Global Climate Justice, Historic Emissions, and Excusable Ignorance

The United Nations Framework Convention on Climate Change (UNFCCC) proposes that the costs of protecting the world from "dangerous anthropogenic interference with the climate" should be distributed according to the principle of "common but differentiated responsibilities and respective capabilities":

> The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. (United Nations 1992, 4)

This principle has three key elements. First, "it establishes unequivocally the common responsibility of States to protect the global environment" (Rajamani 2000, 121). Dangerous climate change is a global problem that can only be prevented through global co-operation. Second, it requires states to pay "in accordance with their . . . differentiated responsibilities." In the third paragraph of the preamble, the Convention notes "that the largest share of historical and current global emissions of greenhouse gases has originated in developed countries" (United Nations 1992, 1). Those states that have contributed more to the problem of climate change—through higher historic emissions—should pay more towards the costs of protecting the climate system. Third, it requires states to pay "in accordance with . . . their respective capabilities." The developed states are wealthier and are therefore more able to bear the costs of protecting the climate system. In sum, the principle of common but differentiated responsibilities and respective capabilities is a "hybrid" principle, which suggests that all states bear a common responsibility for protecting climate-related rights but that how much each state should pay depends on both their historic emissions and their ability to pay.[1]

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Developing states have strongly supported the principle of "common but differentiated responsibilities and respective capabilities." However, as Harris notes, "During the negotiation for the Climate Convention, developing countries were unified in emphasizing the historical responsibility of developed countries for climate change" (Harris 2010, 31). Developing countries have placed more emphasis on the backward-looking principle of historic responsibility than the forward-looking principle of ability to pay. For example, the Brazilian Proposal, which was prominent in international discussions during the late 1990s, suggests that it is "natural to assign relative responsibilities to individual Parties according to their respective contributions to climate change, as measured by the induced change in temperature" (Brazilian Party at UNFCCC 1997, 16). So, a state's contribution to the costs of mitigating climate change should be proportional to the contribution that its historic emissions have made to climate change.

The principle that costs should be allocated in proportion to historic responsibility has also been defended by political philosophers. For example, Simon Caney suggests that it has "considerable intuitive appeal":

> In everyday situations we frequently think that if someone has produced a harm (they have spilled rubbish on the streets, say) then they should rectify that situation. They as the causers are responsible for the ill-effects. (Caney 2005, 752)

For Caney, the historic responsibility principle "follows from the principle, articulated by Rawls and others, that persons should take responsibility for their actions and their ends" (Caney 2009, 241). If they have chosen to emit greenhouse gases, they should be held responsible for the consequences of their actions. However, Caney and others have also noted that several objections can be made to the use of the historic responsibility principle in the context of climate change. First, Caney's argument refers to "persons" but the Brazilian Proposal refers to "Parties" to the UNFCCC, which are states. The application of the historic responsibility principle to states may not have the same "intuitive appeal" unless we can defend an account of states as collective agents with collective responsibility.[2] Second, it may be difficult to accurately attribute historic emissions to agents—either states or persons. The problems of attribution will be most severe for persons and for earlier emissions.[3] Third, many of the persons responsible for historic emissions are now dead. The dead cannot pay their share of the costs of mitigating climate change.[4] So, unless we can defend an

account of states as transgenerational collective agents with collective responsibility for their emissions, we may need (at least) to supplement the historic responsibility principle.[5] Fourth, many of the persons—and states—responsible for historic emissions were excusably ignorant of the consequences of their actions. Before the first Intergovernmental Panel on Climate Change (IPCC) report in 1990, most agents could not have been expected to know the effects of emissions-generating activities. However, the liberal "notion of moral responsibility is closely linked to the notion of being a free agent, voluntarily carrying out any act, in knowledge of its consequences" (Beckerman and Pasek 1995, 410). Therefore, unless we can hold agents liable for costs even when we cannot hold them morally responsible (i.e., liable for blame), an agent's pre-1990 emissions will not be relevant when we calculate their contribution to the costs of climate change.[6]

A new and strengthened international agreement on climate change is urgently needed but it is widely recognised that only a fair or just agreement can encourage compliance. Therefore, it is important for political philosophers to examine proposed principles of climate justice and the criticisms made of them. In this paper, I propose to examine in detail one objection to the principle of historic responsibility—namely, the excusable-ignorance argument. This is an important objection because it seriously undermines the significance of the principle of historic responsibility. If pre-1990 emissions should not be counted, historic responsibility only extends twenty years into the past. Therefore, the states that developed earliest, such as the UK, will be required to pay significantly less toward the costs of climate change than they would under an unrestricted principle of historic responsibility.[7]

The excusable-ignorance argument has received some attention in the literature on the ethics of climate change but it remains underexamined.[8] In this paper, I will outline the excusable-ignorance argument, assess some responses to it, develop a new interpretation of the problem, and propose a principle of limited liability. In section 1, I outline the excusable-ignorance objection. In section 2, I consider and reject the 'legal precedent' argument for the strict liability of excusably ignorant emitters. In section 3, I examine four considerations in favour of strict liability suggested by Stephen Gardiner's brief discussion of the issue. I suggest that one of these considerations, as developed by Simon Caney in his recent discussion of excusable ignorance, supports an intuitively plausible

principle of limited liability. However, I argue that Caney does not offer a convincing justification of his principle of limited liability. In section 4, I draw on Matthias Risse's recent discussion of the issue to propose a new way of understanding the dispute between proponents and critics of the excusable-ignorance argument. I argue that this new way of understanding the problem also provides a new way of defending a principle of limited liability for excusably ignorant emitters. In section 5, I further develop the proposed account in response to three criticisms. Section 6 is a short conclusion.

1. The Excusable-Ignorance Objection

The argument from excusable ignorance makes the following claim:

> If an agent is excusably ignorant of the consequences of her actions, she should not be held liable for the costs associated with the consequences of her actions.

The agent is excused from liability for the costs associated with the consequences of her actions because she was excusably ignorant of those consequences when she acted. The agent's ignorance is excusable—call this the 'ignorance' claim. The agent is excused from liability for costs—call this the 'nonliability' claim.

The ignorance claim is usually taken to be straightforward in the context of climate change:

> [It] is widely accepted that many who have caused GHG [greenhouse gas] emissions were unaware of the effects of their activities on the earth's atmosphere. Furthermore, their ignorance was not in any way culpable: they could not have been expected to know. (Caney 2005, 761)

An agent is excusably ignorant rather than culpably ignorant when she "could not have been expected to know" about the harmful consequences of her actions at the time the action took place. Most persons could not have been expected to know about the harmful (climate changing) consequences of burning fossil fuels during the eighteenth and nineteenth centuries and during much of the twentieth century. The ignorance claim holds until sometime in the late twentieth century when ignorance of the link between burning fossil fuels and causing climate change became

culpable rather than excusable. For example, Peter Singer suggests that since 1990 ignorance about the harmful consequences of fossil fuel consumption has been culpable (Singer 2002, 34). Others suggest slightly earlier or later dates.[9] In this paper, I will assume that most agents were excusably ignorant of the consequences of emissions-generating activities until the last decade of the twentieth century.

The nonliability claim is more controversial in the context of climate change. There is disagreement about whether excusably ignorant emitters should be held liable for the costs associated with their emissions-generating activities. The aim of this paper is to assess the merits of the arguments offered by both advocates and opponents of the nonliability claim. However, two points of clarification are necessary to begin. First, it is possible to reject the nonliability claim without accepting that excusably ignorant agents should be held liable for *all* of the costs associated with their emissions-generating activities. So, we might distinguish three positions: full liability for costs; limited or partial liability for costs; and no liability for costs. Of course, if we propose to defend limited liability, we will need to justify principles for determining the limits on the liability of excusably ignorant emitters. Second, the nonliability claim specifically refers to liability for costs. There is general agreement that excusably ignorant emitters should not be liable for blame or punishment even if their emissions-generating activities cause harm to others. The disagreement concerns liability for costs or 'strict liability'.[10]

The critics of strict liability argue that it is unfair:

> Could we not hold people accountable for past emissions even if nobody was at fault? Yet strict liability must overcome a presumption of unfairness. It should not be applied without the affected individuals being aware of its applicability. Only then can they make a choice whether to participate in the relevant activities, and otherwise it is unfair to hold them accountable. (Risse 2009, 30)

In Risse's view, it would be unfair to hold someone strictly liable for their activities unless they knew at the time that they could be held strictly liable for the consequences of activities of that type. In the climate-change case, we (excusably) knew neither that burning fossil fuels would causally contribute to the harms of climate change nor that we might be held strictly liable for the consequences of our fossil fuel use. Therefore, it would be unfair to hold us strictly liable for our fossil fuel use.

Caney also argues that strict liability is unfair to excusably ignorant emitters:

> Shue's proposal [for strict liability] seems unfair on the potential duty-bearers. As Shue himself has noted in another context, we can distinguish between the perspective of rights-bearers and the perspective of duty-bearers. The first approach looks at matters from the point of view of rights-holders and is concerned to ensure that people receive a full protection of their interests. The second approach looks at matters from the point of view of the potential duty-bearers and is concerned to ensure that we do not ask too much of them. Now, utilizing this terminology, I think it is arguable that to make (excusably) ignorant harmers pay is to prioritize the interests of the beneficiaries over those of the ascribed duty-bearers. It is not sensitive to the fact that the alleged duty-bearers could not have been expected to know. Its emphasis is wholly on the interests of the rights-bearers and, as such, does not adequately accommodate the duty-bearer perspective. (Caney 2005, 762)

Caney introduces some helpful terminology when he distinguishes the rights-bearer's perspective from the duty-bearer's perspective. If climate change will cause deaths, serious injuries and serious illnesses, it appears to threaten the human rights of those affected. From the rights-bearer's perspective, the costs of mitigation must be met to protect their rights. However, Caney suggests that justice requires that we also consider the issue from the perspective of potential duty-bearers. In this case, the potential duty-bearers are excusably ignorant emitters. For Caney, excusably ignorant emitters might reasonably object that strict liability does not take proper account of their perspective because it "is not sensitive to the fact that [they] could not have been expected to know" (Caney 2005, 762).

2. Strict Liability in Law

Henry Shue has argued that the excusable-ignorance objection

> . . . rests upon a confusion between punishment and responsibility. It is not fair to punish someone for producing effects that could not have been avoided, but it is common to hold people responsible for effects that were unforeseen and unavoidable. (Shue 1999, 535)

In our terms, Shue suggests that the excusable-ignorance argument undermines liability for punishment but it does not undermine liability for costs. In other words, Shue endorses the idea of "strict liability" for the costs caused by emissions (Vanderheiden 2008, 190).

Shue's initial defence of this position is simply to claim that it is "common" to hold people liable for costs associated with actions even when they were excusably ignorant of the consequences of their actions

(1999, 535). Neumayer offers a similar argument when he suggests that "It is an established principle of the legal system of almost every country that ignorance does not exempt one from liability for damage caused in the civil law" (Neumayer 2000, 188). Gardiner offers more specific support for the relevance of strict liability in environmental law:

> It is perhaps worth noticing that U.S. tort law allows for circumstances of strict liability—i.e., instances where a party causing harm is liable for damages even when not guilty of negligence—and that this concept has been successfully upheld in several environmental cases and employed in environmental legislation. (Gardiner 2004, 581, n. 83)

In general, the claim is that strict liability for costs is an established legal principle that can be applied to the climate change case.

As Klass acknowledges, it is true that in the U.S. strict liability "has been historically applied through common law and statutory developments in a wide range of areas" (Klass 2004, 907). Moreover, "strict liability for environmental contamination has become a fact of life in the past twenty years since the 1980 enactment of the Comprehensive Environmental Response, Compensation and Liability Act ('CERCLA')" (Klass 2004, 904). However, the application of a principle of strict liability in cases of excusable ignorance is much more controversial than Neumayer and Gardiner suggest. The strict liability provisions of CERCLA are derived from the "common law doctrine of strict liability for abnormally dangerous activities" (Klass 2004, 908). There has been considerable debate over the proper interpretation of "abnormally dangerous activities."[11] However, it has been widely accepted that the risks posed by "abnormally dangerous activities" should be "foreseeable" (Klass 2004, 918). On this interpretation, "there will be no liability where damage could not have been foreseen" (Boyle 2005, 17). So, for example, there will be no liability for costs where:

> . . . a chemical is used whose toxic properties are not at first appreciated and could not have been until the harm first appeared, or where accidents occur in respect of a process not initially thought to be dangerous. Liability it seems might arise in such cases only once the risk is appreciated. (Boyle 1990, 8)

This understanding of the limits of strict liability has been affirmed by the International Law Commission (in its 2001 Articles on Prevention of Transboundary Harm), the draft Third Restatement of Torts in the U.S. (in

2004) and in the widely cited House of Lords' decision in *Cambridge Water Co. V. Eastern Counties Leather.*[12] On this account, strict liability for costs should apply only where an activity is known to present risks. In such circumstances, liability does not depend on intent, recklessness, or negligence. So, for example, the Protocol on Civil Liability for Nuclear Damage (Article 4 [2]) makes the operator of a nuclear energy facility strictly liable for the costs associated with nuclear "accidents" (Boyle 2005, 13). The dominant legal approach does not support strict liability for costs associated with excusably unforeseen consequences of activities. If the consequences of greenhouse gas emitting activities were excusably unforeseen until approximately 1990, international law (and U.S. and U.K. law) does not support strict liability for the costs associated with pre-1990 emissions.

3. Four Responses to the Excusable-Ignorance Objection

Of course, there may be good reasons to change the law. In a brief but provocative discussion, Stephen Gardiner suggests that the excusable-ignorance objection "seems to me far from decisive" because

> . . . if the harm inflicted on the world's poor is severe, and if they lack the means to defend themselves against it, it seems odd to say that the rich nations have no obligation to assist, especially when they could do so easily and are in such a position largely because of their previous causal role. (Gardiner 2004, 581)

Gardiner's argument appeals to four considerations apart from the fact that excusably ignorant emitters causally contributed to climate change. In particular, he emphasises two features of the situation of the (putative) rights-bearers: they suffer "severe" harm; and they cannot protect themselves against that harm. In addition, he emphasises two features of the situation of the (potential) duty-bearers: they are wealthy enough to assist "easily;" and their wealth is "largely" the consequence of the same activities that caused harm to the (putative) rights-bearers. How might each of Gardiner's considerations contribute to the justification of liability for costs?

Gardiner's first consideration suggests that where the interests of the putative rights-bearers are severely harmed, we should hold causally responsible but excusably ignorant agents strictly liable for costs. So, even if excusable ignorance can sometimes excuse an agent from liability for costs, there is a particular (loosely specified) threshold of harm above

which excusable ignorance does not excuse an agent from liability for costs. This argument is problematic for two reasons. First, it focuses exclusively on the perspective of the rights-bearer. It does not address the concern, raised by Caney, that strict liability prioritizes the interests of the rights-bearer over the interests of the excusably ignorant duty-bearer. Second, we might agree that rights-bearers must be protected from severe harm but we might not accept that the correlative duty should fall on excusably ignorant emitters. We might think that some other class of agents—for example, the wealthiest—should pay the costs of protecting the rights-bearers from severe harm. Gardiner's appeal to the interests of the rights-bearers does not help us to decide who should be liable for the costs of protecting those interests.

Gardiner's second consideration—the lack of capacity of the victims to defend themselves—also appeals to the circumstances of the rights-bearers. If the rights-bearers cannot help themselves, causally responsible but excusably ignorant emitters should help them. However, this argument faces the same problems as the first argument. Generally, an appeal to a feature of the circumstances of the rights-bearer cannot provide any reason for holding excusably ignorant emitters rather than some other class of agents (such as the wealthiest agents) liable for the costs of climate change.

Gardiner's third consideration seems more promising because it relates to the circumstances of the excusably ignorant emitters. He suggests that causally responsible but excusably ignorant emitters should be held liable when they are wealthy enough to assist "easily." His suggestion is that strict liability is not unfair to excusably ignorant emitters because it does not demand too much from them. However, if it is unfair to hold excusably ignorant emitters strictly liable because their ignorance prevented them from making an informed choice not to engage in emissions-generating activities, it is not clear that the unfairness 'disappears' just because excusably ignorant emitters can easily afford to pay the costs. In general, we do not assume that if I can easily afford to pay costs that have been unfairly imposed on me, it was not unfair to impose those costs on me. For example, if I lend a book to you and you fail to return it, you have treated me unfairly whether or not I can easily afford to replace it. So, Gardiner's appeal to affordability cannot justify strict liability. Instead, the appeal to affordability might suggest that we distribute the costs of climate change according to ability to pay rather than causal contribution.

Gardiner's fourth suggestion is that excusably ignorant emitters should be held liable because their wealth is largely the consequence of the very activities that have caused climate change. Their economic prosperity is built on fossil fuel use. Therefore, they should be held liable for the costs associated with their emissions. A similar argument has been made by Simon Caney. Caney suggests that excusably ignorant emitters who have benefited from their emissions-generating activities should incur *limited* liability for costs up to the value of their benefits. Caney supports his position with the following hypothetical example:

> Suppose, for example, that by treading on a spot on the ground one causes harm to others on the other side of the globe and suppose that one could not be expected to know that this happens. . . . [One] may conclude here that it is unfair to insist that the person who causes the harm should pay the cost. Now suppose, however, that the person who treads on the spot on the ground derives a benefit from this activity. The behaviour that causes the harm to others also brings them benefits. This considerably changes the situation. In particular, the complaint that it is unfair to make them pay for effects they could not have anticipated loses its force here because, and to the extent that, they have also benefited from this harmful behaviour. (Caney 2010, 209–10)

Caney's claim, like Gardiner's, is that the combination of causal responsibility and benefiting justifies liability. However, Caney, unlike Gardiner, is clear that this is a "*modified* strict liability principle", which limits the liability of excusably ignorant emitters so that their costs should not exceed the value of the benefits that they have derived from their emissions-generating activities (Caney 2010, 210; my emphasis).

As Caney suggests, this account of liability, which combines causal responsibility and benefiting, seems to fit "with our fixed intuitions about specific cases" (Caney 2009, 241). However, neither Caney nor Gardiner provides a convincing theoretical justification of this account of liability. More specifically, they do not explain why causal responsibility is morally significant when the causally responsible agent is excusably ignorant and, therefore, not morally responsible (i.e., liable for blame) for their actions. Caney suggests that "if we grant an agent autonomy then it is appropriate to hold it responsible for the decisions that it makes, including burdens it creates for others" (Caney 2009, 241). However, this does not seem to support the combined account of liability. On the one hand, if granting an agent autonomy is sufficient to hold it responsible for all of the decisions

it makes, even if it is excusably ignorant of the consequences of its decisions, then the agent's liability does not seem to depend on whether it benefits from its actions. On the other hand, if excusable ignorance undermines an agent's autonomy (and moral responsibility), as many liberals would admit, then Caney's liberal principle of responsibility does not explain the moral significance of causal responsibility. So, Caney's principle of limited liability might be intuitively plausible but it is not adequately justified.

In this section, I have discussed four considerations that Gardiner offers in favour of holding causally responsible but excusably ignorant emitters liable for the costs associated with their emissions. I have suggested that one of these considerations, as developed in Caney's work, suggests an intuitively plausible principle of limited liability for excusably ignorant emitters. However, I have argued that this principle requires further justification. In the next section, I propose and defend an alternative approach to the problem of excusably ignorant emitters, which may provide a better justification for a similar principle of limited liability.

4. A New Response to the Excusable-Ignorance Objection

We might usefully begin with a distinction suggested by Risse:

> We often appeal to what individuals had reason to do by way of assessing when they should be *blamed*, or *excused*. Yet we think of *rightness* and *wrongness* differently, in terms of what objectively speaking, all things considered, ought to have been done. In light of this distinction, we cannot conclude that early emitters did no wrong. In hindsight, all things considered, the right course was to adopt conventions of access to the absorptive capacity that would have limited emissions. Objectively speaking, technological abilities in early stages of industrialization were *already* such that a new regime of access to that capacity was required. Still, a set of conditions of *maximally excusatory force* applied to early emitters. The standpoint from which it is correct to say that the decision makers in the past ought to have adopted different norms sets aside scientific limitations. People could not have been expected to accept different conventions at those early stages. (Risse 2009, 31–32; original emphasis)

Risse distinguishes two kinds of judgements and the different informational bases on which those judgements should be made. Judgements about the moral responsibility (i.e., blameworthiness) of an agent for her

acts should be based on the information that the agent could have been expected to have at the time of her acts. If she was excusably ignorant of the consequences of her acts, she should not be liable for blame or punishment. We might say that the informational base for judgements about moral responsibility is 'time-relative' or 'time-bound' because it is limited to the information that the agent should have acquired at the time of her act. In contrast, the informational base for judgements about right and wrong is 'time-neutral' or 'timeless' because there are no limits on when we acquire the information on which we make such judgements. So, we might judge now—on the basis of our best current information—that the acts of previous generations were wrong while also judging—on the basis of the information that they could have been expected to have at the time—that they should not be blamed for their acts. Moreover, if new information comes to light in the future, we may revise our current judgements about whether the acts of previous generations were right or wrong. In other words, our judgements about right and wrong will always remain provisional because they can only be confirmed when we have perfect information.

I believe that this distinction between the standpoints from which we make judgements about moral responsibility and right/wrong helps us to understand why commentators disagree about whether excusably ignorant emitters should be held liable for costs. For critics of strict liability, an agent's liability for costs should be assessed from the same standpoint as her liability for blame. In both cases, our judgements about her liability should be based on the information she could have been expected to have at the time of her act. For advocates of strict liability, an agent's liability for costs should be assessed from the same standpoint as judgements about right and wrong. In other words, it should be based on our best current information. So, if we judge that excusably ignorant emitters acted wrongly, we should hold them liable for the costs associated with their emissions. Some theorists privilege one standpoint; other theorists privilege the other standpoint.

Is there a way forward? I want to propose a solution to the problem of excusable ignorance that aims to take both standpoints seriously. As moral agents, we can recognise that the 'time-relative' and 'time-neutral' standpoints are both morally significant. We can recognise ourselves as 'dual standpoint' moral agents who care about acting rightly but who are

also temporally located and, therefore, bound by the limits that imperfect information places on our capacity to act rightly.[13] I want to suggest that a 'dual standpoint' moral agent might reasonably be expected to accept *limited* liability for costs associated with the consequences of her excusably ignorant but wrongful acts. The aim of the 'dual standpoint' moral agent is to act rightly but she knows that she is permanently fallible because her decisions and actions are based on imperfect information. She knows that she may act wrongly despite her own best efforts. If she does learn that she has unknowingly acted wrongly in the past, she should, as a moral agent, who cares about right and wrong, regret her (excusably ignorant) wrongful act. She cannot change the past. However, if she sincerely regrets that she has acted wrongly, she should not want to have benefited from her wrongful act. Therefore, she should be willing to accept that she should not retain the benefits derived from her wrongful acts. Instead, these benefits may be transferred to the victims of her wrongful acts to rectify (or partially rectify) the wrong that she has done.

Of course, there may be circumstances in which the harmful effects of her wrongful acts are greater than the benefits that she has received from her wrongful acts. In such circumstances, we should not expect her to sacrifice more than the value of the benefits derived from her wrongful acts because holding her liable for the full costs of her wrongful acts does not take seriously her permanent fallibility (which explains her excusable ignorance). Limiting her liability to the value of the benefits derived from her wrongful acts ensures that she is neither benefited nor burdened as a consequence of her nature as a permanently fallible moral agent who has to make decisions on the basis of imperfect information. In the context of climate change, excusably ignorant emitters should be held liable for the costs associated with their wrongful emissions up to the value of the benefits they derived from their wrongful emissions-generating activities.

In this section, I have drawn on Risse's distinction between two standpoints to propose a new way of thinking about the liabilities of excusably ignorant emitters. The principle of limited liability that I have defended is similar to Caney's principle. However, the proposed account provides a new justification for the principle of limited liability. The new account suggests that it is not causal responsibility *per se* that is morally significant but rather our belief—based on best current information—that

(some) emissions-generating acts were wrong. Moreover, limited liability for excusably ignorant emitters is not unfair because it takes seriously both standpoints. Excusably ignorant emitters could not be expected to know that (some of) their emissions-generating acts were wrong but they could be expected to recognise their own permanent fallibility. As moral agents, aiming to act rightly, they should not want to take advantage of benefits derived from their own (excusable) mistakes about right and wrong. Therefore, they should not consider limited liability unfair. Of course, the proposed account remains incomplete because I have not said how we can distinguish right and wrong emissions-generating acts. Instead, I have assumed that some—perhaps, most—emissions-generating acts are wrongful acts. It is beyond the scope of this paper to offer a full account of right and wrong emissions-generating acts, although I say a little more on the topic in both sections 5 and 6.

5. Three Objections and Replies

In this section, I will consider three objections to the proposed defence of the limited liability of the excusably ignorant for their wrongful emissions.[14] First, it might be objected that the account of right and wrong as 'time-neutral' concepts has implausible implications. Imagine the following case: A person, P, saves some poor peasants from poverty by relocating them to a new area of fruitful land, L, some distance away from their original location. Some years later a meteorite strikes L and all of the peasants are killed. If the peasants had stayed on the original land, they would have lived. On the proposed account, it would seem that P's relocation of the peasants is an excusably ignorant but wrongful act. However, this seems to mischaracterise the situation. We might plausibly say that P's act had bad consequences but it does not seem appropriate to say that P acted wrongly.

We might reply to this objection either by defending the claim that P did act wrongly in the meteorite case or by arguing that the proposed account does not imply that P acted wrongly in the meteorite case. I think the second reply is the correct one. However, this requires further development of the proposed account. In particular, we need to think carefully about different types of ignorance. We might usefully begin by distinguishing two kinds of ignorance: moral ignorance and empirical

ignorance. In the meteorite case, P is empirically ignorant: he does not know that the meteorite will hit L and kill the relocated peasants. There is an empirical fact about the world that he does not know. It should be clear that empirical ignorance might be excusable—as it is in both the meteorite case and in the climate change case (pre-1990). In contrast, P would be morally ignorant if he did not know that deliberately killing innocent peasants was wrong. There would be a moral 'fact' that he did not know. It is less clear whether moral ignorance might also be excusable—for example, was the ancient Athenians' failure to reject slavery a case of excusable moral ignorance or a case of culpable moral ignorance? Our answer seems likely to depend on our metaethics. If all humans, irrespective of time or place, have an innate moral sense that provides access to moral 'truths', the moral ignorance of the Athenians seems likely to have been culpable. However, if the acquisition of moral knowledge, like the acquisition of empirical knowledge, is an ongoing and intergenerational social enterprise, the Athenians might have been excusably morally ignorant because they lived at a time when the wrongness of slavery had not been discovered. I cannot defend it here but I will assume that the second of these metaethical positions is more plausible.[15]

The idea of excusable moral ignorance can be understood in terms of the distinction between the time-relative and time-neutral standpoints. From the time-relative standpoint, the Athenians excusably did not know that slavery was wrong. From the time-neutral standpoint, the Athenians acted wrongly. In this case, the idea of judging right and wrong from the time-neutral standpoint seems plausible. However, it might be suggested that the same cannot be said in the case of excusable empirical ignorance. From the time-neutral standpoint, we might judge that P's relocation of the peasants had bad consequences but not that P acted wrongly. So, the proposed account fails because it confuses excusable moral ignorance and excusable empirical ignorance.

I think the distinction between moral ignorance and empirical ignorance is important but I think the account so far is oversimplified. Empirical facts can have different moral significance and can be morally significant in different ways. Our knowledge of the link between carbon emissions and climate change is morally significant because it reconfigures "the circumstances of justice" by making us aware of another

(moderately) scarce resource, namely, the carbon absorption capacity of the planetary system (Rawls 1999, 109). If we believe that justice requires a fair distribution of moderately scarce resources, new empirical knowledge of the effects of carbon emissions may lead us to revise our understanding of the boundary between just and unjust acts. In the climate change case, empirical ignorance can produce systematic moral error just because the knowledge that we lack fundamentally changes our basic moral circumstances. In such circumstances, it does seem appropriate to judge, from the time-neutral standpoint, that excusably ignorant emitters, who have emitted more than they would have been permitted under an accurate account of the circumstances of justice, have acted unjustly and wrongly.

We can now reconsider the meteorite case. The meteorite case is only analogous to the climate change case if we believe that the knowledge of the meteorite strike reconfigures the circumstances of justice, thereby changing our basic moral circumstances and producing systematic moral error. This does not seem plausible. As described, the meteorite strike is a one-off event that has very significant effects in one area and for one group of people. It has only a marginal effect on the circumstances of justice and does not produce systematic moral error.[16] From the time-neutral standpoint, we should not say that P acted wrongly in relocating the peasants but rather that their relocation had bad consequences. Therefore, we should amend the proposed account. We should adopt the time-neutral standpoint to judge acts right or wrong when judgements from the time-relative standpoint are compromised by either (1) excusable moral ignorance or (2) excusable empirical ignorance that produces systematic moral errors.

A second objection to the proposed account might accept this amendment but still argue that it is unfair to require the excusably ignorant to forego the benefits gained from their wrongful emissions. However, this does not seem to take sufficiently seriously the time-neutral judgement that emissions in excess of those that would have been permitted under a correct account of the circumstances of justice were wrongful emissions. A moral agent cannot claim to be legitimately entitled to the benefits of wrongful acts and should not want to benefit from having acted wrongly. Instead, she should regret her wrongful acts and should want to rectify the wrong that she has done. Therefore, she has no grounds for claiming that it is unfair to require her to forego the benefits gained from her wrongful emissions.

However, a third objection to the proposed account might suggest that excusably ignorant emitters are being let off too lightly. Why should the liability of the excusably ignorant be limited to the value of the benefits gained from their wrongful emissions? Why shouldn't they be liable for the full costs of rectifying the harmful consequences of their wrongful emissions even if the full costs exceed the value of their benefits? This objection takes seriously the time-neutral judgement that the excusably ignorant have acted wrongly. However, it does not take sufficiently seriously the time-relative standpoint: the excusably ignorant emitters did not know that they were acting wrongly. If they are held liable for the full costs of rectification, their liability is the same as it would have been if they had knowingly (or culpably ignorantly) acted wrongly. Limiting their liability to the value of their benefits is an appropriate way of balancing the moral significance of the two standpoints because it requires them to forego benefits to which they were not entitled without treating them as if they knowingly acted wrongly.[17]

6. Conclusion

The principle of historic responsibility supports the claim that developed states should pay the largest share of the costs of mitigating climate change. However, the excusable-ignorance objection threatens to undermine the significance of the principle of historic responsibility by limiting its reach to the post-1990 period. I have argued for a middle way between proponents and critics of the excusable-ignorance objection and that imposes limited liability on excusably ignorant emitters. Excusably ignorant emitters should be liable for the costs of climate change associated with their wrongful emissions-generating activities as long as the costs do not exceed the benefits that they have derived from those activities. Further work—both empirical and normative—is required on, at least, two issues to determine the implications of this principle. First, as I have noted, we can only judge which historic emissions-generating acts were wrongful once we have an account of justice (based on our best current account of the circumstances of justice), which tells us which emissions-generating acts were just and which were unjust. Some commentators are tempted by a 'time-neutral' conception of climate justice that allocates equal per capita emission rights to all persons (past, present, and future). As I have argued elsewhere, I think there are good reasons for

rejecting this approach to climate justice.[18] An alternative 'ideal' or 'time-neutral' conception of climate justice is required. Second, to determine the liability of excusably ignorant emitters for their wrongful emissions-generating acts, we will need to develop a principled method for measuring benefits and attributing them to agents and acts. Obviously, this can only ever be an approximation that is likely always to remain controversial. However, subject to further investigation, I think it may be reasonable to assume that the benefits derived from wrongful emissions-generating acts by states that developed early were sufficiently large that the principle of limited liability may closely approximate to the unrestricted principle of historic responsibility. If so, excusable ignorance does not excuse the developed states from liability for the costs of mitigating climate change. If the developed states are not liable for the costs associated with their historic emissions, it must be for some reason other than their excusable ignorance of the consequences of their emissions-generating activities.[19]

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NOTES

1. Caney uses the term "hybrid" to label his own principle (2005, 769). I use the term more generally to refer to principles that are pluralistic. For a fuller discussion of the principle of "common but differentiated responsibilities and respective capabilities" see Bell (2010).

2. On the choice between statist and individualist approaches see Page (1999), Caney (2005, 758–60), Harris (2010).

3. See Grubb (1995, 491).

4. See Caney (2005). I have discussed this objection in Bell (2010).

5. Indeed, some states that are responsible for historic emissions no longer exist – so even the statist approach is susceptible to the problem of 'dead' emitters.

6. Caney (2005) discusses two further objections: 'poor' emitters and 'noncompliant' emitters. I have discussed these objections in Bell (2010).

7. Michel den Elzen and colleagues have suggested that using 1990 rather than 1890 as the start date "decreases the contributions of regions that started emitting early, such as the OECD countries by 6 percentage points" (den Elzen *et al.* 2005, 634).

8. See Caney (2005, 761–2), Caney (2010, 208–10), Gardiner (2004, 581), Gosseries (2004, 39–41), Meyer (2004, 20), Neumayer (2000, 188), Posner and Sunstein (2008, 1597–98), Posner and Weisbach (2010, 110–11), Risse (2009, 30–33), Shue (1993, 52),

Shue (1994, 363), Shue (1999, 535), Vanderheiden (2008, 184–92). Most of these discussions are very brief.

9. A full defence of any particular date will involve addressing difficult questions about the specification of the ignorance (Whose ignorance about which links between acts and consequences?) and about our epistemic duties (How much—and what kinds of—effort are we required to make to increase our understanding of the consequences of our actions?).

10. "Pure strict liability would impose liability without regard to whether the [agent] knew or should have known about the risks" (Grossman 2003, 47).

11. For an overview see Klass (2004, 912–20).

12. See Boyle (2005) and Klass (2004).

13. This approach to the problem is modelled on my more general discussion of a 'dual standpoint' approach to moral and political issues in Bell (1999).

14. I would like to thank an anonymous reviewer for raising these objections (and for suggesting the 'meteorite' case discussed below).

15. See Bell (1999).

16. It is, of course, possible to imagine a meteorite strike, closer to the scale of the one that is thought to have caused the extinction of the dinosaurs, which would change the circumstances of justice.

17. I have not said anything about how the remainder of the costs of rectifying the wrong done by excusably ignorant emitters should be distributed. In short, I believe that other beneficiaries of the wrongful acts of excusably ignorant emitters should also be held liable for costs up to the value of their benefits (because otherwise they benefit from a wrongful act). Any residual costs of rectifying the injustice suffered by the victims of climate change should be shared fairly among all agents according to appropriate principles of justice, which will be related to ability to pay rather than emissions or benefits.

18. See Bell (2008).

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