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CLIMATE REFUGEES AND THE LIMITS OF REPARATIVE OBLIGATIONS TO OFFER ASYLUM

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ABSTRACT. A growing number of authors argue that states which are responsible for global temperature rise owe reparative obligations to offer asylum to climate refugees because their decisions have led to the severe harms which climate refugees suffer. The validity and significance of reparative obligations as ideal moral requirements notwithstanding, this paper argues that, in practice, relying on causal responsibility to determine who is owed asylum is likely to produce morally objectionable outcomes. This problem results from a specific attribution problem, namely, the probabilistic reasoning and inherent uncertainties involved in establishing causal responsibility within the complex causal scenario of climate-related refugee movements. Because of this attribution problem, determining who is owed asylum is likely to be both under- and over-inclusive. Both under- and over-inclusion lead to unjustified deprivations of basic rights for some climate refugees.

I. INTRODUCTION

Most states are failing in their promises to limit their greenhouse gas (GHG) emissions.[1] It is now highly likely that the Paris Agreement's goal for limiting global temperature rise to below 2°C in comparison to preindustrial levels will not be achieved.[2] As the planet warms, climate-related disruptive events, such as sea level rises, protracted droughts, and extensive wildfires are becoming more frequent. Each

[1] For the current states of emission trends, see Intergovernmental Panel on Climate Change (IPCC), "Summary for Policymakers" in H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.), *Climate Change 2022: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (Cambridge University Press, Cambridge, UK and New York, NY, USA, 2022), pp. 3–33.

[2] For the commitment of states, see United Nations Framework Convention on Climate Change (UNFCC), Adoption of the Paris Agreement (No. FCCC/CP/2015/L.9/Rev. 1).

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year an ever-greater number of people migrate to avoid the effects of climate change.[3]

What is the normative relevance of the link between the failure of states to limit their GHG emissions and climate-related migration? A growing number of authors argue that states which are responsible for global temperature rise owe backward-looking *reparative obligations* to offer asylum to climate refugees because their decisions have led to the severe harms which climate refugees suffer.[4] This is crucial for determining which states are required to offer asylum to climate refugees. Reparative obligations are considered to be more stringent than forward-looking *humanitarian obligations* that all states have towards all refugees. In turn, states that are responsible for global temperature rise, and thus under reparative obligations, are required to prioritize climate refugees' claims to asylum over those of humanitarian refugees, provide durable solutions to the problems climate refugees are facing, and bear larger costs in remedying harms climate refugees suffer in comparison to other states.

The role assigned to reparative obligations in determining responsibilities seems well placed when considering the empirical realities of climate-related refugee movements. Climate refugees predominantly flee underdeveloped states that have fewer capacities to adapt in response to disruptive climatic events. At the same time, underdeveloped states contribute, and have historically contributed, less to global temperature rise in comparison to developed states. Hence, reparative obligations are likely to fall on developed states that have greater capacities to offer asylum. Reparatory approaches

[3] The exact numbers are disputed, but it is estimated that a range from tens to hundreds of millions will migrate in response to climate change related events in the coming decades. See Elizabeth Ferris, 'Research on climate change and migration where are we and where are we going?' *Migration Studies,* 8(4) (2020): pp. 612–625.

[4] For arguments for reparation, see e.g., Rebecca Buxton, ''Reparative Justice for Climate Refugees'', *Philosophy*, 94(2)(2019): pp. 193–219, James Souter, ''Asylum as Reparation: Refuge and Responsibility for the Harms of Displacement,'' Journal of Refugee Studies, 35(3)(2022); for compensation, see e.g., Jamie Draper, ''Responsibility and Climate-Induced Displacement,'' *Global Justice: Theory Practice Rhetoric*, 11(2)(2019): pp. 59–80 and ''Climate Change and Displacement: Towards a Pluralist Approach'' *European Journal of Political Theory,* 23(2) (2022), Clare Heyward and Jörgen Ödalen, ''A Free Movement Passport for the Territorially Dispossed'' in Clare Heyward and Dominic Roser eds., *Climate Justice in a Non-Ideal World* (New York: Oxford University Press, 2016), Robyn Eckersley ''The common but differentiated responsibilities of states to assist and receive 'climate refugees,'' *European Journal of Political Theory* 14(4)(2015): pp. 481–500, and for rectification, see e.g. Avner de Shalit, ''Climate Change Refugees, Compensation and Rectification'' *The Monist* 94(3)(2011), pp. 310–328. For the purposes of this paper, following Souter, ''Asylum as Reparation,'' I will use reparation as an umbrella term for compensation, reparation, and rectification.

may then provide adequate remedies for the harms climate refugees suffer.

Nevertheless, this paper advances a cautionary note. The validity and significance of reparative obligations as ideal moral requirements notwithstanding, I emphasize that, in practice, relying on causal responsibility to determine who is owed asylum is likely to produce morally objectionable outcomes. This problem results from a specific *attribution problem*, namely, the probabilistic reasoning and inherent uncertainties involved in establishing causal responsibility within the complex causal scenario of climate-related refugee movements. Because of this attribution problem, determining who is owed asylum is likely to be both under- and over-inclusive. Both under- and over-inclusion lead to unjustified deprivations of basic rights for some climate refugees.

The aim of the paper is not to undermine the significance of reparative obligations in addressing climate change related problems in general. Establishing the morally crucial link between actions or omissions of states is extremely important for assigning responsibility in many cases of climate change related loss and damage. In the last decades, with developments in attribution science, a growing number of litigations aim to hold emitting states responsible for climate related loss and damage.[5] Yet, the case of climate refugees is distinct. Probabilistic reasoning and uncertainties in establishing causal responsibility are especially acute. The institutional structure of refugee protection necessitates a binary answer to the attribution question, which exacerbates over- and under-inclusion. Over- and under-inclusion, coupled with the incapacity or unwillingness of states to accept claims of asylum within their territories, result in morally objectionable outcomes. Does this mean that climate change should not figure in determining responsibilities for refugee protection? Not necessarily. My argument applies only to backward-looking approaches that require identifying a causal relationship between actions and omissions of states and refugee movements. Future research needs to consider whether the novel circumstances brought about by climate change strengthen forward-looking obligations towards refugees.

[5] See e.g., Michael Burger, Wentz, J. & Horton, R.M. ''The law and science of climate change attribution'' *Columbia Journal of Environmental Law,* 45(57)(2020), pp.: 57–88.

The paper is structured as follows: In Section II, I give an outcome responsibility based account of reparatory obligations to offer asylum to climate refugees. I note that for outcome responsibility to obtain, an external state must be causally responsible for the harms climate refugees suffer. In Section III, I clarify the specific attribution problem relevant to climate refugees – namely, that to establish the outcome responsibility of an external state, we need to attribute causal responsibility to that external state for the failure of the refugee-producing state to secure the basic rights of its citizens. In Section IV, I show that probabilistic reasoning and uncertainties of attribution inherent to the case of climate refugees lead to over- and under-inclusive assessments. In Section V, I argue that over- and under-inclusion lead to morally objectionable outcomes in the context of contemporary refugee protection where external states are unable, or unwilling, to accept all claims of asylum within their territories. Section VI concludes by considering whether we should still employ reparatory approaches despite the morally objectionable outcomes.

Before I begin, let me offer clarificatory remarks regarding the concept of climate refugees, the scope of the argument, and its method. I assume that the argument for states' reparative obligations to offer asylum is limited to involuntary migration.[6] I take it that refugees are involuntary migrants who are forced to move because they are unable to secure their basic human rights in their places of habitual residence. Inability to secure basic human rights does not suffice to give involuntary migrants a legal claim to refugee status, as this condition does not satisfy the 1951 Geneva Convention's stipulation that refugees are only those facing persecution in their states of origin. Yet many recent critics have offered normative arguments for broadening the Convention's conception of a refugee and reforming refugee-related institutions towards securing protection of basic human rights.[7] If these authors are right, then those whose basic human rights are not met in their state of origin might have a

[6] A similar limitation is employed by Souter, "Asylum as Reparation," Eckersley, "The common but differentiated responsibilities of states to assist and receive 'climate refugees,'" and de Shalit, "Climate Change Refugee, Compensation and Rectification."

[7] See e.g., Andrew E. Shacknove, "Who is a refugee?" *Ethics* 95(2)(1985): pp. 274–284, Matthew J. Gibney, *The Ethics and Politics of Asylum: Liberal Democracy and the Response to Refugee* (Cambridge: Cambridge University Press, 2004), Matthew Lister, "Climate Change Refugees," *Critical Review of International Social and Political Philosophy,* 17(5)(2014), pp.: 618–634.

moral claim to refugee status even though they currently lack a legal claim. In this limited sense, involuntary migrants fleeing climate change may be conceptualized as climate refugees.

The argument developed here is an instance of non-ideal theorizing as it addresses what external states should do when other external states are unable or unwilling to offer asylum to all claimants within their territory because of what they consider to be their absorptive capacity. If most external states are willing to comply with both their reparatory and humanitarian obligations to offer asylum to refugees, and have the capacity to do so, over- and under-inclusion in determining who are climate refugees might not lead to morally objectionable outcomes. Nevertheless, especially in the context of climate change, it is highly likely that large number of individuals have a legitimate claim to asylum based on deprivation of human rights. Due to large numbers, some states might genuinely lack the capacity to offer asylum. Other states might not be willing to act in accordance with their capacities. Theorizing reparative obligations to offer asylum to climate refugees needs to take the latter facts into account as an empirical reality. Otherwise, action-guiding recommendations that might be derived from the theory result in unintended consequences such as the morally objectionable outcomes that I aim to emphasize in this paper.

II. REPARATIVE OBLIGATIONS TO OFFER ASYLUM

The circumstances of refugees involve unusually severe harms. First and foremost, they cannot have their basic needs or basic rights met in their places of habitual residence. This is how climate refugees can be normatively distinguished from climate migrants. But refugees, including climate refugees, are also harmed in other ways. They lack access to an effective state where they can exercise meaningful political rights.[8] As they are compelled to leave their places of habitual residence, they suffer the loss of their homeland, sense of place, cultural practices, or social attachments.[9] Their life plans that are contingent upon living in places of habitual residence are dis-

[8] See e.g., Ali Emre Benli ''Should Refugees in the European Union Have Voting Rights?'' *Critical Review of International Social and Political Philosophy*, 26(5) (2023), pp.: 680–701.

[9] See e.g., de Shalit, ''Climate Change Refugees, Compensation and Rectification.'' Avery Kolers, ''Floating Provisos and Sinking Islands,'' *Journal of Applied Philosophy*, 29(4)(2012), pp.: 333–343, and Buxton, ''Reparative Justice for Climate Refugees.''

rupted. They no longer have access to the ''ways of life, resources, and opportunities'' associated with these places, on which they had a legitimate expectation to depend.[10] Once they leave their places of habitual residence, they need to bear the costs of reformulating their life plans and adjusting to significantly different circumstances.

The nature and extent of the harms that climate refugees suffer lead to reparatory obligations for states to offer asylum. These are backward-looking obligations grounded in the special relationship between those who are harmed and those who are responsible for the harm. States that contribute to global temperature rise owe reparative obligations to offer asylum to climate refugees because they are responsible for the harms climate refugees suffer. Moreover, the most appropriate form of reparation is to offer asylum to climate refugees, as the legal rights associated with asylum in an external state not only secures the basic rights of climate refugees but also ensures a path out of their social and political predicament.[11]

In the next sections, I will emphasize the difficulties, in practice, for identifying the group of climate refugees that is owed reparative obligations. To do that, we need to know what this relationship, which grounds reparative obligations, involves. Why should states that contribute to climate change have reparative obligations to offer asylum to climate refugees? What makes this relationship morally salient?

In recent literature, several authors argue that states that contribute to global temperature rise have reparative obligations because they are *outcome responsible* for the harms to which climate refugees are exposed.[12] Outcome responsibility has a causal component: ''the agent must in some way have contributed to producing the outcome.''[13] But outcome responsibility is different from causal responsibility. While causal responsibility tracks a causal chain of events and aims to identify the causally salient one, outcome responsibility aims to identify the relevant *human agency* in producing

[10] See Heyward and Ödalen, ''A Free Movement Passport for the Territorially Dispossessed,'' p. 213.

[11] See Souter, ''Asylum as Reparation,'' for an extensive treatment of asylums' reparative and humanitarian function.

[12] See e.g., Souter, ''Asylum as Reparation,'' Buxton, ''Reparative Justice for Climate Refugees,'' and Draper, ''Responsibility and Climate-Induced Displacement.'' Although outcome responsibility is not the only account of responsibility that may ground reparative obligations, I will follow these authors in assuming that it is the most plausible candidate.

[13] David Miller, *National Responsibility and Global Justice* (New York: Oxford University Press, 2007), p. 86.

the outcome.[14] Causal responsibility is thus necessary, but not sufficient, for outcome responsibility. In the absence of human agency, individuals might not be accountable for the harms associated with an outcome.

How does outcome responsibility track human agency? First, outcome responsibility can result from both harmful acts and omissions;[15] individuals are potentially responsible for all their decisions that lead to harmful outcomes. Second, there needs to be a foreseeable connection between the actions of the agent and the outcome.[16] If an individual has no reasonable means of predicting the outcome of an action, then she cannot be responsible for it. This does not mean that one can be outcome responsible only for intended outcomes. One can be responsible for outcomes that one negligently produces. Even in cases where an agent has taken some care to avoid the outcome, she may still be outcome responsible.[17]

Notice that the above discussion does not refer to any wrongdoing or rights violation regarding the actions or omissions of agents. This is because outcome responsibility is distinct from moral responsibility and culpability where these additional features might turn into a wrong. In some cases, outcome responsibility entails reparatory obligations even in the absence of any wrongdoing or rights violation. As James Souter argues, following Tony Honoré and David Miller, ''as agents, when we act we effectively take a bet on the outcomes of our actions. If we see ourselves as entitled to reap the rewards of our actions, then we should also be prepared to bear the costs of them if they harm others.''[18] Outcome responsibility does not always create reparative obligations. For example, as Miller notes, in cases of fair competition we do not expect people who drive others out of business to provide compensation.[19] The same is plausible for at least some cases of justifiable self- or other-defense. But especially when the agent acquires large benefits as an outcome of an action or omission that harms others and the harms incurred are extensive, reparative obligations can emerge.

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[14] Ibid., p. 87.

[15] Souter, ''Asylum as Reparation,'' p. 48.

[16] Ibid., p. 71; Miller, *National Responsibility and Global Justice,* p. 88.

[17] Ibid., p. 88.

[18] Souter, *''Asylum as Reparation,''* pp. 71–72.

[19] Miller, *National Responsibility and Global Justice,* p. 101.

Given what we know about climate change and refugee movements, it is plausible that some states are outcome responsible for the harms to which climate refugees are exposed and the resultant movements. Some states' emissions lead to excessive concentration of GHGs in the atmosphere that causally contribute to global temperature rise. Some states fail to implement mitigation policies to a degree sufficient to keep global temperature rise within defined limits. The rise in temperature increases the frequency and intensity of disruptive climatic events, such as sea level rise, protracted droughts, and extensive wildfires. Such disruptive events undermine the conditions in which individuals can meet their basic human rights in their habitual places of residence and compel them to migrate.[20] In both cases, the consequences of states' actions or omissions were foreseeable. As several authors observe, the implications of climate change for migration had already been recognized by the first Intergovernmental Panel on Climate Change (IPCC) report in 1990.[21] Moreover, states greatly benefit from GHG emissions, while circumstances of climate refugees involve unusually severe harms. It is reasonable to conclude then that states' outcomes responsibility for global temperature rise leads to reparatory obligations to offer asylum to climate refugees.

III. WHICH REFUGEES ARE CLIMATE REFUGEES?

But which refugees are owed asylum on the basis of climate-related reparative obligations? The question is crucial because, as I show in Section V, identifying climate refugees determines which refugees are offered asylum by external states when, as is the actual case, many states are unable or unwilling to offer asylum to all refugees within their territory.

As we have seen, for a group of refugees to be owed asylum by an external state on the basis of climate-related reparative obligations, that external state must be causally responsible for the harms they suffered. In the next section, I inquire whether, and to what extent, we can attribute causal responsibility to an external state for a par-

[20] IPCC, "Summary for Policymakers," pp. 3–33.

[21] See Draper, "Responsibility and Climate Induced Displacement" and Christian Baatz, "Responsibility for the Past? Some Thoughts on Compensating Those Vulnerable to Climate Change in Developing Countries," *Ethics, Policy & Environment*, 16(1)(2013), pp. 94–110.

ticular climate-related refugee movement. In this section, I aim to clarify the form of the specific attribution question that identifies climate refugees.

First, note that an external state's reparatory obligations to offer asylum to a group of climate refugees depend on whether we can attribute causal responsibility to that state for *the failure of the refugee's home state to secure the basic rights of its citizens*. The need for this specific causal relationship reflects the conception of a refugee I note in the Introduction and the existing norms of the state system. I take it that refugees are involuntary migrants who are forced to move because they are unable to secure basic human rights in their places of habitual residence. Within the contemporary state system, an individual becomes a refugee, and suffers the harms of refugeehood, only when her home state is unable or unwilling to protect her human rights. Therefore, an external state has a reparatory obligation to offer asylum to climate refugees if and only if that external state is causally responsible for the home state's failing to fulfil its responsibilities to protect the basic rights of its citizens.

Second, we need to divide the causal scenario into two steps: (i) the actions or omissions of external states causing global temperature rise, and (ii) global temperature rise causing the consequent failure of a home state to ensure its citizens' basic rights. The causal scenario needs to be divided into these steps because while it is impossible to show, for example, that a particular load of GHG particles emitted by an external state E has caused the failure of a home state H, it is possible to show that emissions of E has caused global temperature rise, and that global temperature rise has caused the failure of H.[22]

Third, for attributing responsibilities, while assessing causal relationships at (i) is about determining which states owe reparatory obligations to offer asylum and how the costs of meeting these obligations should be distributed among them, (ii) is about identifying which refugees are climate refugees. (ii) poses a distinct attribution problem for the following reasons. As I will discuss in the next section, a variety of factors might play a causal role in the failure of H to ensure its citizens' basic rights. If global temperature rise is one of these factors, then refugees fleeing H are climate refugees.

[22] For an exposition of how emissions cause harm in two steps, see John Broome, *Climate Matters: Ethics in a Warming World* (New York: W. W. Norton, 2012), pp. 16–37.

This claim is true irrespective of any determination regarding which states are responsible for global temperature rise and owe reparatory obligations to offer asylum.

Fourth, in practice (ii) requires a binary answer. While there may be various factors that cause the failure of H to ensure its citizens' basic rights to different degrees, we need to give a determinative answer to the question which refugees are climate refugees. Due to the institutional structure of the refugee regime, one either has the status of a climate refugee, and the full set of rights associated with it, or not. Although it is likely that reasons for attributing climate refugee status for a group of refugees may be stronger (or weaker) in comparison to another group, this difference cannot be reflected in the final attribution decision.

Fifth, the requirement for a binary answer implies that to attribute causal responsibility to an external state we either need an absolute or a threshold criterion of causal responsibility. An absolute criterion would attribute climate refugee status to refugees fleeing H if global temperature rise has any contribution to H's failure to secure the basic rights of its citizens. Yet this would imply that nearly all refugees are climate refugees, as it is not hard to argue that global temperature rise contributes, even if minimally, to all contemporary refugee movements. Alternatively, a threshold criterion would attribute climate refugee status to refugees fleeing H if global temperature rise has made a substantial contribution to H's failure. To this end, as I discuss in the following section, we need to work out what a substantial contribution is.

IV. PROBABILISTIC REASONING, UNCERTAINTIES, AND OVER AND UNDER INCLUSION

With these clarifications we are in a better position to tackle the question of which refugees are climate refugees. The task is not straightforward. The causal scenario of climate-related refugee movements is extremely complex. Attribution assessments inherently involve probabilistic reasoning and uncertainties. While none of the difficulties ultimately prevent us from attributing causal responsibility to an external state, the set of refugees that are considered to be climate refugees is bound to be over- or under-inclusive.

Consider the following scenario:
Flood: State H has experienced a 5 year-long drought and 5 excessive rainfall events. Extreme flooding ensues across its territory. H no longer has the capacity to secure the basic rights of all its citizens. A group of refugees from H seek asylum in an external state E. E is known to be a high-emitting state that is outcome responsible for global temperature rise.

Is E outcome responsible for H's failure to secure the basic rights of its citizens? In other words, are refugees fleeing H climate refugees? Here the causal scenario has three steps: To attribute causal responsibility to E, we need to causally link (a) global temperature rise with climatic events that occurred within the territory of H, (b) the occurrence of climatic events with the supposed impact of climatic events, and (c) the impact of climatic events with the failure of H to secure the basic rights of its citizens. Furthermore, we need to show that the causal links are those that are salient for casual responsibility and ground outcome responsibility.

Let me begin with (a). Are climatic events that occur within the territory of H caused by anthropogenic rise in global temperatures? Petra Minnerop and Friederike Otto argue that strict 'but for' inquiries used to establish causal relations are over-exclusionary in the climate change context, as they set a high threshold for making causal statements (2020).[23] For example, it would be extremely difficult to show that the 5 year-long drought and 5 excessive rainfall events would not have occurred *but for* the rise in global temperatures. Yet recent developments in attribution science allow us to make probabilistic event attribution assessments that identify alterations in the probability of climatic events occurring as a result of global increase in temperatures.[24] This information may help us to attribute causal responsibility where we cannot establish *but for* causation in at least two ways. For example, let's say that an event attribution assessment found that the probability of occurrence of a 5-year drought within the territory of H has increased by 30% due to anthropogenic temperature rise and the occurrence of 5 excessive rainfalls has increased by 60%. Based on this finding, one way we can attribute causal responsibility is in proportion to the given probability ratio. Another way is to set a probability ratio as a threshold of causal responsibility and include only those events that are above the

[23] Petra Minnerop and Friederike Otto, "Climate change and causation – joining law and climate science on the basis of formal logic," *Buffalo Journal of Environmental Law* 27(2020).

[24] See Geert Jan van Oldenborgh, et al., "Pathways and pitfalls in extreme event attribution," Climatic Change 166, art. 13(2021).

threshold in the set of climatic events for which anthropogenic temperature rise is causally responsible. Let's say that we determine 40% increase in the probability of occurrence as the threshold of causal responsibility in the climate context. This would include the 5-year drought while leaving out 5 excessive rainfalls. Both may be viable ways to attribute causal responsibility in the climate change context. Yet recall that to give a determinative answer to the question of who is owed reparatory obligations, we will have to ultimately identify either H or E as the causally responsible agent. Moreover, we will be faced with a similar issue of interpreting probabilistic causation findings at the junctures of (b) and (c). In turn, we would have to identify a threshold of causal responsibility either at each juncture or at the final outcome of the causal calculus.

Employing probabilistic reasoning needs not constitute a problem for attribution assessments in general. Yet, difficulties arise when we consider inherent uncertainties that need to be accounted for in the context of climate change and refugee movements. In IPCC reports, uncertainties are expressed both in quantitative and qualitative terms. Quantitative uncertainties are about uncertainties within a finding. As in any scientific inquiry that employs an ensemble of models and statistical analysis, results of event attribution studies deliver a range of probabilities together with a quantitative uncertainty value. Qualitative uncertainties, on the other hand, are about the validity of such results. Distinct from quantitative uncertainties, they are evaluated "based on the type, amount, quality, and consistency of evidence" and "the degree of agreement" among the scientific community.[25] For example, scientists may have a better understanding about mechanisms that bring about drought in comparison to excessive rainfall events. Nevertheless, as an integral part of the process, disagreement emerges at each step, including determining the definition of an event, such as a drought, its framing, as well as appropriateness of different models and sets of evidence.[26] Each uncertainty assessment, moreover, is accompanied by a confidence level from low to very high. To attribute causal responsibility, we need to interpret the significance of confidence

[25] Michael. D. Mastrandrea, et al., "Guidance Note for Lead Authors of the IPCC Fifth Assessment Report on Consistent Treatment of Uncertainties." Intergovernmental Panel on Climate Change (IPCC) (2010), pp. 3.

[26] See Geert Jan van Oldenborgh, et al., "Pathways and pitfalls in extreme event attribution."

levels for each finding. For example, we can exclude findings that have low confidence with the aim of removing as much uncertainty as possible from our causal assessment. Yet this leads to biases based on the types of events that are under investigation. The problem is that the state of scientific knowledge and understanding of different types of events vary. In turn, attribution assessments of different types of climatic event receive varying confidence levels due to our understanding of that event. Considering *Flood*, let's say that while the assessment result of 5 excessive rainfall events has a low confidence level, the 5-year long drought has a high confidence level. If we choose to exclude findings that have low confidence levels, we will have to exclude the excessive rainfall events from our assessment. This outcome is due merely to the uncertainties in findings and the varying state of scientific understanding and knowledge of different types of events. In that sense, it could easily be the case that exclusion of 5 excessive rainfall events may be wrong from the point of view of causal responsibility.

What about (b)? Are widespread floods across the territory of H caused by anthropogenic climatic events? Here the attribution assessment regards the impact of the 5-year long drought and 5 excessive rainfall events within the territory of H. The issue is that the impacts of climatic events such as floods usually have anthropogenic causes that might be unrelated to global rise in temperatures, such as local management of water reservoirs and changes in land coverage.[27] To the extent that H is causally responsible for such anthropogenic factors, E might be relieved of causal responsibility. Let's say that in *Flood* the impact attribution assessment found that the occurrence of widespread flooding was made 80% more likely, with drought contributing 30%, excessive rainfalls 20%, water reservoir management 10% and change in land coverage 20%. To attribute causal responsibility to E, we can combine probabilistic assessments at (a) and (b) by employing our preferred conception of causal responsibility, either proportionally or based on a threshold of causal responsibility. Yet issues related to probabilistic causation and uncertainties would emerge, even to a greater degree, as the causal nexus gets more multifarious.

[27] As an example of an actual impact assessment of extreme flooding, see Ji Peng, et al, ''Anthropogenic Contributions to the 2018 Extreme Flooding over the Upper Yellow River Basin in China,'' Bulletin of the American Meteorological Society, 101(1)(2020), pp. 89–94.

Finally, at (c) we need to determine whether the failure of H to secure the basic rights of its citizens is caused by the impact of climatic events. In *Flood*, the impact is extreme flooding. As several authors emphasize, climatic events are threat multipliers.[28] They emerge as elements that aggravate the social, political, and economic problems political communities are already facing. The extent to which floods undermine H's capacities depends on the resilience and vulnerabilities of local populations as well as H's institutions. Let's say that we have determined E's degree of causal responsibility for extensive flooding at the junctures of (a) and (b). We need to then determine the causal significance of floods among other social, political, and economic factors for which H may be causally responsible. Floods may have dire implications. They may displace local populations, lead to crop failures, or destroy essential infrastructure, putting pressure on the economy, health system, and agricultural system. As a result, H may no longer have the capacity to secure the basic rights of its citizens. Yet one might argue that such climatic events and their impact were foreseeable. Moreover, disruptive effects of climatic events could have been averted or minimized by appropriate adaptation policies, such as planned migration, flood resistant crops, or investments in infrastructures. Moreover, such polices could have been implemented by better governance and less corruption. To determine the degree of E's causal responsibility at (c), we could perhaps employ similar attribution assessments as well. Yet modeling alternative policy outcomes and relative human behavior is much more difficult. The lack of knowledge and understanding of social, political, and economic processes may be greater than regarding the physical processes studied by climate scientists. Agreement on the confidence level of findings might be much harder to reach. In turn, the results would involve even starker cases of over- and under-inclusion than event and impact attribution assessments.

Flood is highly stylized. While for some real-life cases, such as island states that are losing territory due to rising sea levels, causal responsibilities may be easily attributed to external states, for most cases the causal nexus is harder to disentangle. The climatic events that occur within the territory of refugee-producing states are likely

[28] See e.g., Jane McAdam *Climate Change, Forced Migration, and International Law* (Oxford: Oxford University Press, 2012); Draper, "Climate Change and Displacement."

to be more numerous and diverse than in *Flood*. Non-climatic but anthropogenic causes that may relieve external states of causal responsibility are likely to be harder to pin down and quantify. It is true that these difficulties do not prevent us from giving a determinative answer to the attribution question. But the result will inevitably be over- or under-inclusive. Some non-climate refugees will be wrongly considered as climate refugees. Some genuine climate refugees will be wrongly considered as non-climate refugees.

V. WHAT IS WRONG WITH OVER AND UNDER-INCLUSION?

It may not come as a surprise that assessments of liability are imperfect in actual circumstances. Some people may win tort suits that they should have lost, and some people lose tort suits that they should have won. Why is over- and under-inclusion especially worrying when it comes to climate refugees?

The issues emerge when states need to determine which refugees they should offer asylum to. States often receive both reparative and humanitarian claims from asylum seekers within their territory. Yet, in many cases, these states are unable or unwilling to offer asylum to all such refugees because of what they take to be their absorptive capacity. Thus, they need to decide which asylum claims to accept.

I assume that states determine the number of refugees they offer asylum by considering both their absorptive capacities, determined by the costs and benefits of offering asylum in terms of social, economic, and political factors, and their normative commitments towards refugees and citizens. The stronger the normative commitments a state has towards refugees, the more costs that that state should be willing to incur by offering asylum.

In making a decision from a normative perspective, states then need to compare reparatory and humanitarian claims. Humanitarian claims are grounded on humanitarian obligations that all states have towards all refugees. These are forward-looking obligations to alleviate the harms that refugees suffer grounded in the severity of those harms. Reparatory obligations are, in general, more stringent than humanitarian obligations. According to James Souter, in the case of

obligations to offer asylum, this is so at least in the following three ways:[29]

(i) Reparatory obligations provide weightier reasons for external states to offer asylum to refugees within their territory in comparison to humanitarian obligations. In other words, external states are required to prioritize reparatory claims over humanitarian claims when the two claims come into conflict.
(ii) Reparatory obligations require states to bear larger costs in offering asylum to climate refugees in comparison to costs that states are required to bear for humanitarian refugees. States have humanitarian obligations to offer asylum to refugees only when the costs are not too high. Reparative obligations, on the other hand, are not as easily countered by costs to the external state.
(iii) Reparative obligations require states to secure climate refugees a more expansive set of rights in comparison to rights that they are required to secure for other refugees due to humanitarian obligations. While humanitarian obligations entail duties to offer asylum as long as the circumstances that create refugeehood exist, reparatory approaches entail obligations for states to secure durable solutions to refugees, such as the opportunity for permanent residency.

If reparatory obligations are more stringent than humanitarian obligations in these ways, then states that have reparative obligations are required to prioritize climate refugees' claims to asylum with respect to humanitarian refugees, provide durable solutions to the problems climate refugees are facing, and bear larger costs in remedying harms climate refugees suffer in comparison to other states.

> Consider the following scenario:[30]
> *Choice*: An external state E is confronted by both climate-based reparatory claims and humanitarian claims of asylum within its territory. E is known to be a high-emitting state that is outcome responsible for global temperature rise. E does not have the capacity to fulfill all claims of asylum within its territory without incurring significant costs. Other external states are in a similar position as E, as they also lack the capacity to fulfill all claims of asylum within their territories.

Which asylum seekers should E offer asylum to? If reparatory obligations are more stringent than humanitarian obligations, then E should prioritize climate refugees. Moreover, as E does not have the

[29] Souter, "Asylum as Reparation," pp. 43–69. See also Gibney, "The Ethics and Politics of Asylum."

[30] Souter considers a similar scenario in his discussion of reparatory obligations. *Choice* is different in the sense that it focuses on the case of climate refugees.

capacity to fulfill all claims of asylum within its territory without incurring significant costs, E should reject some, if not all, humanitarian claims.

Such a distribution of asylum leads to unjustified rights deprivations due to over- and under-inclusion in the determination of the set of climate refugees. As a result of under-inclusive assessments, there will be genuine climate refugees who are wrongly identified as humanitarian refugees. Of these, some, if not all, will have their claims for asylum in E rejected. First, consider genuine climate refugees who are wrongly identified as humanitarian refugees and whose claims to asylum in E are rejected. To the extent that other external states are in a similar position to E, lacking the capacity to fulfill all claims of asylum, these refugees' claims to asylum will ultimately be rejected by all external states. In turn, their mistaken identification as humanitarian refugees will cause them to lack access to basic human rights protection. Now consider genuine climate refugees who are wrongly identified as humanitarian refugees and are granted asylum in E as humanitarian refugees. As humanitarian claims secure a less expansive set of rights than reparatory claims, these refugees will have access to a lesser set of rights in comparison to those accepted as climate refugee in E. Souter argues, observing reparatory obligations in general, that this result would be unfair from a distributive perspective were it to lead to "a two-tier asylum system, in which reparative claimants were offered a 'deluxe' form of asylum."[31] Yet the problem is not that there is a hierarchy between different groups of refugees, which might be justified with reference to the strength of reparatory obligations; rather, the problem is that the attribution of refugees into different groups is likely to be wrong to a significant extent. For some genuine climate refugees, then, the differences in the set of rights is unjustified.

As a result of over-inclusive assessments, there will be genuine humanitarian refugees, wrongly identified as climate refugees, whose claims for asylum in E will be accepted. In cases where E is able to offer asylum only to climate refugees due to E's limited absorptive capacity and E is not able to offer asylum to all those with reparative claims within its territory, some claims of genuine climate refugees will be wrongly rejected. Moreover, offering asylum to wrongly

[31] Souter, "Asylum as Reparation," p. 154.

identified climate refugees will decrease the total number of asylum claims that E will accept. As E is required to secure a more expansive set of rights for climate refugees in comparison to humanitarian refugees, climate refuges impose greater costs on E. As the number of climate refugees for which E offers asylum increases, the capacity of E to offer asylum to any refugee will correspondingly decrease.

Note that under- and over-inclusive assessments are likely to occur simultaneously. External states need to make attribution assessments for resolving climate-related asylum claims for refugees fleeing various states. Each refugee producing state would be exposed to different climate-related disruptive events. As the results of these assessments are prone to be wrong for different reasons, external states will have both under- and over-inclusive assessments. Moreover, over-inclusion exacerbates the problems of under-inclusion, as the more humanitarian asylum claims are rejected due to the capacities of external states, the greater the number of genuine climate refugees, who are wrongly identified as humanitarian refugees, whose claim of asylum will be rejected.

VI. SHOULD WE STILL EMPLOY REPARATORY APPROACHES DESPITE THE MORALLY OBJECTIONABLE OUTCOMES?

The above discussion of under- and over-inclusion shows that employing reparatory obligations to offer asylum leads to rights deprivations for some climate refugees. Yet this alone does not show that we should avoid employing reparatory obligations in determining states' responsibilities to offer asylum. Reparatory obligations reflect a widespread moral intuition that states that emit large amounts of GHGs should be held accountable for the harms of global temperature rise. In turn, it is crucial to inquire whether we should still employ reparatory obligations despite the morally objectionable outcomes. As a way to conclude, let me consider two possible responses to my argument that provide reasons to this end.

The first response is to limit the extent of rights deprivations by qualifying the strength of reparatory obligations and reserve their role for determining responsibilities. Souter proposes two possible qualifications. First, we might revise (i) – that is, reparatory obligations provide weightier reasons for external states to offer asylum to refugees within their territory in comparison to humanitarian obli-

gations. Souter suggests that we might not always be required to prioritize reparatory claims over humanitarian claims; rather, such prioritization might be demanded only when those with reparatory and humanitarian claims are in equal need. When those with humanitarian claims are in greater need, they should be offered asylum. The extent of need, moreover, is determined based on ''the severity of the harm that the refugees risk experiencing upon their return to their states of origin'' and ''the availability of other opportunities to gain protection or residence either in the same state, or elsewhere.''[32] Souter is right that this qualification limits the scope of right deprivations in the case of climate refugees. In contemporary circumstances, especially in the context of climate change, the total number of refugees to whom external states offer asylum is significantly lower than the total number of asylum claims. If the claim of an asylum seeker is rejected, she will most probably lack recourse to asylum in another external state. Hence, in most cases, the severity of harm to which asylum-seekers are exposed would settle the prioritization question. In turn, we would not be faced with rights deprivations arising due to over- and under-inclusion. But note that Souter's suggestion to qualify (i) in this way significantly limits the role of reparatory approaches in refugee protection, which is in line with the aims of the argument I develop here.

Similarly, we might revise (iii) – that is, reparative obligations require states to secure climate refugees a more expansive set of rights in comparison to rights that they are required to secure for other refugees due to humanitarian obligations. Souter suggests that external states should harmonize immigration policies by '''scaling up' the content of humanitarian asylum, or 'scaling down' the content of reparative asylum so that the two match each other, depending on the genuine capability of the state in question.''[33] As Souter argues, the role of reparatory obligations would then be limited to external states' offering climate refugees an apology or an acknowledgement of their role in the harms climate refugees suffer. Arbitrariness in who is owed apology and acknowledgement would remain, although the outcome may not be as morally objectionable as mistakenly not offering asylum. Note again that in actual cir-

[32] Ibid., p. 164.
[33] Ibid., p. 155.

cumstances, the content of reparative asylum would need to be scaled down in most cases, rather than that of humanitarian asylum scaled up. Consequently, this would limit the extent of rights deprivations due to over- and under-inclusion, as states would have resources to offer asylum to a greater number of refugees within their territory. But, similar to the above revision of (i), revising (ii) in this way further undermines the role of reparatory obligations towards climate refugees.

The second response is to emphasize the strength of reparatory obligations.[34] To this end, one might argue that if (ii) is true, that is, if reparatory obligations require states to bear larger costs in offering asylum to climate refugees in comparison to costs that states are required to bear for humanitarian refugees, then the aggregate number of all refugees to whom states have obligations to offer asylum within their territory will increase. In a similar way, the aggregate number of refugees offered asylum internationally would also increase. While the increase in the number of refugees would not fully alleviate all the morally objectionable outcomes, as there would still be some who are wrongly excluded, it would significantly reduce the extent of the problem. Moreover, the increase in the total number of refugees that are offered asylum as a result of employing reparative approaches morally outweighs the moral wrong of rights deprivations due to over- and under-inclusion. In turn, one might conclude that the right deprivations are justified, as they are the unavoidable outcomes of the morally best approach.

Are rights deprivations in fact justified? Not necessarily. To begin with, the objection overestimates the increase in the total number of refugees offered asylum due to (ii). First, reparative obligations should not place unreasonable burdens on states. If E is outcome responsible for the failure of H to secure the basic rights of its citizens, then E should offer asylum to climate refugees fleeing H as long as the number of asylums does not undermine E's capacity to secure the basic rights of its citizens as well as refugees within the territory of E. Offering asylum greater than this number would go

[34] This is a crucial objection, as it might motivate authors who recognize over- and under-inclusive outcomes of reparatory approaches and nonetheless uphold them for addressing climate change related loss and damage. See, for example, Eric Posner and David Weisbach, *Climate Change Justice* (Princeton: Princeton University Press, 2010), Maxine Burkett, "Rehabilitation: A Proposal for a Climate Compensation Mechanism for Small Island States," *Santa Clara Journal of International Law* 13 (2015), p. 108, and Buxton, "Reparative Justice for Climate Refugees," p. 219.

against the moral grounds of reparations due to outcome responsibility for human rights deprivations. Nevertheless, in practice, we should not expect states to determine their absorptive capacity solely based on this moral obligation. In non-ideal actual conditions, states need to consider constraints on the number of refugees to whom they offer asylum. These may be, for example, constraints of political feasibility in implementing and sustaining immigration policies. Second, when a state fulfills its absorptive capacity by offering asylum to climate refugees, it may limit the number of humanitarian asylum claims it accepts without violating its humanitarian obligations. As similar considerations are valid for all external states, the increase in the aggregate number of refugees offered asylum internationally would not be as extensive as the objection assumes.

One might still maintain that the limited increase in the number of refugees given asylum internationally would render employing reparatory obligations together with humanitarian obligations the morally best approach, despite unavoidable rights deprivations. But this claim wrongly assumes that reparatory obligations are the only moral obligations that can take into account climate-change related reasons in determining responsibilities for refugee protection and lead to an increase in the total number of climate refugees offered asylum. Global temperature rise significantly alters the relationship between individuals as well as states across the globe. These novel circumstances might ground novel forward-looking obligations of justice, such as international or global distributive justice, for external states to offer asylum to refugees, including climate refugees.[35] Unlike backward-looking reparatory obligations, distributive obligations do not require establishing causal responsibilities for grounding the obligation to offer asylum and, thus, avoid the drawbacks of doing so identified here. If there are indeed such forward-looking obligations brought about by climate change, imposing rights deprivations via a system grounded in reparative obligations would be unjustified. This is because the fulfillment of forward-looking obligations would increase the aggregate number of refugees offered asylum internationally as much as the increase reparatory obligations would achieve in non-ideal actual conditions. In turn, the

[35] For an example of how climate change may pose a novel question of global distributive justice, see Lukas H. Meyer and Dominic Roser, "Climate justice and historical emissions," *Critical Review of International Social and Political Philosophy* 13(1)(2010), pp. 229-253.

rights deprivations emphasized here would not be considered as the unavoidable outcomes of the morally best approach. Future research needs to consider the prospects of such forward-looking obligations. Until then, the argument developed in this paper remains cautionary.

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