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What could justify a prohibition on the luxury emissions of the very rich?

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Abstract

In this article, I discuss whether, in addition to pricing emissions, we should prohibit a specific category of luxury emissions, those arising from goods and services that only the richest can afford. In the first part, I ask whether a justification for such a prohibition can be derived from emissions sufficientarianism. I argue that emissions sufficientarianism does not explain why we should prohibit only high-wealth emissions and not also the recursive production of emissions that are neither high-wealth nor subsistence. Moreover, it does not provide a reason why we should prevent the production of high-wealth emissions by those who have offset them *ex ante*. In the second part, I ask whether a justification for the prohibition of high-wealth emissions can be based on emissions limitarianism. I argue that emissions limitarianism can explain why we should prohibit only high-wealth emissions, but it cannot account for why high-wealth emissions are bad even if they are offset *ex ante*. In the third part, I use two arguments, positional consumption and moral disengagement, to explain why carbon offsetting cannot be used as a means of circumventing the emissions ceiling. I conclude with a brief overview of the policy implications of this normative discussion.

Keywords: carbon offsets; emissions limitarianism; emissions sufficientarianism; moral disengagement; positional consumption.

1. Introduction

The top 0.1% income group of the world's population is responsible for a relatively disproportionate amount of greenhouse gas (GHG) emissions compared to the remaining 99.9%. According to recent research on emissions inequality by Lucas Chancel (2022: 933), the top 0.1% of global carbon emitters emit on average 14 times more per year (425 tCO_{2e}) than the larger top 10% (29 tCO_{2e}) and about 70 times more than the global average (6 tCO_{2e}). Consumption accounts for at least a third of the GHG emissions associated with the world's richest 0.1% of income earners, hereafter referred to as *the very rich* (Chancel, 2022: 934; Oxfam, 2022: 3). Most of the consumption emissions of *the very rich* appear to be driven by their demand for goods and services that are inaccessible to the remaining 99.9% of the world's population, hereafter referred to as *all others*. The most prominent of these are private aircraft, superyachts, high-emissions road vehicles, and huge dwellings (Nielsen et al., 2021; Otto et al., 2019; Lynch et al., 2019; Oswald et al., 2020; Gössling and Humpe, 2023) – we could also add space tourism, which is currently a marginal but growing phenomenon (Ryan et al., 2022). According to a recent report by Oxfam

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(2023a: 15), based on data from the Stockholm Environment Institute, the annual per capita consumption emissions of the world's top 0.1% income group are 77 times higher than the global average emissions needed in 2030 to keep global warming below 1.5°C above pre-industrial levels, or 2.8 tCO₂ per person. Moreover, a study by Beatriz Barros and Richard Wilk (2021: 318) shows that a few of the world's billionaires consume more than 10,000 tCO_{2e} per person per year, and some even more than 30,000 tCO_{2e}.

The classic distinction in the literature is between subsistence emissions, i.e. those that people need to produce in order to survive or to achieve a minimum standard of living, and luxury emissions, i.e. all those that are not subsistence (Shue, 1993, 2019; Duus-Otterstrom, 2023, 2024; Vance, 2023). Here I break down the broad category of luxury emissions into high-wealth emissions and non-subsistence emissions. High-wealth emissions come from goods and services that only *the very rich* can afford and that make the big difference between their consumption emissions and those of *all others*. Non-subsistence emissions are those emissions that are neither subsistence nor high-wealth.

Climate policy experts mostly agree that if the external costs of GHG emissions were linked to their sources, emissions would fall quickly and efficiently (World Bank, 2023). While this is generally true, there are two main reasons it is not so for many of *the very rich*. First, *the very rich* are wealthy enough to pay for the externalities associated with their emissions-generating actions without changing their consumption patterns (Otto et al., 2019: 83; Chancel, 2022: 935; Nielsen et al., 2022: 1003). To make matters worse, the number of *the very rich* is growing and they are getting richer (Forbes 2024; Oxfam 2023b: 15). Second, a large part of the consumption emissions of *the very rich* comes from luxury goods, the main purpose of which is to signal social status and which may therefore, at least in some cases, have zero or even positive price elasticity (Bagwell and Bernheim, 1996; Fassnacht and Dahm, 2018). As these goods become more expensive and therefore more exclusive, they may become more attractive to *the very rich*.

If we want to curb high-wealth emissions, we must either prohibit them or strongly discourage them, for example through luxury carbon taxes. To do this, however, we need to justify a line that distinguishes those uses of sustainable emissions allowances that must be subject to uniform price constraints from those that must be subject to special measures. I call this line the emissions ceiling (see also Schlosberg, 2019: 299). I submit that a justification for the emissions ceiling must meet two requirements. First, it must explain why producing a given amount of emissions through a single action above the ceiling (e.g. a single flight in a private jet) should be morally different from producing the same amount of emissions through a series of actions below the emissions ceiling (e.g. repeated flight in commercial aircraft) – I will call this the moral difference requirement. Second, it must explain why an emissions-generating action should be considered to be above the emissions ceiling even if the emissions it produces are fully offset *ex ante*, for example by investing in reforestation, carbon-storing agricultural practices, etc. – I will call this the offset insufficiency requirement.

In the first part of the article, I consider whether the emissions ceiling can be derived from emissions sufficientarianism, the view that everyone has the moral right to emit for subsistence. I argue that this would satisfy neither the moral difference requirement nor the offset insufficiency requirement. In the second part, I discuss whether the emissions ceiling could be decoupled from the notion of subsistence emissions and based on emissions limitarianism, which is the view that those emissions that make a decisive contribution to someone's flourishing are of higher moral value than those emissions that are not decisive in this sense. I argue that this would satisfy the moral difference requirement but not the offset insufficiency requirement. In

the third part I argue that both a positional consumption argument and a moral disengagement argument can allow the emissions ceiling to satisfy the offset insufficiency requirement as well. Although this article does not pretend to exhaust the issue of the implementation of the emissions ceiling, I will also briefly address these aspects in part four. In the following, I will discuss the emissions ceiling as a prohibition of high-wealth emissions.

It might be argued that discussing an emissions ceiling is an unduly isolationist way of dealing with the issue of high-wealth emissions (Caney, 2018). The latter are simply a consequence of the unfairness of *the very rich* being so rich. Therefore, the main policy objective must be to redistribute wealth from *the very rich* to *all others*, which would, among other things, reduce the carbon footprint of the former. Several proposals have been put forward, including progressive tax reforms (Burkart, 2023; Oxfam, 2023a, 2023b), progressive taxation on consumption (Frank, 2010), clearly defined limits on the amount of wealth a person can hold (Robeyns, 2024), high taxes on inheritance (Halliday, 2018), and so on. Obviously, if wealth were less polarised, *the very rich* would emit less GHGs. It is also beyond doubt that many theories of distributive justice could easily justify a large transfer of wealth from *the very rich* to *all others*. Not to mention that in many cases the wealth of *the very rich* is at least partly the result of more or less legal tax avoidance (EU Tax Observatory, 2024) and of class dynamics whereby the richest manage to co-opt the middle classes in maintaining the status quo by granting them small economic benefits (Shapiro, 2002: 125-126).

Without questioning any of the above, my aim in this article is to explore whether there are reasons why individuals should refrain from “converting” their wealth into emissions-intensive consumption, even if their wealth is legitimately held. In other words, I want to ask whether it is possible to justify policies that would curb high-wealth emissions without recourse to a specific theory of justice in holdings. If this can be done, it would mean that even those who believe that large wealth inequalities are justifiable, e.g. on libertarian grounds or because, at least in some cases, they are thought to benefit the worst off, could accept the idea of an emissions ceiling on purely climatic grounds. This could be important in giving political traction to the climate transition.

2. Deriving the emissions ceiling from emissions sufficientarianism falls short of two requirements

Emissions sufficientarianism holds that no one should have fewer emissions allowances than they need to meet their subsistence needs. More specifically, an individual can be said to be morally entitled to a certain number of subsistence allowances if, given the opportunities and means available to them at a reasonable cost, they could not achieve subsistence with a lesser number of allowances (Shue, 1993, 2019; Hayward, 2007; Gardiner, 2017: 445-449; Tank, 2022; Duus-Otterström, 2023, 2024)¹. The moral entitlement to emit for subsistence might be thought to justify the moral prohibition against emitting for major luxuries, at least if certain empirical conditions are met. However, I will argue that this justification for the emissions ceiling is flawed. Specifically, I will firstly explain below why emissions sufficientarianism applies in an emissions floor. The latter is a proviso on the use of sustainable emissions allowances, which requires that the share of allowances needed for subsistence be immune to price constraints and guaranteed a priori. I will then argue why we cannot derive the emissions ceiling from the emissions floor, because this fails to meet two important normative requirements.

The adoption of a mitigation target implies that we are dealing with a limited number of sustainable emissions allowances, which we usually refer to as the carbon budget – an example

of a mitigation target is the Paris Agreement's goal of limiting global warming to well below 2°C above pre-industrial levels (UNFCCC, 2016, art. 2). Therefore, emissions sufficientarianism is usually applied in an emissions floor, a constraint on the possible use of the carbon budget. The emissions floor is designed to separate subsistence emissions from luxury emissions – and as noted in the introduction, the notion of luxury emissions includes what I define in this article as non-subsistence emissions as well as high-wealth emissions. The purpose of the emissions floor is to ensure that emissions below the floor are not sacrificed to make room for those above it.

There are three possible ways of managing a carbon budget. First, to distribute allowances according to a patterned principle, that could also take into account historical carbon footprints, such as emissions egalitarianism – this is the isolationist approach to the carbon budget, in that allowances are distributed independently of broader considerations of socio-economic justice (Torpman 2019). Second, to include allowances in the basket of social goods to be distributed on the basis of broader principles of socio-economic justice, e.g. sufficiency, equality, etc. – this is the integrationist approach to the carbon budget, as it places allowances within a more general discourse of justice (Gosseries, 2023: 118-149). Third, introducing a financial incentive, such as a carbon price, and then letting individuals decide how many allowances to “pay for” – this is the market-based approach to the carbon budget (Gajevic Sayegh, 2019).

The emissions floor implies that whatever approach is taken to allocating the carbon budget, subsistence emissions must be deducted from the “allocandum” and guaranteed a priori. In addition, all three different approaches inevitably lead to price constraints on allowances. This is obvious for the market-based approach, but it is also true for the two distributive approaches. Indeed, the latter cannot do without some form of trading which in turn determines a market price for allowances – for example, an equal global distribution of allowances without trading would not only be highly inefficient, but would likely lead to economic collapse. The emissions floor requires that subsistence allowances be exempt from the price dynamics, either taxation or trading, associated with managing a scarce carbon budget – and obviously the tighter the budget, the tighter the price constraints (Shue 1993: 57-58)².

2.1 Deriving the emissions ceiling from the emissions floor

The emissions floor might be used to justify an emissions ceiling when total emissions allowances are extremely scarce. I will first discuss how, and then say why we should not be satisfied with this justification. Suppose that:

1. We are at time t_1 and there are urgent moral reasons to halve net GHG emissions by time t_2 ;
2. The emissions floor at t_1 is positive, or in other words, at t_1 it is not possible to satisfy all the world's subsistence needs without emitting GHGs and at a reasonable cost. This is due both to technical limitations, i.e. the technologies that allow all subsistence needs to be satisfied by low- or zero-carbon satisfiers at reasonable cost simply do not yet exist, and to distributional problems, i.e. where such technologies do exist, they are not made available to the worst-off (see Duus-Otterström, 2023: 922; McLaughlin, 2019: 266).
3. The emissions floor is expected to remain positive at t_2 , although probably lower than at t_1 , due to the persistence of the above problems.

If 1-3 are true, emissions sufficientarianism implies that the only luxury emissions that will be allowed at t_2 are those that are consistent with a luxury emissions budget. The latter is given by the difference between the total annual carbon budget at t_2 , i.e. consistent with mitigation obligations, and the emissions required to meet the emissions floor. In fact, if the luxury emissions at t_2 were to exceed the luxury emissions budget, there would not be enough allowances available to meet the emissions floor, holding mitigation obligations constant. And at that point, the luxury emissions in excess would have to be banned in order to defend subsistence emissions.

Faced with the very real risk that we will not be able to reduce the annual flow of emissions from t_1 to t_2 so that luxury emissions at t_2 are equal to or less than the luxury carbon budget at t_2 , we could argue that it is a justified precaution to start prohibiting from t_1 those emissions-generating activities that are most likely to lead to an overshoot of the luxury carbon budget at t_2 . For example, a suborbital flight lasting a few minutes, which would produce the equivalent of the average annual emissions of a member of the world's top 1% of emitters, that is around 100 GtCO₂ (Marais, 2021; see also Chancel, 2022). Or a few holidays on a superyacht that would produce more emissions in a year than the entire country of Tuvalu (Niranjan, 2023), and so on³.

2.2 The emissions ceiling derived from the emissions floor fails both the moral difference requirement and the offset insufficiency requirement

Emissions sufficientarianism could thus be seen as justifying the introduction of an emissions ceiling in order to reduce the risks associated with managing a very limited budget of luxury emissions. However, this justification for the emissions ceiling would not satisfy the two main normative requirements that an emissions ceiling must meet. I will first present these two requirements and then argue why the justification for an emissions ceiling offered by emissions sufficientarianism falls short of both.

The moral difference requirement postulates that the justification for the emissions ceiling must explain why we should treat a quantity n of high-wealth emissions from a single action A occurring between t_1 and t_2 (e.g. from a single flight per year by private jet) differently from an equal quantity n of non-subsistence emissions from a repeated series of actions B,C,D occurring between t_1 and t_2 (e.g. several commercial flights during the year). If we cannot explain the qualitative difference between the emissions produced by A and those produced by the sequence B,C,D, then the emissions ceiling would not be valid because it would penalise those who do A simply because of their extravagant tastes and/or wealth. Either we say we have to prohibit both A and the sequence B,C,D, or we say we have to prohibit neither and continue to rely only on price constraints to manage the carbon budget. Either way, we no longer have an emissions ceiling that separates high-wealth emissions from all other emissions and that warrants special measures aimed only at the former.

The offset insufficiency requirement postulates that a justification for the emissions ceiling must explain why we should prohibit someone from performing an emissions-generating action A at t_2 , even though the same person has performed one or more actions X(s) between t_1 and t_2 with the explicit purpose of offsetting the same amount of emissions expected from A. An emissions ceiling that does not satisfy the offset insufficiency requirement remains normatively valid, but it can be easily circumvented by *the very rich* through ex ante offset schemes (see Placani and Broadhead, 2022) – which many wealthy individuals already use (Huddleston 2021). In practice, therefore, the emissions ceiling would allow *the very rich* to maintain their emissions-intensive lifestyles even in the presence of the emissions ceiling, simply by paying a relatively small

additional tax. One might think that we should not worry about the offset insufficiency requirement because carbon offsetting schemes are in many cases unreliable, with widespread examples of overestimation and double counting, and that they have side effects on local communities (Gabbatiss et al., 2023). So a carbon offset with these problems cannot make an emission morally neutral. However, this would allow opponents of the emissions ceiling to pass the buck to those who run the offset schemes and those who should monitor them. I therefore submit that a justification for an effective emissions ceiling must be able to defend it even in the face of perfectly functioning carbon offsets.

An emissions ceiling derived from emissions sufficientarianism does not satisfy the moral difference requirement. In fact, performing an action A between t_1 and t_2 that produces an amount n of high-wealth emissions does not take up more carbon space from subsistence emissions than performing a sequence of less polluting actions B,C,D between t_1 and t_2 that together produce an amount of non-subsistence emissions equal to or greater than n . For example, taking one trip a year by private plane vs. several trips a week by scheduled plane. So, from an emissions sufficientarian perspective, there is no reason why A should be prohibited and not also the sum of B,C,D. Furthermore, an emissions ceiling derived from emissions sufficientarianism does not satisfy the offset insufficiency requirement. If between t_1 and t_2 an individual takes one or more actions X(s) that produce n negative emissions, and at t_2 takes action A that produces positive emissions not greater than n , then it cannot be said that by taking X(s)+A the individual is violating someone else's moral right to emit for subsistence consistent with a given mitigation target.

3. Deriving the emissions ceiling from emissions limitarianism satisfies the moral difference requirement, but not the offset insufficiency requirement

Emissions limitarianism is the view that emissions that contribute decisively to someone's human flourishing have a higher moral value than those that do not. Therefore, emissions allowances may become so scarce that we might want emissions of the latter type to give way to emissions of the former type. Emissions limitarianism might thus allow us to justify the emissions ceiling independently of the emissions floor. The problem with emissions limitarianism, however, is that even if we propose a minimalist account of human flourishing, it is difficult, especially for public authorities, to understand when an emissions-generating action leads to emissions that contribute decisively to someone's human flourishing and when it does not⁴.

As a practical matter, it is not possible to prohibit specific emissions, i.e. those identified on the basis of the purpose that a particular individual intends to pursue with them. We can only prohibit certain sources of emissions that are assumed to be commonly used by individuals to achieve certain purposes. Therefore, which general uses of the carbon budget (e.g. car journeys, flights, etc.) should be below and which above the emissions ceiling does not seem to be something that emissions limitarianism can specify, at least not in an exhaustive way. I will argue, however, that emissions limitarianism can provide reasons to prohibit high-wealth emissions, since they are in the vast majority of cases superfluous to human flourishing. This justification of the emissions ceiling makes it possible to satisfy the moral difference requirement, but the problem of the offset insufficiency requirement still remains.

Emissions limitarianism is premised on the axiological claim that human flourishing is intrinsically important, so that a society in which more people flourish is better than one in which fewer people do. It is generally said that individuals flourish as long as their life is "high in

prudential value” (Arneson, 1999: 113) or, more simply, when they have reached a sufficiently high level of well-being (see Rasmussen, 1999; VanderWeele, 2017). How high this level of well-being is, and how to measure it, obviously remain open questions (Robshaw, 2023: 76-98). However, from an essentialist perspective (Nussbaum, 1992), it is reasonable to assume that an individual cannot live a flourishing life if they lack (at least) the ability to: get together and spend time with significant others (family members, friends, lovers, artists, colleagues, etc.); engage in productive activities in which they can develop their skills and abilities and fulfil their aspirations; explore the world in a variety of forms and ways; engage in gratifying leisure activities (see also Nussbaum, 2007: 76-81). We can define the latter as shared human ends and see them as a prerequisite (not necessarily exhaustive) for human flourishing. Shared human ends can be realised through different satisfiers or combinations of them, many of which obviously generate emissions.

As already mentioned, a carbon budget should necessarily be managed through price constraints, arising either from patterned principles plus trading or from carbon pricing. If the carbon budget is extremely scarce, price constraints will be so high that they will seriously impede many people from achieving shared human ends. Every time a person adds GHGs to the atmosphere, the carbon budget is further reduced, which in turn increases the price pressure on emissions allowances. Emissions limitarianism does not resolve the issue of whether a given emission is more or less justifiable. This depends on which normative approach is used to manage the carbon budget and whether the individual has legitimately acquired the allowances for the emissions they intend to produce. More specifically, in the case of a patterned approach, it depends on whether the individual has been given the necessary allowances or has subsequently bought them from others, while in the case of a market-based approach, it depends on whether the individual is willing to pay for the right to emit. Emissions limitarianism simply says that an emission is wrong if it contributes to the creation of barriers to the realisation of shared human ends by some, without making a decisive contribution to the flourishing of others.

All this poses no small epistemic problem. Indeed, there seem to be at least two reasons why public authorities would find it difficult to commit to an outright prohibition of superfluous emissions. On the one hand, a given emission source may produce superfluous emissions in some cases and not in others, depending on both the user and the context. In some cases, for example, we use cars to do things that we could do using less polluting public transport. This may be to get to a place in a reasonable amount of time where we want to do something that goes beyond subsistence but is still crucial to our flourishing, such as spending time with a loved one, attending some events, pursuing a hobby, and so on. In other cases, however, the use of a car is the only way to carry out one of the above activities within a reasonable time, for example due to infrastructural or geographical constraints. This suggests that in most circumstances the easiest way to reduce superfluous emissions is to rely on price constraints and the incentive they create for people to emit less overall.

On the other hand, we cannot simply justify the prohibition of a particular action on the grounds that the action does not serve the attainment of human flourishing for those who do it. Indeed, it may be that someone other than the performer of the action makes a decisive contribution to their human flourishing as a result of the action, and so the prohibition of the action could not be justified on emissions limitarian grounds. For example, the emissions that I cause by driving a car may be mostly superfluous for me because I can almost always use alternative, less polluting means of transport for the journeys that are important to me. But it may also be the case that, for at least some car manufacturers and car parts sellers, their jobs are a crucial source of human

flourishing that cannot easily be replaced in the short term, even with public support. It follows that emissions limitarianism cannot be used to justify an immediate ban on car sales.

There are, however, certain types of activity that almost always produce superfluous emissions and which we have reasons to prohibit rather than charge a uniform price. Activities that produce high-wealth emissions fall into this category for three main reasons. First, these activities are typically satisfiers of shared human ends that can be replaced by at least one other much less polluting satisfier. Private flights are almost always substitutable for trains and commercial flights in terms of speed and frequency. Superyachts can be substituted by land-based holidays for luxury and exclusivity, or by smaller motor yachts or luxury sailing boats built with sustainable materials. Highly polluting cars can be replaced by electric cars for performance, exclusivity and aesthetics. Most activities done in mega-houses can be done in smaller houses, and so on. Second, as noted above, uniform price constraints will not be sufficient to induce *the very rich* to renounce the satisfiers that produce excess emissions; non-market policy instruments will also be needed.

Third, while it is true that prohibiting high-wealth emissions may risk limiting the opportunities for human flourishing of some people more or less directly linked to the luxury industry, the very nature of the sources of these emissions may nevertheless justify doing so. It is clear that Paris-consistent mitigation will necessitate a number of societal transformations, not least in the world of work. And it is also clear that this will require both the private and the public sectors to mobilise scarce resources where they can make the most difference. In terms of the emission intensity of both production and consumption, assets such as superyachts, private jets, mega-houses and so on are unmatched in their category and well above average. Moreover, the luxury industry has sufficient resources and know-how to undertake ambitious decarbonization (Deloitte 2024). In short, if we have to start somewhere to radically transform society in order to meet increasingly difficult mitigation targets such as those set in the Paris Agreement, the luxury industry is a legitimate place to start.

A limitarian emissions ceiling can satisfy the moral difference requirement. The high-wealth emissions produced by a single action A are morally worse than the same sum of non-subsistence emissions produced by the sequence of actions B,C,D. So we might want to prohibit the former but not the latter. For example, in contrast to emissions sufficientarianism, emissions limitarianism can explain why travelling from New York to London in a private jet or spending a weekend on a superyacht is morally worse than taking a commercial flight from New York to London, three or four times a year, to both work in the US and keep in touch with family in Europe. This is the case even if the two different types of action produce the same amount of emissions.

However, there remains the problem of the offset insufficiency requirement. We cannot say that I am eroding the carbon budget, and thus creating additional barriers for others to flourish, if I produce a certain amount n of superfluous emissions after having produced an equal amount n of negative emissions. This would mean that emissions limitarianism could justify an emissions ceiling, but it would also allow *the very rich* to get around it by paying up front for what it would actually cost to sequester, say by planting trees, the exact amount of GHGs expected to be produced by private jet travel.

4. Two extra grounds can allow the emissions ceiling to satisfy the offset insufficiency requirement

I have argued that a valid justification for an emissions ceiling that prohibits high-wealth emissions should be based on emissions limitarianism rather than derived from emissions sufficientarianism. The problem with this justification, however, is that *the very rich* could easily circumvent the emissions ceiling by committing ex ante to offset the high-wealth emissions they intend to produce. In what follows, I propose two arguments as to why high-wealth emissions, even when offset ex ante, remain morally problematic and should therefore be avoided.

4.1 Positional consumption and the relational pull problem

The first argument why high-wealth emissions should be avoided, even if they have been offset ex ante, is that they lead to either an unjustified waste of social resources or an unequal sacrifice for climate mitigation. More specifically, high-wealth emissions create social pressure on *all others* to maintain or increase their carbon consumption, not for its use value, but mainly to defend their social position – what I call the relational pull. The latter can come into friction with the financial incentive to reduce emissions provided by price constraints. If the relational pull prevails, the sustainable emissions budget would be significantly depleted without making anyone better off, as relative positions do not change. If, on the other hand, the financial incentive proves stronger than the relational pull, *the very rich* would become a carbon aristocracy. That is, they could continue to indulge in extravagant and emissions-intensive forms of consumption, while *all others*, through their behavioural changes, would promote a climate transition that would serve to protect everyone, including *the very rich*, from the risks of runaway global warming⁵.

There is empirical evidence that many emissions-generating goods and services are highly positional, meaning that they are pursued largely (and in some cases overwhelmingly) because of how they compare to other people's goods, rather than because of their absolute characteristics (Ramakrishnan and Creutzig, 2021; Mi et al., 2018; Liu et al., 2019). This is the case for cars, clothes, boats, housing and so on (Galak et al., 2016; Gössling, 2019; Frank, 2020: 162-163; Salle, 2024). In general, it can be said that regardless of the quality of the emissions-generating good you own, the more people around you who have goods of the same type that are more conspicuous than yours, the higher the reference standard for what is an acceptable good for you. And therefore, in proportion to how sensitive you are to social pressure, the greater the non-financial pull to want a more conspicuous good (see Frank, 2020: 129-130).

The very rich are usually in a privileged position to shift the terms of reference of acceptable consumption for *all others* (Reeves, 2018). Typically, when social status depends on achievements, each social group seeks social validation by emulating the positional consumption patterns of groups above it in the social pyramid (Trigg, 2011; Wisman, 2011; Galak et al., 2016). Therefore, the more the wealthier adjacent group expands its positional consumption, the more pressure there is for the lower adjacent group to do the same in order to defend its social status. The strength of this trickle-down effect is that it is not simply due to social envy. An increase in consumption by group A does not (or at least not necessarily) trigger an instinct of competition and rivalry with A in the poorer group B, but instead raises the bar of adequate consumption for the members of B (see Frank, 2020: 139-144). This is why many suggest that the more unequal a society is, or in other words, the more wealth is concentrated at the top, the higher the level of positional consumption in the society (Velandia-Morales et al., 2022). In a sense, this is a double burden for the non-rich. Not only do they have fewer goods than if wealth were more equally distributed, but the goods they do have are also less rewarding than if their value were measured against lower terms of reference.

As we said earlier, uniform price constraints on emissions allowances produce a strong incentive for *all others* to reduce their consumption, including their positional consumption, i.e. to live in smaller houses, to drive less and/or smaller cars, to travel less, and so on. But they do not provide such a strong incentive for *the very rich*. This is both because of the wealth they control and because it is likely that, at least in some cases, a small price increase that drives the less wealthy of the wealthy away from highly positional assets will make the possession of these assets more exclusive and thus even more valuable to those who can still afford them (Theiss and Noll, 2022; Bagwell and Bernheim, 1996; Fassnacht and Dahm, 2018). In short, even with price constraints, it is very likely that *the very rich* will continue to indulge in emissions-intensive positional consumption. And as mentioned earlier, this positional consumption yields a relational pull on *all others*, and in particular on the group occupying the rung immediately below *the very rich* in the social pyramid, which we can define as *the near-rich*.

Two cases can arise. The first is that the relational pull is stronger than the financial incentive of price constraints, the second is that the financial incentive predominates. I will start by examining the first case. Consider, for example, a hypothetical scenario in which ambitious pricing policies have made owning and driving a car more expensive. Other things being equal, *the near-rich* have an incentive to give up driving SUVs, for example, and switch to a compact car or even public transport, to save money. Imagine, however, that in the same society *the very rich* continue to drive very expensive SUVs or powerful (and very polluting) sports cars. *The near-rich* will experience a pull, not financial but purely relational, to keep driving their SUVs despite the fact that these cost more, in order to defend their social status. If the relational pull wins out over pricing policies, *the near-rich* will absorb price constraints, for example by reducing their savings or even giving up other non-positional forms of consumption, such as health insurance, education, security spending, etc. (see also Kim and Jang, 2014).

At this point, the same relational pull that *the very rich* exert on *the near-rich* will be exerted by *the near-rich*, who have absorbed the price constraints, on the social group immediately below them, *the middle class*, who in most cases will not be able to afford the expensive SUVs of the rich, but will demand crossovers that are similar in weight and size to SUVs (see Frank, 2020: 161-163). All of this reinforces a phenomenon that has been going on for years, namely the steady increase in the average size of the car fleet (Transport & Environment, 2024). And this is not just true of cars. The sociologist Grégory Salle (2024), for example, notes how the progressive increase in the size of superyachts in recent years has led to an increase in the overall size of the yacht fleet. This is for the simple reason that the pursuit of ever larger super-yachts by *the very rich* has shifted the benchmark of an acceptably large yacht upwards for *all others*.

This is a tremendous waste of sustainable emissions allowances (as well as money), since increasing the size of the car fleet, as well as of the yachts in the other example, does not change the relative position of their owners, but only increases the emissions produced by the fleet as a whole (as well as increasing costs for everyone, but that's another matter). In cases like these, it could be argued that an emissions ceiling that prohibits the ownership of cars, yachts, etc. above a certain size is justified as being in everyone's interest. This will save valuable social resources, such as sustainable emissions allowances, without changing anyone's relative position, as the average size of cars/yachts etc. is expected to stabilise or even decrease (see Frank, 2020: 191-231).

However, the opposite could also be the case, with the financial incentive of price constraints proving stronger for *all others*, including *the near-rich*, than the relational pull wielded by *the very rich*, thus turning the latter into a carbon aristocracy. This may happen because *all others* are very careful

with their finances, or because the price constraints have been set high enough, and so on. *The very rich* will continue to drive flashy luxury cars, lead hyper-mobile lifestyles, live in huge houses, while *all others* will adapt to driving more modest cars or not driving at all, travelling only when absolutely necessary, building and living in smaller houses, and so on. A climate transition in which emissions reductions are only the result of behavioural changes by *all others*, while *the very rich* are free to maintain their emissions-intensive lifestyles, is unfair from any perspective of climate ethics. *The very rich* are, in fact, those who have contributed most to the emissions-generating activities that have precipitated the climate crisis, those who have benefited most from these activities, and those who could make the most substantial behavioural renunciations without giving up a flourishing life.

Of course, this is based on what might be called a “qualitative interpretation of the idea of equal burden sharing” (Aldred, 2012: 355). The latter suggests that the sacrifice imposed by a set of public policies on someone who can pay a relatively small amount of money to continue doing what they were doing before cannot be said to be equal to the sacrifice imposed by the same set of public policies on someone who has no reasonable alternative but to change their behaviour. For example, the “loss” imposed by price constraints on a very wealthy person who can afford to pay for the climate externalities caused by their holiday on a superyacht cannot be said to be qualitatively equal to the “loss” imposed by the same price constraints on another person who can no longer afford to pay for the climate externalities caused by their intended holiday (e.g. because of a significant increase in air fares) and therefore forgoes it. The emissions ceiling serves to ensure that *the very rich* make a fair sacrifice and show due respect for *all others* in tackling a common threat like climate change.

However, a possible objection to the positional consumption argument in support of the emissions ceiling is that a consumption arms race is not only a legitimate way for *the very rich* to communicate their success to the outside world, but also an incentive for them to invest in taking more and more entrepreneurial risks, which indirectly benefits everyone (see Nielsen and Axelsen, 2022: 744-745). Without going into the empirical aspects of such a claim and remaining neutral on the issue of justice in holdings, the simple answer to this concern is that the emissions ceiling is not a measure against the excesses of *the very rich*, but only against those whose climate impact is reckless and disrespectful of the climate effort to which price constraints subject *all others*. Even with an emissions ceiling, there is nothing to prevent *the very rich* from redirecting their positional consumption towards social markers that produce emissions compatible with the emissions ceiling.

If action A, which generates high-wealth emissions, together with other similar actions, induces a relational pull that pushes *all others* to resist price constraints, then A causes a gross waste of social resources and must be prohibited – at least if those involved face a collective coordination problem. Even if A were offset ex ante, this would not be sufficient to neutralise the relational pull⁶. On the other hand, if action A, together with other similar actions, induces a relational pull that is weaker than price constraints, a carbon aristocracy emerges. This poses a problem of fairness and mutual respect in the collective endeavor to mitigate climate change, which the emissions ceiling can solve and which offsetting cannot alleviate.

4.2 Moral disengagement

The second argument for prohibiting high-wealth emissions, even if they have been offset ex ante, is that they provide a very advantageous term of comparison against which *all others*’ “much

more normal” emissions are measured. This raises two problems. On the one hand, the fact that *the very rich* are allowed to indulge in very emissions-intensive lifestyles can make the climate crisis look much less serious than it is. Among other things, this risks delegitimising the price constraints compatible with an ambitious climate transition by making them seem disproportionate. On the other hand, the persistence of high-wealth emissions can create a sense of unfairness in *all others*, as price constraints target smaller injustices without touching the larger ones. All of these issues can lead to social resistance to policies that serve a rapid and effective climate transition, such as price constraints.

Moral disengagement occurs when someone who has formed a moral judgement that certain individual actions are morally problematic and should be avoided fails to move from moral judgement to moral behaviour. Typically, those who are prone to moral disengagement adopt a series of more or less conscious psychological manoeuvres that dissociate self-condemnation from the violation of the moral judgements they have formed (Bandura 2015). Some of these manoeuvres focus on the effects of the action, either by sanitising the language used to describe it or even by justifying it as the lesser of two evils. Other manoeuvres focus instead on the context in which the action takes place, and these certainly include what Albert Bandura (2022: 105-106) calls advantageous comparison (see Peeters et al., 2019: 432-433). The latter occurs when an individual forms a generic moral judgement about the consequences of a certain class of actions (e.g. contributing to global warming is *prima facie* bad), but then also forms a specific moral judgement about a particular action that goes against the generic moral judgement (e.g. about taking the car to work). And the formation of this second judgement is influenced by comparison with the most favourable available references, i.e. those against which the negative consequences of the action in question appear minor.

Peeters et al. (2019) explain well how advantageous comparison plays a crucial role in the moral disengagement of emitters. People generally form a moral judgement about whether an emissions-generating action should be avoided also by observing the behaviour of those around them. For example, an individual who has already formed a moral judgement that emissions are generally bad will have a very strict benchmark against which to judge using a car to get to work if the majority of colleagues use public transport. On the contrary, the continuous use of the car by colleagues will make the individual's occasional use of the car seem like a good thing, or at least not something to be severely condemned. In the words of Peeters et al. (2019: 433): “the perception of behaviour is coloured by what it is compared against, and by exploiting this contrast principle, reprehensible conduct can be made to seem righteous”.

It is easy to see how high-wealth emissions provide an advantageous term of comparison, which in turn leads to moral disengagement from the climate crisis. In general, the more advantageous the terms of comparison available, the easier it will be for individuals to dissociate self-condemnation from the violation of the generic moral judgement. For example, in a context where the majority of people are guilty of major acts of corruption, a small act of corruption by a single individual may seem less morally serious to the individual than it would in a context where everyone is acting honestly (see also Bandura, 2002: 50). Therefore, when Paris Saint-Germain (PSG) football players can use a private jet to travel from Paris to Nice (a distance that can be covered in less than two hours by high-speed train), Elon Musk's private jet can fly the 35-mile distance between San Francisco and San Jose, and Taylor Swift can produce 1,800 more carbon emissions than the average person in a year with her private jet alone (Lair, 2022; Zilber, 2022; Faecks and Scott, 2024), driving a car to take your children to school seems far from unusual and inappropriate to many. But this is, of course, a distorted view of reality that ignores

the fact that, at the current annual rate of GHG emissions, we are less than six years away from using up the entire carbon budget compatible with keeping global warming below 1.5°C above pre-industrial levels (see Lamboll et al. 2023).

Prohibiting high-wealth emissions can help to bring the emissions-generating actions of *all others* back into the appropriate realm of abnormality. This will make price constraints more acceptable to *all others*, and it would remove the sense of injustice that those bound by price constraints may feel. This is a pro tanto reason for introducing an emissions ceiling. As argued earlier, *the very rich* have no valid counterargument against this, since the emissions ceiling will neither affect their wealth nor prevent them from acquiring social markers commensurate with their wealth, provided of course that the emissions they produce are compatible with the emissions ceiling. Like the positional consumption argument, the moral disengagement argument allows the emissions ceiling to satisfy the offset insufficiency requirement. Action A, which generates high-wealth emissions, may provide for an extremely advantageous comparison term for *all others*, even if A is offset ex ante by action X, for the simple reason that X may not be as visible as A.

5. How to implement the emissions ceiling

There seem to be at least three different ways of preventing *the very rich* from producing high-wealth emissions: banning sources of high-wealth emissions (prohibition), super-taxing the ownership and/or use of the sources of high-wealth emissions (sin taxes on emissions-intensive consumption), introducing a progressive tax system on all emissions with a large increase in the tax rate for *the very rich* (progressive Pigouvian taxation). The latter is a tax scheme in which the economic value of a given climate externality is weighted against the income (or wealth) of the person producing it (see Bourumand et al. 2022), and it could be set up in such a way that people above a certain income (or wealth) threshold face a steep increase in their carbon tax rate.

However, there are some reasons why I believe that progressive Pigouvian taxation would be a poor enforcer of the emissions ceiling. For one thing, it would require a complex and costly administrative monitoring mechanism, which could also be easily circumvented by *the very rich* by registering jets, superyachts and houses in the name of ad hoc companies they control, as many already do (Porter 2023). Moreover, progressive Pigouvian taxation would overburden *the very rich* even when doing relatively normal things such as heating a medium-sized house or driving an economy car, and this would require a justification beyond that which can be provided for the emissions ceiling. Therefore, I believe that the choice of how to enforce the emissions ceiling is between prohibition (Armstrong, 2023; Greenpeace, n.d.) and sin taxes on emissions-intensive consumption (Benoit, 2020; see also Oswald et al., 2020). I will not go into this issue here, but I think it is important to emphasise that the choice between the two different means of enforcing the emissions ceiling involves trade-offs, e.g. between effectiveness (maximised by the ban) and raising revenues to be reinvested, e.g. in transforming the luxury industry (only possible with taxation)⁷.

We should also stress that it is unrealistic that an emissions ceiling can actually be enforced without broad agreement between countries. For example, if country X banned the production and ownership of superyachts, a millionaire would have no difficulty registering the boat in country Y. It would be a different matter however if country X agreed with other countries to adopt an emissions ceiling and then exerted pressure, including trade pressure, on country Y to adopt an emissions ceiling as well. This could, for example, lead to the conclusion that if an emissions ceiling is normatively justified, it should become part of a climate club proposal (Hovi

et al. 2019). There are also things that individual countries can do unilaterally to accelerate the widespread implementation of an emissions ceiling. For example, if the European Union were to ban yachts from docking above a certain size, it is likely that many yacht owners would be willing to travel in a tolerated-size boat rather than miss out on the opportunity to spend the summer on the Mediterranean coast (see also Salle, 2024). These are, of course, only sketchy considerations and the issue of the implementation of the emissions ceiling requires a more detailed analysis than can be given here.

Conclusions

In this article, I analysed what (if any) justification could be made for introducing an emissions ceiling that prohibits high-wealth emissions. I argued that a valid justification for an emissions ceiling must satisfy both the moral difference requirement and the offset insufficiency requirement. Under tight carbon budget conditions, one might want to derive the emissions ceiling from an emissions floor. However, this justification of the emissions ceiling would be normatively flawed because it does not satisfy either of the above requirements. One might then think that the emissions ceiling can be justified independently of the emissions floor on the basis of emissions limitarianism. This second justification of the emissions ceiling satisfies the moral difference requirement, but not the offset insufficiency requirement. I have therefore proposed two further arguments that can be used to show why high-wealth emissions should be prohibited even if they have been offset *ex ante*: positional consumption and moral disengagement. Combining these two arguments with emissions limitarianism provides a sound normative case for the emissions ceiling.

Acknowledgments

I am very grateful to two anonymous referees and to the editors of this journal for their excellent comments, which helped me a great deal, including clarifying the main arguments of this article. For their insightful comments and suggestions on an earlier draft of this article, I am also very grateful to Axel Gosseries and to those who organised and participated in the *Sustainability in the Anthropocene: Just Climate Transitions Network Conference* at the University of Potsdam (DE).

Declaration of conflicting interest

The author has no conflicting interests to declare.

Funding

This article is part of a project that has received funding from the European Union's Horizon Europe research and innovation programme under the Marie Skłodowska-Curie grant agreement No 101109449 (PROHIBLUX).

Endnotes

¹ According to a narrow interpretation of emissions sufficientarianism, which goes back to Henry Shue's (1993) original formulation, subsistence is more or less equivalent to survival (see also Vance, 2023; Gardiner, 2017: 445-449). Instead, according to a broad interpretation, subsistence is realized in a decent standard of living (Tank, 2022: 1077; see also Duus-Otterström, 2023: 921-923). I will not enter into this distinction here, as what will follow applies to both interpretations of subsistence.

² For a different view on this point see Duus-Otterström, 2023.

³ Conversely, if it is believed that we have reached the point where the carbon budget consistent with the desired mitigation target is too small to leave room for luxury emissions (see Tank, 2022; Duus-Otterström, 2024), then the emissions ceiling could be relevant in identifying which luxury emissions must be prohibited most urgently.

⁴ The term “limitarianism” was originally coined by Ingrid Robeyns (2017; see also 2024) to indicate a view of socio-economic justice. On emissions limitarianism, see also Corvino 2024.

⁵ The term carbon aristocracy has already been used in the media to describe very wealthy people with large carbon footprints (see Fassler, 2023). In my use of the term here, *the very rich* will only become carbon aristocrats if *all others* are forced by price constraints to change their lifestyles significantly.

⁶ Another possible view is that the positional externalities caused by high-wealth emissions should be included in the social cost of emissions. This could justify over-taxation of high-wealth emissions, which would, among other things, act as a disincentive to their production. In the final section, I briefly discuss luxury taxation as an alternative to prohibition as a means of enforcing the emissions ceiling.

⁷ In addition, an alternative to sin taxes on a list of specific emissions-intensive items, which I will not discuss here, is a tax scheme where the carbon tax rate increases with the emitter's emissions – commonly referred to as “progressive carbon taxation” (Chancel 2022: 5-6; see also Dietsch 2024). For the purposes of the arguments in this article, the extent to which this proposal can provide a strong disincentive that targets only high-wealth emissions and not also the non-subsistence emissions of *the very rich* should be further explored.

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