership argument, and the price argument.

#### *2.1.1. The non-ownership argument*

The *non-ownership argument* states that since the absorptive capacity of the atmosphere is an environmental prerequisite for human life on earth, it is to be regarded as a common good and, hence, should not be transformed into parcels of private property (Northcott, 2007). Furthermore, since we cannot act on behalf of nature in deciding who can be pardoned for violating ‘Mother nature’s physical integrity,’ neither a user nor a regulator can sell what Goodin (2010, p. 234) calls ‘environmental indulgences,’ analogous to the indulgences that the Medieval Church offered to its wealthy parishioners. Should we, by a sale of indulgences, choose to cause detriment to the property that is sold, we would be despoiling a good upon which the interests of future generations depend. Furthermore, as stewards of the natural world, we have clear responsibilities towards nature as well as to future generations and their interests in the natural environment. By selling environmental indulgences, stewards would be permitting the destruction of a good that they have a duty to protect (Goodin, 2010, p. 234). Moreover, ET enables an agent to exchange a good for cash at the cost of depriving herself of the material and nonmaterial prerequisites for making use of that cash (Goodin, 2010, p. 235). In other words, ET permits an agent to trade away the environmental prerequisites for human existence in exchange for monetary goods that will become useless once humanity is deprived of the environmental background conditions needed to sustain life.

Even if the ownership of a parcel of the atmosphere could be granted to an agent, this would not mean that the agent should be permitted to transfer parts of her property to other agents. ET is therefore accused of enabling a violation of the common responsibility we have to abate climate change (Page, 2011, p. 59; see also section 2.2.3 below) and allowing one agent’s environmental quality to be, partly, determined by another’s riches (Goodin, 2010, p. 235). Furthermore, selling pieces of the atmospheric capacity would render the granting of indulgences dependent upon the payment of cash and not on the conditionality of emissions that are necessary to meet people’s basic needs. According to Goodin (2010, p. 235), since being allowed to emit a certain level of greenhouse gases (GHGs) is literally of vital importance, the

objection to ET at issue here is not that the impermissible is permitted, but rather that the unsellable is sold.

According to Aldred (2012, p. 342), private ownership is not in itself problematic, rather, once it involves the right to pollute, ET schemes threaten the ideal of stewardship. Since every unit of emissions damages the atmosphere, the proponents of ET would have to adopt an 'all-things-considered' interpretation, or a 'cost-benefit' view of damage which balances the damage done by emitting GHGs against other benefits. However, the stewardship view denies the primacy or even the validity of all-things-considered judgements (on a strong account), and views the benefits to humanity that might accrue from damaging the environment as being of secondary importance (Aldred, 2012, p. 343).

In response to the previous argument, Caney (2010, p. 204) and Caney and Hepburn (2011, p. 211) argue that the non-ownership argument overlooks the difference between 'property rights' and 'user rights.' Since climate change is being caused by the overuse of the absorptive capacity of the atmosphere, a system of attributing allowances limits and regulates access to the absorptive capacity. Thus, an emissions allowance is an authorization to emit a fixed amount of GHGs, over a fixed period of time. They thus 'entail a right to use, for a period of time, a certain proportion of the absorptive capacity of the atmosphere' (Caney & Hepburn, 2011, p. 211). As the cap on emissions declines yearly, so too will the number of allowances, the duration of which is therefore merely temporary. Furthermore, the GHGs covered by the allowance remain in the atmosphere for a given (very long) period of time after which they will cease to exist, as will their impact (Caney, 2010, p. 204; Caney & Hepburn, 2011, p. 211). Hence, both the allowance and the emissions covered by it are temporally limited and therefore an emissions allowance does not constitute a property right (Ott & Sachs, 2000, p. 14).

Moreover, in contrast to Goodin, Caney and Hepburn (2011, p. 211) argue that ET is compatible with – and even supports – the stewardship view of responsibility, which holds that a steward has a duty to conserve or preserve the natural world. ET places a maximum on emissions, and thus it simultaneously enables and limits the use of a natural resource (Caney, 2010, p. 204; Caney & Hepburn, 2011, pp. 205, 212). In

addition, since ET mandates a phase- out of allowable emissions, it respects the interest of future generations (Page, 2011, p. 55). Furthermore, according to Page (2011, p. 62) ET does not involve the destruction of the good that the stewards have a duty to protect, since they cannot be said to have a property right over the natural resource. The only good that a steward can destroy is the allowance itself, yet doing so would decrease the supply of allowances and accelerate the protection of the underlying asset.

ET thus appears to be compatible with the fundamental ideas of the stewardship responsibility to conserve nature in the interests of future generations. Therefore, according to Ott and Sachs (2000, p. 14), the non-ownership argument against ET does not hold if emissions allowances are considered ‘not as a rent yielded by a property, but as a fee to be paid for the temporary right to use the atmospheric commons beyond its sink capacity.’

Page (2011, pp. 61–62) further notes that critics of ET would have to persuasively argue why the usufructuary right (i.e. the right of the holder to derive profit or benefit from a good that is held in common ownership) interpretation is unsound. Indeed, Caney and Hepburn (2011, p. 213) argue that we have positive reasons to ascribe such user rights to agents: the fact that agents are granted user rights offers them the goods needed for adequate living (land, food, water, infrastructure), while simultaneously restricting the amount that can be appropriated from the commons. What this line of reasoning implies is that precisely because the absorptive capacity of the atmosphere is a global resource, ‘humanity as a whole is entitled to impose charges on using it and then disburse the revenues to important causes which benefit the human race’ (Caney, 2010, p. 205; see also Tickell, 2008, pp. 68–70). Indeed, as Page (2011, p. 62) observes, regardless of the spatial or generational location of agents, ET could be designed to reflect the joint and equal ownership of the atmosphere by directing the generated revenues to mitigation and adaptation, or to poverty reducing initiatives. So long as compensation is offered, it would even be parochial to resist the advantages of reducing emissions in economies with high carbon intensity and low efficiency, since they can deliver emissions abatement more effectively than the industrialized economies (Page, 2011, p. 62).

In sum, the non-ownership argument holds that since each agent needs the atmosphere's absorptive capacity to sustain life, that capacity should be considered as a common good and therefore no agent can be the owner of (part of) the atmosphere. Since it falls outside any entity's authority to own, buy or sell private parcels of the atmosphere, trading emissions allowances is an illegitimate practice in which we are selling/owning that which is not ours to sell/own and which we have a duty to protect. However, based on our assessment of the criticisms of the non-ownership argument we find that this objection is unconvincing since it overlooks the difference between 'property rights' and 'user rights.' Since both the allowance and the emissions it covers are temporally limited, emissions allowances lack the features of private ownership. Moreover, from the perspectives of the atmosphere as a global commons and the stewardship responsibility to conserve and protect the natural environment, ET can in fact be endorsed, since it enables and limits the use of the commons, it takes into account the interests of future generations, and it can generate revenues that can help to tackle climate change injustices.

#### *2.1.2. The price argument*

The second of the two commodity-centered objections, the *price argument*, criticizes the pricing mechanism that ET employs to, allegedly, determine what has value. According to this argument the natural environment is market-inalienable, i.e. it should not be bought and sold. A number of arguments support this main claim. First, putting a price on (a segment of) the environment would result in valuing nature instrumentally (Sandel, 2012, p. 75), which would preclude agents from appreciating the value of the atmosphere as an intrinsically valuable component of the natural environment. Second, it is argued that ET would attach a price to a good that is not equivalent to other goods that share a similar market value. Treating it as if it is equivalent to other goods demeans and diminishes its intrinsic value (Goodin, 2010, p. 236; O'Neill, 2007, pp. 5–7).

Third, economists consider trading via markets as the most efficient way to maximize the economic well-being of everyone in society since markets allocate goods to those who value them most, as measured by their willingness to pay for those goods (Sandel, 2012, p. 30). However, the willingness to pay for a good does not adequately capture people's attitude towards nature because market prices do not only show the

*willingness* to pay for a good but also reflect the *ability* to pay (Sandel, 2012, p. 31). Hence, as regards the atmosphere, putting a price on its absorptive capacity will direct its use to those who are most able to pay for it, which are not necessarily those who value it most. The value of a good is thus determined by the highest bidder, which is an inappropriate way of dealing with a good that all of mankind requires to sustain life.

The fourth argument invoked in defense of the market-inalienability of the natural environment is that there is no pre-established equality between the price, or 'exchange value,' and the benefit, or 'use value,' of a good, i.e. the market price of a good does not correspond to the benefit or utility a good offers (Sagoff, 2004, p. 84). For example, for a hiker the benefit of walking in an age-old forest *could well be above* the cost of the train ticket she bought to get to the forest. Consider a more dramatic example: the price or exchange value of a life-saving medicine does not correspond with the benefit or use value it represents for the patient whose life is saved. In other words, as a consumer the hiker/patient pays the market price or the exchange value of a good, but that price does not reflect how much the hiker/patient values the use of the good or the benefits the good delivers. Hence, a pricing mechanism only captures the exchange value, not the use value. It addresses agents merely as consumers and not *qua* citizens/hikers/patients. In the ET case, the market can neither capture the use value of the atmosphere, nor express the atmosphere's total utility. Therefore, it is an imperfect way of expressing how much a good is valued and it does not tell us whether a good has intrinsic value or instrumental value or both.

In scrutinizing the price argument, Caney (2010, p. 206) proposes distinguishing between three claims about the relationships between market mechanism and value. The first claim states that, since the market ascribes value to  $x$ ,  $x$  therefore has value. Put differently, there is no independent standard of value:  $x$  has value only because consumers value it. In contrast, the second claim states that the market is the adequate tool to discover what has value: there can be an independent standard of value, and the market is an accurate epistemic method to *ascertain* what has value. The third claim asserts that the market is a reliable instrument to *protect* what has value.

The first two claims thus concern how and to what we can ascribe value. Exactly



because of these claims regarding the relation between markets and value, the proponents of the price argument contest ET's validity, because, according to them, a market mechanism cannot determine the intrinsic value of the natural world. However, the third claim is not concerned with *why* something has value (first claim) nor does it assert *how we know* what has value (second claim); it is simply concerned with whether the market is a good instrument for protecting what has value and hence, it focuses on the means, i.e. ET, that can be used to achieve an end, i.e. regulating access to an environmental resource (Caney, 2010, p. 206).

Proponents of the price argument assert that the use of a market-based mechanism as a means to preserve the natural world will result in agents adopting a market-based criterion of value. As Aldred (2012, p. 346) argues, the market attaches a price in order to determine relative value in a particular context; hence, in order to protect what has value, the market makes contextual judgements about relative value. Accordingly, 'trading schemes are not neutral market instruments which have no effect on the goals they serve' (Aldred, 2012, p. 348). However, ET prices the use of the atmosphere's absorptive capacity, it does not put a price on the atmosphere itself (Caney, 2010, pp. 206–207; Caney & Hepburn, 2011, pp. 220–221). Consider the example of the hiker: she believes the age-old forest to be intrinsically valuable and therefore that it needs to be protected. She might agree that the most adequate means to do so is to regulate access to it. Hence, when she pays an entrance fee, she does not think that the price she pays grants her a property right over a piece of the forest nor does she believe that the price indicates the value of the forest. It would indeed be more accurate to think that the sum she pays is appropriate to help preserve and maintain the forest. In other words, a price scheme puts a price on hiking in the forest, but not on the value or the protection of the forest. The price is merely a means to achieve a desired end (Caney & Hepburn, 2011, p. 221).

Hence, although a market tool is used to regulate access to the forest, it does not necessarily change for the worse the way the good is valued. Rather, the mechanism allows us to abide by principles of intergenerational justice, by preserving the sink capacity of the forest for the benefit of future generations, as well as intragenerational justice, for example, by allocating access to those with the least means to enjoy hiking in the forest. By analogy, 'to put a price on one thing (the right to use the atmosphere)

is not to put a price on another thing (the preservation of our climate system' (Caney & Hepburn, 2011, p. 221). Hence, Caney (2010, pp. 206–207) argues: 'emissions trading does not require us to put a price on what is priceless.' ET regulates access to an intrinsically valuable good, hence it does not entail that a price mechanism should be used to determine what has value. Although Sandel (2012, p. 78) rightly states that 'markets reflect and promote certain norms, certain ways of valuing the goods they exchange,' it need not be the case that market norms crowd out nonmarket values. We will return to this statement below.

Furthermore, as Page (2011, p. 62) notes, agents can act in response to financial incentives to preserve the atmosphere while at the same time also valuing nature intrinsically. If the proponents of the price argument would refute this claim they need a convincing argument as to why the financial incentive, being a means, forecloses a reverence for the natural environment and the protection thereof, which would constitute an end (Page, 2011, p. 62). The price mechanism thus becomes a vehicle of an agent's expression of her intrinsic regard for a good and not its denunciation (Walsh, 2001, p. 532). Even assuming that Aldred is right to state that a price confers a judgement about value, why should it be presumed that the price negatively influences a value, since the price might indeed be levied out of reverence for the environment. Therefore, it might be considered that because the environment is valued, a price is attached to its overuse.

Finally, proponents of the price argument claim that to price a good would make it equivalent or commensurable to other goods with the same exchange value, and this commensurability would change the social meaning of the traded good (Aldred, 2012, p. 346). This Kantian line of reasoning is usually deployed in debates regarding the commodification of individual human beings, organ trade, surrogacy, and so forth. However, extending this line of thought to a different range of goods including environmental objects, natural processes, and relations between generations, implies a conceptual leap, for which convincing arguments need to be provided (Page, 2011, p. 62). Since agents place a monetary value on goods to which non-monetary, intrinsic value is also assigned, it does not seem that the fact that there is a market price requires the buyer or seller to believe that a traded good could be substituted for another good sharing the same market price alone, for the traded good 'may not be

viewed *merely* as a commodity' (Page, 2011, p. 63, emphasis in original). In other words, whether the social meaning of the good is altered depends, in part, on the context in which the trade takes place, and on the environmental considerations the agent holds. We will return to this issue in the following subsection.

In sum, the price argument holds that the natural world possesses an intrinsic value and therefore belongs to the group of goods that are market inalienable. Since ET employs a pricing mechanism, it diminishes the value of the atmosphere and equates it with goods with comparable exchange value, which will make agents value it instrumentally rather than intrinsically. Moreover, creating an exchange value for parcels of the atmosphere allows us to disregard its use value, which is, considering the importance of the good in question, an inappropriate way of dealing with it. These arguments lead the proponents of the price argument to conclude that ET creates false commodities since nature's value cannot and should not be determined by price.

We found that the price argument is unconvincing. ET is merely a means to achieve a given end: it does not prescribe how and to what we ascribe value. As a tool to reach environmental protection, ET prices the right to use the atmosphere, rather than putting a price on (the preservation of) the atmosphere as a whole.

## **2.2. *Person-centred objections***

Besides the commodity-centered objections a second type of fundamental objection to ET is frequently made, which can be called 'person-centered' objections. Person-centered objections to ET focus on the duty-bearers (i.e. those who bear the duty of, in this case, mitigating climate change) instead of the goods being traded. From this perspective, the three key arguments against ET are the 'crowding-out argument,' the 'fine/fee argument,' and the 'civic responsibility argument.' The overall conclusion of the proponents of these arguments is that a market-based mechanism, such as ET, will reduce the stigma of emitting GHGs and thus give rise to the wrong kind of behavior towards nature. We will consider the three arguments in turn.

### **2.2.1. *The crowding-out argument***

ET is said to cause a *crowding-out effect*, otherwise known as 'the hidden cost of reward,' 'the corruption effect' or 'the undermining effect,' which rests on the

distinction between internal and external motivations (Frey, 2001, p. 55). An agent is internally motivated to perform an act when she receives no apparent reward except for the inner satisfaction she enjoys from performing the act. An agent is externally motivated when she is offered an incentive to perform the act. Hence, the incentive, and not the internal satisfaction, persuades the agent to do a certain act.

The crowding-out argument holds that when using pricing systems, internal motivations are non-additive to external motivations (Frey, 2001, p. 87). In other words, the use of external motivations *crowds out* internal motivations. For example, when agent *x* cuts her own emissions and is therefore able to sell the emissions allowances she does not require, agent *x* will be less motivated to reduce emissions for the sake of the environment, but will rather do so to gain financial rewards (Page, 2011, p. 49). Consider a second example: when agent *y* is able to buy allowances which enable her to continue her environmentally damaging behavior, for example driving an SUV, she will most likely be less motivated to reduce her own carbon footprint (Sandel, 2012, p. 78). Hence, ET is said to unintentionally dictate a hierarchy between two non-additive motivations (Frey, 2001, pp. 55–60; Goodin, 2010, p. 236; Spash, 2009, p. 33). Whereas emitting high levels of GHGs should be seen as a matter of intrinsic wrongdoing, ET allows emissions to be ‘offset’ or compensated by paying the relevant market price. Put in more general terms, markets reflect and promote certain norms or certain ways of valuing the goods that are exchanged (Aldred, 2012, p. 348; Sandel, 2012, p. 78). When relying on financial incentives, Sandel (2012) argues, ‘we need to ask whether those incentives will corrupt attitudes and norms worth protecting’ (p. 91). In other words, will applying market norms be worth the erosion of nonmarket values? Furthermore, it is argued that ET is likely to incentivize a ‘motivational spillover,’ in which the crowding out in one context also leads to the erosion of intrinsic motivation in other contexts (Aldred, 2012, p. 351). In sum, according to the crowding-out argument, financial incentives will predictably weaken the moral stigma of emitting GHGs, resulting in a gradual degradation of environmental concern, which in turn gives rise to a lower overall level of environmental protection (Goodin, 2010, p. 236; Sandel, 2005, p. 94, 2012, p. 79).

In an attempt to rebut the crowding-out argument, Page (2011, p. 50) argues that its proponents have yet to deliver empirically supported evidence that ET crowds out

internal motivations. Although a number of experiments and a broad range of literature in social psychology and behavioral economics are devoted to the interplay of financial incentives and internal motivations, the proponents of the argument seem to claim that the environmental crowding-out effect is an uncomplicated extension of the classic crowding-out effect as observed between individuals (Page, 2011, p. 50). However, according to Page (2011, p. 51), the crowding-out effect observed in experimental conditions cannot easily be applied to ET, since the system of incentives and motivations is far more complex.

Furthermore, other policies might be prone to the crowding-out effect as well. It can be argued that any policy intervention that incentivizes environmental protection beyond an agent's internal motivation will result in some level of crowding-out. As Page (2011) argues 'it becomes clear that the real question is *how much*, not *if*, a particular policy is vulnerable to the crowding-out effect' (pp. 51–52, emphasis in original).

As Sandel (2012) rightly notes, when commodifying a good, we must 'consider more than efficiency and distributive justice [...] We must also ask whether market norms will crowd out nonmarket norms, and if so, whether this represents a loss worth caring about' (p. 78). However, the crowding-out argument presupposes that a large number of agents care deeply about the environment and that their motivation to act in an environmentally sustainable manner is at risk through participation in ET. However, when considering the current levels of deforestation, food waste, resource depletion, climate change, biodiversity loss, and nitrogen cycle disruption (see for example Foley et al., 2011; IME, 2013; Rockström et al., 2009), it should be clear that many individuals, governments and businesses show little or no environmental concern. The question of the crowding-out effect might thus not be relevant since that what is absent—i.e. the nonmarket norm of caring for the environment—can hardly be crowded out by a market norm of offering incentives to abstain from environmentally damaging behavior (Page, 2011, p. 52).

Perhaps, a policy such as ET, which is also addressed at those with little environmental concern so that they too partake in a system that protects an environmental resource, could be shown to be a first crucial step in modifying the

behavior of these agents. Indeed, according to Page (2011, p. 52), environmental policies like ET arguably enable a *crowding-in* effect since they engage agents without internal motivations to preserve the environment by offering external motivations. Whether those agents are motivated to participate in the scheme because they need to obtain allowances to continue their lifestyles or whether they do so in order to profit from the trade is irrelevant from the perspective of the environment. However, such a response would be unsatisfactory to the proponents of the crowding-out argument since in their view ET prevents us from developing the *right kind of attitude* towards the environment. We will return to this argument below.

In sum, the *crowding-out argument* states that the external motivations created by ET will erode the internal motivations agents have to protect the environment, which will result in a gradual degradation of environmental concern. After scrutinizing the counter-arguments, we find that the crowding-out argument against ET is unconvincing. We agree with Page that, since other policy interventions might also result in a crowding-out effect, the relevant question to be asked is: *to what extent* does ET crowd out internal motivations to protect the environment, relative to other policy instruments? In view of the severe environmental problems facing us and the political and societal inaction we are currently witnessing, the possibility of *a* crowding-out effect is not a sufficient reason to refrain from a policy intervention like ET.

#### 2.2.2. *The fine/fee argument*

The second person-centered objection to ET, *the fine/fee argument*, is closely related to the previous argument. It states that, since ET prices GHG emissions, agents who wish to continue their environmentally damaging behavior are able to do so if they are willing and able to pay the imposed price. ET levies a price that can be considered as a fine in order to dissuade agents from emitting vast amounts of GHGs. However, those able to afford the imposed price can regard the fine as a fee for continuing their GHG emissions. In the example considered above, if agent *y* were able to buy allowances to cover the emissions of her gas-guzzler, allowances would resemble fees that are to be paid to continue her environmentally destructive behavior (Sandel, 2012, p. 76). This is problematic since fines are considered to register moral disapproval while fees are simply acknowledged as prices that imply no moral judgement (Sandel, 2005, p. 94, 2012, p. 65). Yet, emitting too much GHGs, as part of an energy-profligate way of

life, constitutes behavior that should be discouraged, ‘even stigmatized’ according to Sandel (2012, p. 73). The fine/fee argument thus offers a critique of the Polluter Pays principle, which is a straightforward principle commonly applied in cases of environmental damage, holding that ‘because you broke it, you now have to fix it.’ The Polluter Pays Principle arguably has a sound moral basis, yet it also reflects a profoundly immoral position: ‘because I have paid, I can now pollute’ (Goodin, 2010, p. 236). Hence, when fines become fees, the desired attitude towards the environment is crowded out and the disincentive ET is supposed to generate dissolves.

A first critique of the fine/fee argument is that the argument does not exclusively apply to ET: carbon taxes or other monetary incentives are prone to the same critique. Furthermore, as already hinted at in our discussion of the crowding-out argument, whether an agent regards the carbon price as a fine or as a fee will depend, at least in part, on the environmental concerns she has. If those concerns turn out to be meagre, the trivialization of motivations ET is accused of engendering will clearly be absent. On the other hand, if an agent is highly concerned with the state of the environment, she will regard the carbon price as a fine anyway.

Indeed, even when an agent considers the carbon price as a fee, she is still obliged to contribute to a scheme that delivers environmental protection. From the standpoint of the environment it does not matter whether the agent regards the fine as a fee; what matters is that the carbon price is paid. According to some critics of the fine/fee argument, whenever a particular person emits too many GHGs, there is *no wrong done* if, as a result of the functioning of the ET scheme, another person emits less than the imposed quota as long as the quota correspond to their basic needs (Caney, 2010, p. 209; Caney & Hepburn, 2011, p. 222). Hence, they conclude, a system of fees is not necessarily inappropriate (Caney & Hepburn, 2011, p. 222). Yet, again, such a response is unlikely to convince the proponents of the fine/ fee-argument, for in their view carbon pricing prevents the *right kind of attitude* towards the environment.<sup>2</sup> Although this fundamental objection certainly carries force, it might be addressed

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<sup>2</sup> In this regard, we should note that, in our view, people’s freedom to develop their own attitudes is important. While sound and robust climate policies are critical to ensure that the basis for human civilization is not undermined, it is not necessary or desirable, and moreover, probably not even feasible, to *force* the ‘right kind of attitude’ upon others. We thank an anonymous reviewer for drawing our attention to this point

through an *ET system that is complemented with certain regulatory measures*: when an agent refuses to limit her emissions and seeks to repeatedly purchase a multitude of additional allowances to cover her high-level emissions, the price of the allowances could be adjusted to reflect the moral disapproval of emitting high levels of GHGs, by levying an escalating tax on the additional allowances according to the agent's responsibility and respective capability. Hence, the person with little regard for the environment would be made to bear a burden according to the strength of her shoulders.

Proponents of the fine/fee argument might respond that *the right kind of attitude* can and should not be encouraged by making people pay a monetary sum, but requires the cultivation of habits of restraint and a shared sacrifice that a responsible environmental ethic requires (Sandel, 2005, p. 95, 2012, p. 76). However, as suggested, ET could be complemented with regulatory measures, imposing an escalating tax on additional allowances according to the capability of the allowance buyer. This would imply that a *considerable* sacrifice would be made, and that the moral disapproval of emitting excess amounts of GHGs would be integrated into the mechanism. In order to avoid such an escalating tax on additional allowances, the agent would then need to avoid excess emissions and thus cultivate habits of restraint or ingenuity (by selecting goods that are environmentally non-degrading).<sup>3</sup> Such a policy would punish environmentally inconsiderate agents and strongly encourage them to develop a – minimal – environmental ethic. Such an ethic would then admittedly not come about because of a reverence for nature, but by what Hardin (1986, p. 1247) has coined 'mutual coercion, mutually agreed upon.'

In this regard, it can of course be retorted that an environmental ethic should be developed through cooperation instead of coercion, and that it thus involves much

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<sup>3</sup> For reasons of feasibility it is suggested that a flat rate tax on additional emission entitlements would be more suitable than an escalating tax. Furthermore, lower incomes and poorer countries might be reliant on fossil fuel intensive technology while the wealthy might be able to afford the energy efficient technology. Hence, through our proposition, the worst-off might be burdened while the best-off do not need to make a 'considerable' sacrifice. This argument clearly is forceful, yet, a flat rate tax might still not dissuade the best-off to lower fuel consumption, while through revenue recycling, the tax' regressive effect on low-income households can be addressed. The matter of feasibility of the flat rate tax is of course a matter of empirical research. We will not pursue the matter here further and suffice by advocating a tax on additional emission entitlements and advocate a revenue recycle to avoid the tax's regressive effect



more than considerations of economic measures regarding energy use (Jamieson, 2010, p. 85). Indeed, the development of such an ethic is inextricably connected to the fundamental moral questions posed by climate change: how ought we to live, what kinds of societies do we want, and how should we relate to the natural environment (Jamieson, 2010, p. 82; Peeters et al., 2013, p. 69; Peeters, et al., 2015, pp. 103–104)? However, as we argued above, an attitude of stewardship towards the environment can go hand in hand with the designing of a just ET system, and in the transition to different moral attitudes towards the environment, ET might well be a necessary first step towards engaging agents without internal motivations to help preserve the environment.

In sum, the fine/fee argument holds that ET enables agents to view the imposed carbon price as a fee to be paid in order to continue business-as-usual behavior towards the environment. This is said to be problematic since fees are viewed as implying no moral judgement, while the carbon price should be regarded as a fine to dissuade agents from overusing the atmospheric absorptive capacity. Yet, having scrutinized the counter-arguments, we find that the fine/fee argument against ET is unpersuasive, since whether an agent regards the fine as a fee will depend, in part, on the extent to which she is concerned about environmental protection. Admittedly, from the perspective of the environment it is unimportant who commits the emissions abatement (whether that is a concerned agent or an unconcerned agent). However, we agree that it is important to encourage the *right kind of attitude* towards the environment, hence it needs to be considered how ET systems could be made to reflect the appropriate moral disapproval towards emitting too many GHGs.

### *2.2.3. The civic responsibility argument*

According to the third and final person-centered objection to ET, the *civic responsibility argument*, ET undermines the ‘spirit of a shared sacrifice that may be necessary to create a global environmental ethic’ (Sandel, 2012, p. 75). From this perspective agents in a society are bound together by a solidaristic background scheme, in which each agent has the civic duty to make a particular kind of sacrifice and not to discharge her duty onto others (Caney, 2010, pp. 203, 207). In the case of climate change, each agent should perform her civic duty by constraining her own emissions and should not pay others to perform that duty for her (Aldred, 2012, p.

354). When an agent does pay another to abate emissions on her behalf, she is enjoying the ‘environmental indulgences’ criticized above (Goodin, 2010, p. 234). Access to emission markets gives rich, high-polluting agents the opportunity to postpone emissions abatement efforts, which implies a displacement of responsibilities among agents (Page, 2011, p. 60).

It could be retorted that in society we often ask others to perform some of our duties. For instance, we delegate to the state the authority to protect its citizens or we pay organizations to perform charity work. The outsourcing of certain forms of responsibility should not necessarily be regarded as making the wrong kind of sacrifice. Even in the case of ET a sacrifice is made, since emissions allowances have to be paid for. However, the complaint expressed by the civic responsibility argument is *not* that through ET no sacrifice is being made, but rather that through ET agents are not making the *right kind* of sacrifice. In other words, paying a sum of money is said not to be the correct way to discharge one’s duty since caring for the environment is a non-delegable duty that is held by each agent. Hence, instead of paying another agent or institution, each agent must discharge her duty by keeping her emissions within a pre-specified limit (Sandel, 1997). Failing to uphold this duty, it is argued, will impede the development of a global environmental ethic (Sandel, 1997, 2012, p. 75).

However, Caney (2010, p. 207) argues that the civic responsibility argument need not exclude the practice of ET. When considering the claim that buying emissions allowances constitutes immoral behavior, it is important to distinguish between principles of justice and principles of ethics. Although one might defend the position that, as a matter of justice, an agent has a right to use emissions allowances and trade them, from a civic responsibility perspective everyone should ‘join in and do their bit.’ Yet, according to Caney (2010, p. 207), claims about the immorality of buying emissions allowances are claims about the *ethical* propriety of engaging in this activity; hence these claims do not show that *justice* does not permit ET. Thus, Sandel’s argument that buying emissions allowances conflicts with civic responsibility ‘is not a contribution to a discussion of what rights people possess (the nature of justice) but a contribution to a discussion of how people should behave (the nature of ethics)’ (Caney, 2010, p. 208).

As explained earlier, Sandel argues that in a society with a background scheme of solidarity we cannot allow some to pay their way out of behaving responsibly. In a solidarity scheme it would be problematic to allow some to buy an exemption from the burden of limiting emissions, since this would imply that an agent could outsource the obligation she holds to her fellows (Sandel, 2012, p. 74). An agent would then be acting in a private self-interested way when she should rather be acting in a public-spirited way. However, as mentioned in the previous section, ET schemes could be designed so as to reflect this concern by levying an escalating tax on additional allowances. Furthermore, the problem could also be avoided if ET schemes were to represent ‘upstream accounting’ of emissions (Tickell, 2008, pp. 90–92). Under an upstream ET scheme, emissions are accounted on the production rather than on the consumer level. In doing so this policy tool reaches the bottlenecks in the chain of processes ultimately leading to GHG releases, thereby making it considerably easier to measure and control emissions (Tickell, 2008, p. 90–91).<sup>4</sup>

Hence, in the upstream version of ET, an institutional entity, such as the EU for example, would allocate allowances to companies and businesses, rather than to individual agents, and companies and businesses would surrender allowances to cover their emissions under a progressively tightening emissions cap (Tickell, 2008). Aldred (2012, pp. 352–354) contests the previous claim and argues that, under upstream accounting, the effect is that consumers are buying allowances ‘indirectly;’ a company’s demand for allowances is merely a derived demand. Individuals would then still be motivated by self-interested ‘improper motives’ since they would not be taking part in the common sacrifice (Aldred, 2012, p. 354). However, since companies are not bound together by a solidaristic background scheme, it cannot be said that this form of ET would allow individual agents to exempt themselves from their civic responsibility (Caney, 2010, p. 208). Apart from the efficiency arguments in favor of upstream accounting (see Tickell, 2008, pp. 90–91), in this approach it is not the case that individuals are allowed to buy exemptions and repudiate their responsibility. Whether a firm is permitted to buy additional allowances, and to what extent, depends

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<sup>4</sup> It is argued that while upstream accounting might avoid the civic responsibility argument against ET, under such an accounting system costs will most likely get passed along the supply chain, ultimately making consumers bear the burden. However, as mentioned, when revenues are ‘recycled’ they could cancel out the possible regressive effect of a carbon price on households while not permitting citizens to make no *reasonable sacrifice*.

on the design of the scheme and/or the regulations in force. Furthermore, since companies do not act on internal motivations (except for the motivation to make a profit), upstream accounting carries the benefit that it would limit the environmental crowding-out effect (Page, 2011, p. 65). Another advantage would be that upstream accounting could tackle energy inefficiencies and carbon intensities directly at the source, since companies would be motivated to become more energy efficient or to move away from fossil fuel energy in order to avoid the higher costs that the additionally needed allowances would impose (Page, 2011, p. 65).

Although markets are said to generate wealth and promote liberty, they have a tendency to perpetuate the existing distribution of wealth or, even worse, lead to more unequal outcomes. It is therefore said that ET will extend the domain of market distribution to include a good that is a prerequisite for the fulfilment of basic needs and economic development (Aldred, 2012, p. 345). In a world marked by extreme inequalities of wealth, the burden of a higher carbon price would fall on the worst-off. However, as Caney and Hepburn (2011, p. 223) note, whether or not an ET system produces unequal outcomes depends on its design. If an ET scheme were to be designed under an upstream accounting method, allowances should be auctioned instead of being grandfathered (i.e. handed out cost-free). Auctioning allowances would generate revenues, which could fund and incentivize the development and use of clean technology, compensate climate victims, support adaptation initiatives, etc. (Barnes et al., 2008; Caney & Hepburn, 2011, p. 224; Page, 2011, p. 64; Tickell, 2008, pp. 94–97; see also Burkett, 2007; Kaswan, 2011). Whether ‘revenue recycling’ will continue status quo inequality, as it may simply cancel out the regressive effect of the carbon price, needs to be empirically established. Furthermore, this is a matter that can be dealt with through the taxation measures suggested in the discussion of the previous argument. Moreover, in order to avoid market failure ET schemes should be completed by other regulatory measures, discussed below.

We can thus conclude that the civic responsibility argument is not a convincing reason to reject ET. Although Sandel’s argument is forceful with regard to some variants of ET, it cannot be said that under the ‘upstream accounting’ variant of ET agents would exempt themselves from a public service that is binding for others, nor that they would violate the background solidarity scheme or disregard their duty of contributing

to the shared sacrifice.<sup>5</sup> Under an upstream accounting ET scheme, responsibilities to reduce emissions would not be directly ascribed to citizens, but nevertheless a collective environmental objective would be pursued (Caney & Hepburn, 2011, p. 215). Furthermore, the upstream accounting of emissions would meet the requirements of distributive justice provided that it would auction allowances to the highest bidder. The resulting revenues could then be spent on tackling climate change and helping the poorest adapt to its severe consequences.

In sum, after examining the various fundamental objections to ET, we can conclude that although some of the criticisms are clearly pertinent, it is possible to address them and to design an ET system that respects justice-based criteria. The critique of the opponents seems to focus on the implementation of an exclusively neoclassical economic approach to managing environmental threats. If markets are left to work out who will reduce emissions, the opponents rightly fear that such an implementation will negatively affect distributional outcomes, leaving the most vulnerable even worse off. Furthermore, it is argued that such an approach will instigate the wrong kind of attitude towards the environment. The critique thus focuses on the immoral basis of the Polluter Pays Principle, which reflects the attitude that: ‘because I have paid, I can now pollute,’ an attitude analogous to what has been termed ‘cowboy climate capitalism’ (Newell & Paterson, 2009, p. 95). However, as Newell and Paterson (2009, p. 81) argue, given the time frames within which climate action has to take place, it is clear that neoliberal capitalism will define the context and historical moment in which action has to take place. Given the fact that emissions have to peak and decline before the end of the present decade in order to have a reasonable chance of limiting global warming to 2°C, by 2100 (Arnell et al., 2013; den Elzen, Mendoza-Beltran, Hof, van Ruijven, & van Vliet, 2013; Rogelj, McCollum, O’Neill, & Riahi, 2012), stating that carbon markets are inherently flawed carries a risk, since the abandonment of carbon markets might well mean that no serious international abatement efforts whatsoever are undertaken (MacKenzie, 2009, p. 451).

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<sup>5</sup> In stating that, under an upstream account of ET, responsibility to reduce emissions is not directly ascribed to citizens, we are not arguing that responsibility for emissions should be ascribed only to the production side (instead of the consumer side). Individual agents, in our view, certainly do have responsibilities to reduce emissions. However, the evaluation of other necessary policy measures in this regard, falls out the scope of this paper.

Furthermore, ET need not be shaped exclusively by neoclassical economic theory; in the transition towards a decarbonized economy, a Keynesian version of climate capitalism is attainable (Newell & Paterson, 2009, p. 96). The regulator would then clearly demarcate the limits of carbon market functioning: setting the steepness of reduction pathways; excluding emissions vital for subsistence; deciding the regulatory measures – described above – to dissuade agents from emitting in excess; creating carbon price stability by installing a floor price; limiting flexibility mechanisms; limiting the option of banking allowances; seeking novel incentives in financing; as well as directing action to those parts of the economy that carbon markets fail to reach.

### **3. Conclusion**

In this paper we have analyzed the arguments made by prominent commentators who claim that ET is morally reprehensible. We have divided the objections to ET into two groups: ‘the commodity-centered objections’ and ‘the person-centered objections.’ Although we sympathize with some of the arguments made by the opponents, we have argued that their arguments are unpersuasive when an ET system is well designed: emissions should be accounted ‘upstream,’ i.e. on the production rather than the consumer level, and allowances should be auctioned so as to create revenue which can fund mitigation, adaptation and compensation initiatives. In addition, we have argued that regulatory measures, such as an escalating tax on additional allowances, could impose a *reasonable sacrifice*, which could instigate the *right kind* of behavior towards the environment.

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### **References**

Aldred, J. (2012). The ethics of emission trading. *New Political Economy*, 17, 339–360.

Arnell, N. W., Lowe, J. A., Brown, S., et al. (2013). A global assessment of the effects of climate policy on the impacts of climate change. *Nature Climate Change*, 3, 512–519.

Barnes, P., Costanza, R., Hawken, P., et al. (2008). Creating an earth atmospheric trust. *Science*, 319, 724b.

Burkett, M. (2007). Just solutions to climate change: A climate justice proposal for a domestic clean development mechanism. Legal Studies Research paper Series, Working Paper Nr. 07-26. US: University of Colorado Law School. Retrieved from <http://ssrn.com/abstract=1020818>.

Caney, S. (2010). Markets, morality and climate change: What, if anything, is wrong with emissions trading? *New Political Economy*, 15, 197–224.

Caney, S., & Hepburn, C. (2011). Carbon trading: Unethical, unjust and ineffective? *Royal Institute of Philosophy Supplement*, 69, 201–234.

EDF. (2013). *Emissions trading system comparison table*. New York, NY: Environmental Defense Fund. Retrieved from [http://www.edf.org/sites/default/files/EDF\\_Chart\\_Emissions\\_Trading\\_Programs.pdf](http://www.edf.org/sites/default/files/EDF_Chart_Emissions_Trading_Programs.pdf).

den Elzen, M. G. J., Mendoza-Beltran, A., Hof, A. F., van Ruijven, B., & van Vliet, J. (2013). Reduction targets and abatement costs of developing countries resulting from global and developed countries' reduction targets in 2050. *Mitigation and Adaptation Strategies for Global Change*, 18, 291–512.

Foley, J., Ramankutty, N., Brauman, K., et al. (2011). Solutions for a cultivated planet. *Nature*, 478, 337–342.

Frey, B. S. (2001). *Inspiring economics*. UK: Edward Elgar.

Goodin, R. (2010). Selling environmental indulgences. In S. M. Gardiner, S. Caney, S. D. Jamieson, & H. Shue (Eds.), *Climate ethics, essential readings* (pp. 232–246). New York, NY: Oxford University Press.

Hardin, G. (1986). The tragedy of the commons. *Science*, 13, 1243–1248.

IME. (2013). *Global food – waste not, want not*. London: Institution of Mechanical Engineers. Retrieved from <http://www.imeche.org/knowledge/themes/environment/global-food>

Jamieson, D. (2010). Ethics, public policy, and global warming. In S. M. Gardiner, S. Caney, S. D. Jamieson, H. Shue (Eds.), *Climate ethics, essential readings* (pp. 77–86). New York, NY: Oxford University Press.

Kaswan, A. (2011). Reconciling justice and efficiency: Integrating environmental justice into domestic cap-and-trade programs for controlling greenhouse gases. In D. G. Arnold (ed.), *The ethics of climate change* (pp. 232–254). UK: Cambridge University Press.

MacKenzie, D. (2009). Making things the same: Gases, emission rights and the politics of carbon markets. *Accounting, Organizations and Society*, 34, 440–455.

McAllister, L. (2009). The overallocation problem in cap-and-trade: Moving toward stringency. *Columbia Journal of Environmental Law*, 39, 395–445.

Newell, P., & Paterson, M. (2009). The politics of the carbon economy. In M. Boykoff (Ed.), *The politics of climate change* (pp. 80–99). London: Routledge.

Northcott, M. (2007). *A moral climate*. London: Darton, Longman and Todd. O'Neill, J. (2007). *Markets, deliberation and environment*. London: Routledge.

Ott, H. E., & Sachs, W. (2000, May). *Ethical aspects of emissions trading*. Canada, Saskatoon: Wuppertal Papers Nr. 110, Contribution to the World Council of Churches Consultation on Equity and Emission Trading – Ethical and Theological Dimensions.



Retrieved from <http://www.studver.unimaas.nl/critics/literature/WP110%20ET%20ethics.pdf>

Page, E. (2011). Cosmopolitanism, climate change, and greenhouse emissions trading. *International Theory*, 3, 37–69.

Peeters, W., Dirix, J., & Sterckx, S. (2013). Putting sustainability into sustainable human development. *Journal of Human Development and Capabilities*, 14, 58–79.

Peeters, W., De Smet, A., Diependaele, L., & Sterckx, S. (2015). *Climate change and individual responsibility: Agency, moral disengagement and the motivational gap*. Basingstoke: Palgrave MacMillan.

Rockström, J., Steffen, W., Noone, K., et al. (2009). A safe operating space for humanity. *Nature*, 461, 472–475.

Rogelj, J., McCollum, D. L., O'Neill, B. C., & Riahi, K. (2012). 2020 emissions levels required to limit warming to below 2°C. *Nature Climate Change*, 3, 405–412.

Sagoff, M. (2004). *Price, principle, and the environment*. UK: Cambridge University Press.

Sandel, M. (1997, December 17). It's immoral to buy the right to pollute. *New York Times*. Retrieved from <http://www.nytimes.com/1997/12/15/opinion/it-s-immoral-to-buy-the-right-to-pollute.html>

Sandel, M. (2005). *Public philosophy*. Cambridge: Harvard University Press.

Sandel, M. (2012). *What money can't buy, the moral limits of markets*. UK: Allen Lane.

Spash, C. L. (2009). *The brave new world of carbon trading*. Norway: Norwegian Institute of Life Sciences. Retrieved from <http://mpra.ub.uni-muenchen.de/19114>

Tickell, O. (2008). *Kyoto2: How to manage the global greenhouse*. London: Zed Books.

Walsh, A. (2001). Are market norms and intrinsic valuation mutually exclusive. *Australian Journal of Philosophy*, 79, 525–543.