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Taxing the Beneficiary: applying the Beneficiary Pays Principle to individuals through carbon taxes

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Taxing the Beneficiary

applying the Beneficiary Pays Principle
to individuals through carbon taxes

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*You are not obligated to complete the work,
but neither are you free to abandon it.*

~ Rabbi Tarfon

Abstract

The Beneficiary Pays Principle (BPP) describes a method for distributing the costs of climate change, in this case among those who benefit, directly or indirectly, from emissions. Such distributive principles are essential in determining where the moral responsibility for climate harm lies, and how this harm is best addressed. This thesis proposes a concise answer to what exactly BPP ought to mean, explaining how it could be applied to different agents, including individuals. Working from this definition, this research creates a theoretical basis for developing workable policies, using a carbon tax as a basis. To this end, I discuss the impact of consumer behavior on climate change and the problems which stem from disregarding the consumption and emissions of individuals. I also examine the different approaches to using BPP, focusing on the question “*could BPP be applied to individual actions?*” I discuss the possibility of implementing a carbon tax as the ideal way to put this interpretation into practice and conclude that BPP forms a necessary basis for globally addressing climate harm.

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Introduction

In the last twenty years, two-thirds of extreme weather events were influenced by human activity (Carbon Brief, 2021), sea levels will continue to rise, and forests may begin to die (IPCC, 2022). Undeniably, the rapid changes in our climate are due, in large part, to human activities. Specifically, the anthropogenic emissions of greenhouse gasses (GHG) such as carbon dioxide are ultimately at the root of much climate change related harm. Harms such as natural disasters, food shortages and displacement of people are exacerbating at alarming rates, requiring states, individuals and other agents to adapt to or mitigate the effects (IPCC, 2022). Such measures are costly and will likely require large scale global cooperation (IPCC, 2022). It is unsurprising then, that the matter of who is to carry the costs has been the subject of much scrutiny and debate.

As of yet, there is no agreed upon way to divide the various costs of climate adaptation and mitigation. Worries regarding fairness, free riding, effectiveness, and in many cases, public resistance against climate policy have made debates at the state level difficult to settle (Berrang-Ford, et al; 2019). One proposal for fairly dividing costs is that of the Contributor Pays Principle, or CPP, which suggests that those who emit the harmful GHG should pay for the harm they inflict. There is also the Able Pays Principle, or APP, which is more practical, and simply assumes those who can afford to ought to pay, regardless of their responsibility in creating the problem. Finally, there is the Beneficiary Pays Principle, BPP. This supposes instead that those who benefitted from the harm done through emissions should pay to compensate for those harms. Often in these discussions, the focus is on states, sometimes including similarly large and influential actors such as corporations and NGO's. Individual responsibility and inaction, however, are kept largely out of the discussion. I will look closer at how the two concepts interact, and how individual responsibility factors into a fair division of climate costs.

Currently, there is no agreed upon definition of what BPP means, which leads to different interpretations being brought up and discarded frequently, muddying the waters. Similarly, very little thought is given to which actors are of influence in any of the three given theories. Most assume states as relevant actors, as governments are generally the creators of enforceable climate policy, but the topic is often not brought up at all. This leads to a gap in the overall debate, namely an application of cost division strategy to other actors, specifically individuals. Connecting these two areas of the climate debate, those of cost division and personal

responsibility, opens up promising avenues for solutions which encourage lifestyle changes. Ultimately nudging individuals to address overconsumption, one of the root causes of climate change. The scope of this research will be largely limited to the aforementioned BPP and its application to individual people. Necessarily, this will touch on the different perceptions of (personal) responsibility, the other methods of cost division, and the issues around viable real-world application, though the focus will be on determining a solid theoretical basis for individual responsibility.

This thesis proposes a concise answer to what BPP ought to mean, explaining how it could be applied to different agents, including individuals. Working from this definition, this research creates a theoretical basis for developing workable policies, using a carbon tax as a basis. To this end, I discuss the impact of consumer behavior on climate change and the problems which stem from disregarding the consumption and emissions of individuals. I also examine the different approaches to using BPP, focusing on answering the question “*could BPP be applied to individual actions?*”

Ultimately, I conclude that to ensure all actors fulfill their moral duty to compensate climate harm, a modified version of BPP is necessary as a moral basis for the creation of cost-division policies such as carbon taxes, proposing a version of BPP applicable to the climate harm problem which, whilst applicable at all levels, centers individual responsibility as to create a normative ground for government legislation targeting consumer behavior. Specifically, *if an agent benefits from any action, good, or service which harms or has harmed others in its creation or execution, that agent has a moral duty to compensate that harm, even if the agent did not seek out the benefit or cause the harm directly.* To this end, I will start by reviewing the existing debate, and establishing how to conceptualize personal responsibility for this purpose. Then, I will formulate a method for viably applying BPP to individuals. Finally, I will discuss the feasibility of such a method, and propose solutions to some practical problems of implementing policy based on this version of BPP.

1. BPP and individual responsibility

1.1 Why BPP?

The Beneficiary Pays Principle has been extensively debated, with both the proponents and opponents of BPP divided along different lines of reasoning. Whilst BPP can be applied in many scenarios, I will be discussing its use as pertaining exclusively to costs of climate change. In this context, BPP requires consumers to carry the full costs incurred by the products and services they enjoy, effectively allocating costs based on the size of one's ecological footprint.

In the literature, the theoretical basis for BPP follows from answering the question of *why* experiencing benefits from (the causes of) climate harm requires any degree of responsibility to compensate that harm, if at all. As discussed, the accumulation of GHG emissions leads to harms which are shouldered in large part by the most relatively disadvantaged people (Nazrul Islam & Winkel, 2017; EPA, 2021). Benefitting from the creation of these harms is morally objectionable according to Barry and Kirby (2017, p. 286), as refusal to give up benefits keeps victims from being compensated, thus perpetuating the harm caused by excessive GHG emissions. Butt (2014, p. 342) compares this to the private law notion of unjust enrichment, posing that a benefit acquired through harming another person cannot legitimately belong to the person who acquired it. That would go against the "natural duties of justice," the notion that people are obliged to assist those in dire need when they can do so to no harm to themselves, regardless of their voluntary actions. In other words, by choosing to sustain the harm by refusing to yield the benefits gained, someone can be morally lacking even when they did not create the harm directly. Caney (2010) is more direct, stating that anyone who engages in any activity which risks harming others is obliged to compensate the harm they cause.

As such, the baseline of any interpretation of BPP is that if an agent benefits from actions that (risk) harm to another agent, the former has a duty to compensate the latter. Butt (2014) lays the focus of the BPP on that duty, stressing that even involuntarily acquired benefits ought to be compensated. Lindstad rejects this responsibility, posing that since the beneficiary is innocent from causing the harm, they face no particular responsibility to compensate it, as giving up benefits does not undo harm that has been done, and thus harm and benefits are not directly related. Perpetuating harm by neglecting to address it is morally wrong, but it is morally wrong for everyone who is able to help, not just the beneficiary. However, this assumes

that the purpose of using BPP is to undo harm, a notion I strongly oppose. Rather the purpose is to address the consequences of the harm once it is there. Barry and Kirby argue similarly when they address the objection of excusable ignorance, the idea that at one point in the past, people were unaware of the harmful effects of their emissions. They recognize this to be true, and counter that intention has no bearing on responsibility. Even if the beneficiary cannot be held causally responsible for inflicting harm, harm that is done must still be addressed and therefore “still grounds duties” for beneficiaries; they can still be held morally responsible.

Other opposing views consider BPP as a whole ineffective. Heyward (2021) does not contend with the moral soundness of BPP, but rather concludes that either of the other cost division strategies are preferable. Out of two remaining, the more popular candidate is CPP, as APP, while easiest to put into practice, removes the aspect of accountability. Similarly to Heyward, Barry and Kirby (p. 296) argue for a combined strategy, where CPP functions as an addition to BPP. CPP would account for contemporary emissions, whereas past emissions (whose creators have passed away) would be compensated by the surviving beneficiaries instead. They do note, however, that CPP is problematic in the way it assigns duties, as it tends to leave out individuals. Atkins (2019) supports this view, but opposes CPP altogether. Not only does he reaffirm that CPP cannot account for past emissions, he also takes issue with the fact that individuals cannot be held accountable, on account that most individuals will personally never emit enough to be held liable, even though they consume goods and experience benefit from state-sponsored amenities which required high emissions to produce. According to Atkins, BPP casts a wider net than CPP, and makes it easier to assign duties to relevant agents. Heyward (p.123), on the other hand, prefers using APP in addition to BPP. Whilst BPP demands beneficiaries give up or compensate their benefits, it does not require them to cover the full cost of the damage beyond their share. There is a considerable risk, especially where past emissions are concerned, that beneficiaries will run out before the harm is fully compensated. Given the pressing and time sensitive nature of climate harm, it is unavoidable that those actors who can afford to will have to shoulder some of that remaining cost. I agree with Heyward’s assessment of APP as a necessary addition in cases where beneficiaries run out, and believe APP should not be the default either, as it foregoes any element of causal responsibility. This incorrectly positions creating and sustaining harm as consequence free for many, as well as punishing an affluent few for the collective harm done by everyone on earth. Beyond questions of practical justice, this approach undermines moral duties. Given the urgency surrounding climate change, using APP is justified, but only as a last resort.

With all of the aforementioned strategies, it is important to determine what actors to focus on. Where CPP focusses primarily on states, the scalable dimension of BPP allows for focus on actors across the board, ranging from states to individuals. Generally, climate accords require states as a whole to reduce emissions and free up funds for ‘green’ projects. This requires states to distribute costs internally, something which is frequently met with resistance from corporations and residents alike, leading to governments commonly failing to meet agreed upon standards (Climate Action Tracker, 2021) On the flip side, requiring only citizens do their part for the environment in a society which structurally prevents individuals from making greener choices is a near impossible demand. It is relevant, then, to determine what personal responsibility entails, how individuals can best be motivated to take responsibility, and to what extent that responsibility can be enforced.

The notion of personal responsibility in climate debates overall has sparked some debate, though very few are opposed to the concept altogether. The biggest point of contention has been the interpretation of responsibility, and the division along two broad lines: the responsibility to reduce one’s personal carbon footprint, and the responsibility to take political action through voting, protesting, social movements, et cetera.

1.2 Individual responsibility

This branching between interpretations is brought up by Fragnière (2016), who argues for a concept of individual responsibility which is determined on a case by cases basis, as the power and influence each person has will vary based on factors ranging from location, wealth, and status within the community. An important caveat to this is what he calls the minimum livable standard, below which a person cannot live a reasonably comfortable life. Climate duties may never force a person below this standard. He also stresses the importance of overall lifestyle changes, but considers these insufficient without institutional change and regulation. To him, this means that beyond a responsibility to make greener personal choices, there is a duty to political action as well. Sinnott-Armstrong (2010), on the other hand, uses the duty to political action to argue against lifestyle changes, as he considers small amounts of personal emissions not to be harmful. This argument is refuted by Schwenkenbecker’s (2012) notion of collectivized harm, or the logic that small amounts of emissions add up to harmful ones when considering collective behaviors. Sinnott-Armstrong’s argument is entirely dependent on the

viewing of individual emissions as the result of isolated acts, which they, by their nature, cannot be.

DeSombre (2018) argues in favor of lifestyle-based personal responsibility, but reasons that people will not be motivated to take this responsibility if it continues to be a ‘moral struggle,’ in other words, it is currently too difficult or expensive for most people to make greener choices. This meshes well with Fragnière’s arguments on the importance of lifestyle changes, as both argue for the necessity of providing more accessible alternatives to those people who currently choose carbon-intensive products and services because the barriers to greener alternatives are too difficult to overcome. DeSombre, however, doesn’t put the responsibility for ensuring change at an institutional level in the hands of individuals. Instead, governments are responsible for incentivizing people, as a bottom-up approach of gradual social change would be too slow to mitigate climate change. Beliefs about human nature, which are generally pessimistic about doing what is morally right, can be limitations to people’s motivation. To work around this, DeSombre proposes systemic change to make the greener option the cheaper, faster, or more achievable one. This way even people who are not actively seeking out an environmentally conscious option are still helping, rather than hurting, the environment. This is in line with Herzog (2015) who defines the need to change the collective mindset as moving the ‘feasibility frontier,’ or the limits of what can be realistically achieved. This frontier is determined by such factors as beliefs about human nature, as people tend to base their decisions on commonly held opinions and beliefs, cultural norms they often do not think to question. Changing these social bounds will likely shift the overall mindset to be more optimistic, which pushes the feasibility frontier forward by as much as people become willing to embrace and commit to new options and solutions.

Cripps (2013) discusses grounds for personal responsibility in the context of reducing carbon footprints, and determines that, despite the difficulties in assigning responsibility for very small amounts of personal emissions, individuals can be held responsible as though they are a collective. These ‘potential collectives’ are groups which consist of people who independently exhibit the same behaviors. A single person driving a car may not pollute enough to cause harm, but a collective of people all driving cars would amount to harmful amounts of emissions. Considering people a collective in this way could also make individuals less hesitant to accept their part of the collective responsibility, as it is a group effort, so to speak. Banks (2013) coins a similar concept, that of ‘action collectives.’ These are unstructured groups who contribute to

collectivized climate harms through their individual actions. However, Banks does add that responsibilities within the group need not be distributed equally, noting that people cannot be held accountable for factors outside of their control (such as someone who happens to live in a cold climate using more gas to heat their home than someone in a warm climate). Rather, action collectives provide moral grounds for individual responsibilities through the notion of collectivized harm, as well as ensuring the collective behavior is discouraged as much as possible.

For the purposes of this research, I will assume people can be held individually responsible for their contribution to the collective harm caused by emissions they created, or which are created from goods and services they consume. As this assumption is applicable to contemporary and forward-looking emissions, I will focus on those. BPP's ability to account for past emissions is incredibly valuable, but establishing individual responsibility and workable policies for this application is beyond the scope of this research. Similarly, whilst institutional changes are essential and political action is a valuable tool to achieve this, I will here disregard the duty to take political action, focusing on individual responsibility to cut personal emissions and compensate for the harm which follows from the emissions they still enjoy. To the extent that people have control over their circumstances, the lifestyle they choose can have harmful consequences and for those consequences they are liable.

2. Application of BPP to individuals

2.1 BPP in practice

Having established that individuals bear some responsibility for the harms caused by climate change, as well as the moral soundness of BPP, the practical effects of BPP on individuals must be examined. Ultimately, all cost division strategies are instruments to achieve a goal. The obvious goal is to divide unavoidable climate costs justly and effectively, which essentially boils down to creating accountability. As discussed, BPP is the ideal basis for creating this accountability in individuals, allowing them to compensate the harm they are currently perpetuating through their enjoyment of benefits. Practically however, compensating harm addresses the symptoms of climate change, not the root cause. Whilst BPP hinges on a moral duty which stems from harm being done, the ideal goal is to eliminate that harm altogether, to not need any cost division strategy at all.

BPP, when applied to individuals, addresses both the unavoidable costs and the root cause of climate change: excessive consumption. By addressing the benefit, the costs actors carry become proportional to their ecological footprint, meaning that those who consume less, pay less. Financial incentives are strong motivators (Shaw & Gupta, 2015) and making lifestyle changes is directly rewarded with lower costs. Ecological scapegoating, where people refuse to limit the harm they do because some other party is supposedly responsible for climate change, becomes incredibly difficult as the cost carried is tied directly to behavior, making it difficult to blame others for incurring it. As such, BPP is not only the most desirable cost division strategy, its benefits when encompassing individuals extend to forming (part of) a solution to the root causes of climate costs.

2.2 Defining benefit

When demanding compensation for benefits, it is important first to clarify what ‘benefit’ means in this context. Benefits include any advantage or profit gained through the emitting of GHG. These range from tangible wealth, such as monetary gains from producing and selling products with a high carbon footprint, all the way to the intangible benefits of living in a developed country, which is able to provide better amenities and infrastructure than those countries which have not gone through emission-heavy development. As such, benefits are gained also from the consumption, use and enjoyment of products which are emission heavy in either their use or production. Using this notion of benefit, there is no requirement that a person be necessarily in a better position than before to have benefitted. It must only cause them to be in a ‘good’ or desirable state, as opposed to harm, which requires someone be put in a ‘bad’ or undesirable state, rather than requiring them to be worse off overall (Barry & Kirby, 2017, p. 300). Even so, it can be difficult to establish when someone benefits. Butt (2014) and Lindstad (2019, pp. 32, 38) bring up that whether any individual experiences something as a benefit is subjective, and therefore there cannot be one enforceable standard. I pose, however, that at least within the context of climate change, there are agreements on what constitutes a benefit. Besides widely recognized categorizations of ‘luxury’ items and markets, it is commonly understood that excessive emissions are made to improve the general standard of living either for an individual or within a community. Even if these benefits are imposed on someone who did not request them, which Butt sees as an obstacle to holding such a person responsible, that person still objectively enjoys a benefit other people do not. In my view, their continued enjoyment of the benefit constitutes a form of acceptance.

Embracing, rather than rejecting benefits of climate change, whether inherited or by continued consumption of the goods that cause it, constitutes moral ground to require such agents to bear some of the costs this behavior incurs.

There are some exceptions to be made to this requirement, however. It is commonly accepted that compensating climate harm should never result in doing harm to oneself. In this vein, Page (2012, p. 318) proposes the “no debilitating cost” principle. This is to say that beneficiaries are to compensate the harm from which they benefit, up until a threshold after which the cost of compensating causes harm to themselves. This concept can be directly linked to Fragnière’s livable standard. Both specify a limit to the extent to which an individual’s responsibility can reach. Consequently, BPP can only be applied after a certain benefit threshold has been met. This type of benefit allowance is not dissimilar to the concept of a tax-free rate. Such a threshold for BPP would necessarily be determined at state level. This is because the cost of living generally varies most significantly between states and this way some of the more glaring global differences in circumstances (such as the gas consumption differences between colder and warmer climates) are accounted for as well.

Another caveat to the BPP requirement of compensation follows from those differences in circumstance. Whilst beneficiaries can be held responsible even for involuntarily acquired benefits, as this still covers the goal of creating accountability and covering costs, ideally, they would be incentivized towards climate neutral consumption, therefore addressing the root cause of climate change. It is therefore still relevant to consider why people choose to consume emission heavy products and services. In the simplest scenario, someone may not have alternatives available to them, forcing them to consume highly harmful products. This is the *theoretical* agency. If there are alternatives, someone may not be able to afford them. This impacts the *actual* agency. When there is actual agency, BPP is at its fairest and most effective, as its impact is equal for all. When there is no actual agency, disadvantaged groups with fewer means and less control over their surroundings will experience a much bigger impact from BPP than those in more privileged positions.

2.3 Public approval of BPP

Another reason to take agency into consideration is public perception. Realistically, enforcing policy which holds individual consumers accountable for their choices when there are no

alternatives available is unlikely to be popular with voters. Especially because developing alternatives is outside of any individual's ability, requiring states, larger organizations and corporations to put in the required time, skill and funds. A sore spot, because whilst there currently is a rhetoric of individual responsibility in many places, the majority opinion of those concerned with climate change regards "big business" as the primary culprit (The Guardian, 2019; Harvard Political Review, 2020; CDP, 2017). This is to say, many people feel that corporations which are responsible for a relatively large share of harmful emissions ought to be held responsible for both costs of climate change. This sentiment is best represented by the contributor pays principle, as the commonly held logic is that as these actors have control over the creation of vast amounts of emissions, they are in a position to cut these emissions as well; as opposed to individuals, who do not get a say in how these businesses are run. This type of public opinion matters because of its influence on the viability of any proposed legislation. After all, politicians generally try to keep citizens satisfied, and when citizens do not support a proposal, it is less likely to be enacted. Secondly, it matters to understand the social and cultural context in which such policy is constructed. Many of the current issues which prevent more responsible consumption and other harm-reducing behaviors are due in large part to the prevailing beliefs people have about the world they live in.

Despite the widespread recognition among individuals that climate change is a pressing issue, few people are currently taking responsibility for the benefits they enjoy from climate harm. In their book, Peeters et al. (2015) describe this inconsistency as the motivational gap, which they argue stems not just from being unable to recognize climate change as a morally important issue, or from personal responsibility being considered unconvincing. Rather, a lack of individual agency is often touted as the basis of 'moral disengagement.' When someone believes (or convinces themselves) their decision is not influential, they can allow themselves to stop engaging with the moral question. The prevailing belief here is that individual actions make no difference. A well-structured implementation of BPP could change this perception by making the effects of individual actions tangible. By virtue of its proportionality, both the compensating of benefits from harm, as well as choosing the alternative with fewer benefits from harm have immediate and calculable consequences. This tangible effect will reduce moral disengagement, as the feelings of being overwhelmed by the problem and confused about the solutions commonly associated with climate change (Peeters,

et al; 2015) are reduced by the implementation of necessary infrastructure and regulation, encouraging harm reduction in individuals.

Another common concern regarding collective responsibility of individuals is that of free riding. The prediction is that it becomes easier to hide in the group, to wait for the other members to compensate. However, Obradovich and Guenther (2016) observe the exact opposite effect. Mitigation behaviors increase when climate harm is presented in a collective context, indicating a more pressing sense of responsibility. As Schwenkenbecker (2012) also concludes, simply thinking about the problem in terms of “we” rather than “I” is enough to motivate change in behaviors. The feasibility frontier moves forward when people believe others are also addressing the same problem, as larger groups have a more substantial impact. To apply BPP to individuals in a way which people feel positively enough about that it can count on public support, a collectivist approach is essential, which in turn, requires state-level legislation.

2.4 Carbon tax

Taking into account these limitations and considerations, any effective form of BPP will have to be regulated and enforced. There is the established moral duty for individuals to compensate harm they profit from and the similar moral duty to take responsibility for their part in the climate harm that has been and continues to be caused. Moral duty alone, however, does not effectively move people to change their habits or minds. The vital problem as described by DeSombre is that when action is dependent on moral grounds alone, this causes each action to become a matter of conflict for the individual. And, ultimately, “willpower is a depletable resource” (2018, p. 175). This means that people will always be tempted to take the more convenient option. On top of this, even when they are willing to put in the extra effort, without properly defined actions, usable infrastructure, and guidance, people may not know how to comply with their moral duties, adding yet another barrier for them to overcome. Instead, governments ought to take responsibility by guiding behavior through fines and incentives. Systemic measures are necessary to ensure the proper safeguards against poverty and unfair division of responsibilities, as well as to ensure the practical functionality of compensating benefits, something which is highly impractical without the necessary infrastructure to efficiently transfer benefits without massive loss of value.

My proposed version of BPP, *if an agent benefits from any action, good, or service which harms or has harmed others in its creation or execution, that agent has a moral duty to compensate that harm, even if the agent did not seek out the benefit or cause the harm directly*, lends itself well to what is ultimately the most viable application of the concept in practice, a carbon tax. This is a tax levied on the carbon emissions created by the production of a service or good. As these emissions are responsible for contributions to climate harm, such a tax would be a direct price tag which allows for compensation of the harm while purchasing the good. A direct effect of this is a cost increase of products the more they contribute to pollution, often leading to the greener option becoming more affordable than the emission-heavier one. Capstick and Lewis (2010) show however, that the effects of implementing a carbon tax go beyond a predictable decrease in consumption of emission heavy goods due to price differences. Instead, substantial behavioral differences indicate that a carbon tax leads to increased carbon budgeting- the active decision to consume in a more environmentally conscious way.

This means that a carbon tax is not only a simple transactional necessity to fulfil one's obligations under BPP. On top of that, it is an effective tool to increase awareness of the climate harm one is contributing to everyday, which in turn will lead to improved motivation to combat these harms. It is also an effective incentive to make lifestyle changes, by virtue of making cleaner options, where available, more attractive. This follows DeSombre's recommendation that emission reduction should be made to be the obvious and easy choice even to those people who do not care for the environment. Murray and Rivers (2015) examine the British Columbia carbon tax and conclude that under this tax, emissions had been reduced by 5%-15% four years after implementation. Notably, the aggregate economy barely suffered from the price increases and over time, the majority changed their opinion from opposed to the tax, to being generally in favor.

Another benefit to using a carbon tax under BPP is that it eliminates many downsides of using national measures to solve international problems. If a tax is applied following CPP, where a state taxes the producer who emits the GHG, such a producer is incentivized to relocate to a state which does not apply such a tax. If instead the beneficiary is taxed, this tax exists regardless of who or where the producer is. Assuming emissions are equal between producers and imported goods and services are taxed the same way as domestic ones, there is virtually no risk of unfair competition or tax evasion at the corporate level. This incentivizes businesses to

drive down emissions through innovation and investment, creating cleaner alternatives and in turn improving agency, rather than incentivizing tax evasion by continuing to emit elsewhere.

Based on the generally favorable views on the effectiveness on carbon taxes, as well as its myriad of benefits beyond its function as a method to implement BPP, I argue that a carbon tax is both the most viable and desirable way to ensure moral obligations of individuals are met. If such a policy proves effective, it ought to be expanded to encompass other harmful GHG, as to avoid the assumption that CO₂ alone is responsible for all climate harm.

3. practical concerns

3.1 Practical feasibility

All this is not to say that a carbon tax is an easy or flawless fix. The constructing of such a tax system is incredibly complex, requiring a great deal of careful balance and precision. Beyond these practical challenges, a political willingness to introduce such a system isn't a given either. Especially when the prevailing notion is one of resistance against personal responsibility and increasing costs of living, there is little room for error. As a result, the implementation of a consumer carbon tax is a slow process, plagued with argument and concern. The most common issues can be sorted under three broad categories: practical feasibility concerning the design of the tax itself. Adverse effects, mostly concerns for economic damage, especially to low-income households. And finally political viability, specifically the lack of platform among voters.

Whilst there is no room within the scope of this research to delve deep into the intricacies of fiscal policy making, understanding the basic challenges of constructing a carbon tax is essential to understanding both the solutions and limitations. The most vital and challenging part of the process is determining what amount to tax. VATs, for example, are fixed percentages which are not influenced by the nature of the product they are attached to. In the Netherlands books face a 9% VAT charge and in the UK every dress shirt has a VAT charge of 20% added to it. It is unimportant whether the book is mass produced or bound by hand, and the quality of material and production process of the shirt are not taken into account. For a carbon tax, this would defeat the purpose of personal responsibility. Instead, each item must be taxed according to the carbon emissions it requires to produce. Suddenly, whether a shirt is made locally or shipped from halfway across the world makes a difference in its tax rate. Accuracy in these calculations is vital for the system's effectiveness. So, to fully account for all emissions, a

cradle-to-grave overview must be made for each product taxed. Any beef patty must be considered from the resources used to grow the feed for the cattle, all the way down to the processing of the plastic packaging the patty was sold in. These supply chains are lengthy, often spread over multiple countries or even continents. Calculations are usually at least somewhat flawed, simply on account of the fact that keeping a manageable overview is a herculean task. One solution to this, other than time, patience, and a thorough mathematician, is to isolate distinct parts of these chains. Transportation, for example, can be taken out of the chain and handled as a separate process relatively easily. Calculating emissions for this area alone is a lot more straightforward, and this way emissions produced in transportation can be taxed at the corporate level, when a company decides to ship products to stores. Ultimately this cost may still end up increasing consumer price just as the tax would have done, but it alleviates the tax complexity. (Li, et al. 2021)

Despite this method of compartmentalizing, the required paperwork piles up high. This will inevitably lead to complex bureaucratic structures to keep track of all the necessary information. Such a bureaucracy is rather sensitive to fraud. I bring this up because of a related topic, often spotted in supermarkets. Frequently, two similar products will be placed right next to one another, differentiated largely by their price and label. Inevitably, it is the more expensive product which claims to be the more responsible choice. There are many such labels, stoplights, ratings, checkmarks, and more titled “natural” or “biological.” These products, it is commonly understood, play upon a sense of morality. The implication is that the expensive chicken with the green check on it likely lived a better life than the cheaper one without. And to those consumers who wish to be mindful and morally correct, that is worth paying a little extra. Consequently, to the companies producing the chicken (or pasta sauce, or even hybrid car), the little green sticker with “bio” on it is worth a lot of money. This phenomenon is a risk in carbon taxing as well, as the ability to mark your product as clean, or green, or low-emission will inevitably draw in customers. Within such a large structure, the administrative side will have to be a watertight construction to avoid bleeding value or creating fraudulent tax ratings. This is a question of due diligence and investment, though it is not impossible to monitor for through extensive checks and regulations. Overall, these challenges in maintaining an accurate and detailed administration are not enough reason to abandon the tax altogether. It is however important that sufficient time and care is taken in the process of development, so as to avoid having to constantly put out small fires after implementation.

3.2 Adverse effects

Then there are concerns of adverse effects. One frequent concern is the issue of borders. If one state implements a carbon tax and the price of say, cars, sharply increases, many will purchase one from a neighboring country where prices remain low. It is, after all, not uncommon either in European countries to pop across the border to fill your car with cheaper gas. Climate harm is a global problem, and moving production to other countries to avoid taxes only leads to harming the home economy without actually addressing the problem. This worry is easily assuaged by McAusland (2021), who demonstrates how in consumer goods, a carbon tax in one place works to reduce consumption worldwide. The aptly named spoilsport effect happens when demand for a good drops in one place due to increased taxes, which then causes overall profitability to drop for those who produce it. Less profitability equals less entry, which reduces producer competition, driving up prices for all consumers, tax or not. This price increase will reduce overall demand even if a carbon tax is not universally applied.

A more complex argument against taxing carbon emissions is that of affordability. When engaging with this criticism it is important to separate luxury emissions from survival emissions (Shue, 1993). Naturally this is not done along a black and white line, but when the debate centers around affordability, this is understood in light of the ability to afford necessities such as gas and electric to warm the home. Air travel to holiday destinations, on the other hand, is not a basic good or necessity for survival, making it a privilege that people are not fundamentally entitled to, which means its affordability need not be protected to the same degree. This means that goods deemed necessary for survival may require adjusted tax rates. There are multiple ways to ensure the availability of essential goods, one of which is lower taxes for these categories. The downside is that the lower rate enables wealthier people to overuse resources without sufficiently compensating for them. This could possibly be compensated for with additional policy measures, but is nonetheless important to keep in mind. Another solution is a tiered system, which could be focused on the product, increasing the tax rate as consumption increases past a certain threshold. Except this requires tracking individual consumption, which is only really feasible in cases such as home gas meters. And even then, essential consumption will be higher for a family of six than for a single adult. So instead, the tiers could be income dependent, with low-income households enjoying tax exemptions for certain products. Shue (1993) makes a proposal in line with the no debilitating cost principle, suggesting what he calls an “inalienable allowance” referring to carbon taxes in particular. This is again similar to a tax-free rate. The inalienable allowance allocates each person an emission

budget, which they can use to freely acquire basic goods they cannot go without. After they've spent this allowance, they'll be taxed for the extra (presumed to be) luxury emissions.

Another possible solution lies in the nature of the tax. It need not be a blunt force instrument. When it comes to basic goods specifically, there is a lot of fine tuning to be done. Introducing a full tax (high enough to compensate the costs of climate harm) immediately will likely lead to resistance as prices soar up. Instead, the tax can be increased slowly over time, be reduced when necessary, and be customized for different categories as circumstances require. Finding the delicate balance between too low to be effective and too high to be affordable is unlikely to happen right of the bat and providing space to adjust the dials could allow for a very precise instrument. This would also help in transitioning from one product to another. Basic goods must be accessible, which means that until alternatives become widely available and affordable enough to consider, consumption of dirty goods must be sustained or even subsidized. Allowing for the tax to gradually increase ensures a smooth transition period when new technologies do arrive.

A similar argument in opposition concerns the regressive nature of carbon taxes, as they disproportionately impact low-income segments. Malerba, Gaentzsch and Ward (2021) discuss this problem, determining the adverse distributional effects. They observe that an unadjusted carbon tax may worsen poverty (though without influencing inequality) by taking up relatively more of the lower income households' limited funds. The solution they propose is based around social security and wealth redistribution. This redistribution need not be preexisting, rather they suggest "recycling" part of the revenue stream from the carbon tax back to the lowest income households. This social assistance would ensure everyone is able to afford necessities, and the bigger part of the burden would appropriately fall with those who can carry it. Additionally, in their case study, such a system significantly reduced poverty altogether.

In all proposed solutions and caveats, it is important to keep sight of the actual agency requirement as well. Many practical problems a carbon tax runs into are caused in large part by a lack of desirable, affordable, high-quality alternatives to the more GHG-heavy essential goods that are being regulated. Agency is a fundamental part of fostering a successful change in consumer behavior and mindset, and a requirement for a functioning carbon tax. GHG-heavy goods can only be discouraged when clean goods are widely available, in which case the transition to climate neutral living will come smoothly.

3.3 Platform for implementation

The final hurdle in creating a carbon tax, and perhaps the most difficult to overcome, is that despite its effectiveness, neither politicians nor consumers seem to want one. This is, understandably, a big roadblock for its implementation. There are two sides to this, the political and the social, with the first being heavily influenced by the second. Politicians are hesitant to enact legislation which blatantly increases costs of living. Tax increases often disliked policies (Wilson, 2006). The concern from politicians about a lack of platform among voters is based in large part on the assumption of tax unpopularity. Understandable as such a fear is, taxes are mostly accepted as necessary and often viewed favorably in countries with decent public amenities (Steinmo, 2018). Carbon taxes do face resistance in many places, however. Typically, these are places where climate friendly living is not regarded as important within a community. Lindman, Ek, and Söderholm (2013) investigate this social feasibility further and conclude that social norms greatly influence carbon tax desirability. People value their reputation and self-image, and generally want to be considered a good and responsible person. Norm compliance is important to people, as social norms dictate what is “good.” When the normative claim which follows from BPP is embraced, and people believe others around them care about taking responsibility for climate harm, willingness to pay a carbon tax greatly increases. This is, effectively, how the feasibility frontier is pushed forward. As such, information campaigns which focus on the responsibilities which follow from BPP may go a long way to increase policy desirability. As for political feasibility beyond social platform, Sandmo (2004) focusses on the revenue generated by a carbon tax. Tax revenue is not generally earmarked for a specific purpose, rather it is all added to the pile of government funds which is then used to finance policy, services, and amenities across the board. However, as a carbon tax is built on the presumption of responsibility for global harm, and many states have already accepted some degree of responsibility in covering climate costs via the Paris accords, the revenue from a carbon tax would provide the necessary funds for encouraging green development, poverty mitigation, and most importantly, covering costs both within the state, as well as possibly funding international mitigation and adaptation initiatives. The double dividends of lifestyle change (and thus harm reduction) coupled with the generated funds for economic development (p. 16) lead to promising potential revenue for governments. And where there is revenue to be gained, political willingness is sure to follow. It is perhaps worth investigating the relationship between this political willingness and personal responsibility

regarding instigation of institutional reform, and how institutions can be socially motivated to become willing to implement carbon taxes, an aspect I've had to largely disregard due to scope constraints.

Concluding remarks

The problem of climate change is increasingly urgent as climate harms manifest themselves in myriad ways around the globe. The implementation of concrete and effective policy is not just desirable, it is necessary. To this end, it is important to realize that the debate should be centered around determining the most effective ways for actors at every level to take their part of the global responsibility of undertaking adaption and mitigation efforts, rather than focusing on which actors are to blame. The beneficiary pays principle allows this burden to be placed with everyone who has had a part in the perpetuation of the harm done to our planet and its inhabitants. The effect of this, ultimately, is increased effectiveness of all efforts. Rather than appointing responsibility to a specific set of actors, requiring one group (whether that be corporations, individuals, or states) to compensate for all others who are not concerned with harm reduction, a cohesive system can be created under BPP. I argue that a modified BPP, one which is not only applicable at state level, but which includes even the smallest actors, is a necessary element to forming the moral basis for effective climate solutions.

The moral responsibility for individuals to not ignore climate change and do their part in mitigating harm allows for them to be granted duties under BPP. These duties to compensate harm can only be realistically carried out when sufficient infrastructure is available. To this end, it is important not to overlook the responsibilities of states, NGO's, corporations, and other actors beyond the individual level. A carbon tax is one way to create something of a holistic whole, in which each actor compensates their benefits, whether they be massively influential or a small contribution. And it is the coming together of all these contributions under one cohesive policy, a policy which comes with a host of beneficial side effects, which allows for a centralized revenue stream which can be used to hit global adaption and mitigation targets.

Due to the limited scope of this research, I have not been able to dive deep into the intricacies of constructing a carbon tax, or the details of what implementation would look like, a process which will inevitably differ per state. Similarly, further research may be done regarding the many different benefits a carbon tax ought to cover, defining not only what they are concretely, but also how each could best be regulated. There are limitations to using a carbon tax to fulfil

the obligations under BPP as well, of course. Carbon taxes are a considerable part of BPP implementation, but don't account for most of the historical emissions and climate benefits that don't stem from consumption. BPP provides moral ground to require compensation for these benefits, but different policies or even unregulated action in the form of offsetting projects will be required to fulfil these obligations. Further research could provide insight into the best way to handle these errant branches of benefit. There is also the risk of BPP still falling short of compensating climate harm, due to an eventual lack of beneficiaries. At this point, we will be reliant on APP to fill the gaps.

As for this research, I conclude that not only can BPP be applied to individuals, doing so is highly desirable. I've provided the necessary moral ground to justify a carbon tax, which will be the first step towards creating both the necessary infrastructure, as well as the required shift in public norms and perceptions to effectively combat climate harm. BPP proves not only the fairest and most complete cost distribution method, but it also lays the groundwork for a convincing narrative regarding personal responsibility in highly consumerist societies.

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