Journal of Agricultural and Environmental Ethics
https://doi.org/10.1007/s10806-019-09816-w

ARTICLES

Environmental Individual Responsibility for Accumulated Consequences

Laÿna Droz[1]

Accepted: 20 November 2019

Abstract

Climate change and many environmental problems are caused by the accumulated effects of repeated actions by multiple individuals. Instead of relying on collective responsibility, I argue for a non-atomistic individual responsibility towards such environmental problems, encompassing omissions, ways of life, and consequences mediated by other agents. I suggest that the degree of causal responsibility of the agent must be balanced with the degree of capacity-responsibility determined by the availability of doable alternatives. Then, the more an agent has powers as a group member, the more she is responsible to design the social structure and the infrastructures of the group towards sustainability. Finally, one can hold another agent responsible only if the accused is not in a vulnerable position and if she is capable to take reparative and adaptive actions.

Keywords Individual responsibility · Collective responsibility · Environmental ethics · Climate change · Mitigation · Adaptation

Introduction

Many environmental problems are caused by the accumulated effects of repeated actions by multiple individuals.[1] Climate change is the result of practices in which the large majority of the world population is engaged over a lifetime. Similarly, biodiversity losses occur all over the planet because of the harmful accumulation of seemingly benign effects of a high variety of human activities. The causal systemic complexity of most environmental problems raises the question of who is morally responsible for them.

[1] I use the feminine as gender neutral.

✉ Laÿna Droz
layna_droz@yahoo.fr

[1] Laboratory of Global Environmental Policy, Graduate School of Global Environmental Studies, Kyoto University, Yoshida-Honmachi, Sakyo-ku, Kyoto 606-8501, Japan

Published online: 14 December 2019

Several authors attempted to assign collective responsibility, namely, that groups could be held responsible *as group* for some harmful consequences, whose cause can be traced back to the whole group of people engaging in the practice (Corlett 2001; Feinberg 1970, 222–251; Smiley 2017). This can seem to be promising, as it appears to be difficult to isolate the members directly engaging in one specific practice without including the members engaging in practices supporting the primary practice. Indeed, it seems hard to solely accuse drivers of private cars of contributing to carbon emissions, regardless of the lack of public transportations, the affordability of cars and fuel, the industries producing cars, the infrastructures financed by the State, etc. Practices mutually support each other and are closely intertwined into networks, which can be referred to as social structures (Haslanger 2015, 12). Then, the group of members of a given social structure could be held collectively responsible for the harmful effects of a practice.

This approach is used beyond the philosophical realm, in policy-making, law, and environmental communication. Nations are often considered as groups who have a collective responsibility to reduce their greenhouse gas emissions (for example with the United Nations Framework Convention on Climate Change, see also Stone 2004). Companies are sometimes accused of being responsible for deforestation and biodiversity losses in some areas. Regardless of the different contributions, acts of protest of their members, or internal power dynamics, groups seem to be treated as appropriate candidates for moral collective responsibility.

Yet, four main problems appear when assigning collective responsibility to a group. First, it raises the problem of defining groups' borders. Because of the closely interconnected ties of economy and trade and of the high mobility of the most powerful actors, to ground collective responsibility at the scale of the nation is doubtful. Second, collective responsibility erases dynamics of oppression and domination internal to the group. Some dominant individuals in the group who are the main perpetrators of the harm could continue oppressing the other individuals under the appearance of legitimacy because of collective responsibility. Third, it can lead to a dilution of responsibility and to nobody actually taking responsibility (Reiff 2008). Assigning collective responsibility to the group disregard internal dynamics of oppression, domination and abuses, and may allow the few individuals who have committed the actions leading to the worse consequences (e.g. decisions to allow the commercialization of some herbicides) to go away without being held personally responsible. Members of the group who gathered the main benefits of the harmful practices are then free riders at the expenses of other members of the group who had little to say in the continuation of these practices. Fourth, members who feel unjustly held responsible for a harm they almost did not contribute committing, or that they could not have prevented are likely to feel resentful and to reject responsibility as a whole. Such a situation can then lead simultaneously to social unrest, to the continuation of oppressive and abusive relationships inside the group and to the lack of effective reparative actions.

If, for the above reasons, collective responsibility can be an appropriate tool in some legal contexts, it seems too precarious to be used as an ethical justification sufficient to trigger significant structural changes. However, at the other end, individual responsibility also suffers severe drawbacks. Individual responsibility is

usually understood in extremely narrow terms, hence, to focus exclusively on it can be seen as a way for companies and governments to escape accountability (Kent 2009). I propose a wider account of individual responsibility that is non-atomistic, symmetrical regarding actions and omissions, and that covers effects mediated by other agents and the social structure itself.

To begin with, I will explore the idea of non-atomistic individual responsibility towards environmental problems. This will help us to define the criteria for being a moral agent who qualifies for responsibility ascriptions, under what conditions moral responsibility is properly applied, and what the possible objects of responsibility ascriptions are. Then, I will define what counts as harm and reparation relatively to sustainability. Once we established who is responsible for what harmful consequence, we will discuss who is responsible to do what reparative (or preventive) action. Finally, we will shortly address the question of who can hold whom responsible.[2]

Individual Responsibility for Environmental Harm

Questions of moral responsibility are ubiquitous regardless of cultures and eras. Generally, responsibility connects a past action that had harmful consequences with a future expected reparative action. A common intuition is that to be responsible, an agent must have caused the consequences, and a freedom component is often added, namely, that she had the capacity to act otherwise. Most famously, Aristotle already excluded from the realm of responsibility any action coerced, because they were done involuntarily (Book III of Nicomachean Ethics, see also Golding 2005, 221–235). Even today, causation and capacity are the two main aspects of responsibility. To these two aspects, H.L.A. Hart added two usages of the word "responsibility", associated with the social role and with liability (1968).

So, to use responsibility as a hinge connecting what the agent did in the past with what she is ethically required to do in the future, we need to clarify the causal link between the agent and the harmful consequences, and the capacity of the agent to act otherwise, which raises questions of ignorance, easiness to change and basic needs. Let us start with causation. As we have already shown, causation of environmental problems is highly complex. Most environmental damages are not caused by an isolated action such as pulling the trigger and killing someone. They are caused by repeated actions and omissions that are bound together into lifestyles largely based on habits.

It follows that a comprehensive account of moral responsibility for environmental problems must include as possible objects of responsibility ascriptions not only actions, but also omissions, ways of life and habits (Cullity 2015). Throughout one's life, an individual agent is leaving significant traces on her environment and on her social structure. I consider as significant any effect that is important enough

[2] This list of questions is inspired by Nancy Fraser who describes three abnormalities of justice with the questions What, Who and How, 2008.

to cause irreversible damages (such as a species extinction) or to trigger domino effects resulting in environmental changes affecting other species' survival and other humans' fulfilment. One's very existence already has significant effects, mediated by other people who are taking the passive agent in consideration in their own decisions. For example, an infant already has an environmental impact simply by increasing the number of potential consumers in market analysis, leading to a production increase of some goods. Remarkably, most of these objects of responsibility are not deliberate actions voluntarily taken for a clear purpose by a fully aware agent. On the contrary, they fall under the grey shadow of automatisms and habits. That is, we cannot reduce causal responsibility to voluntary actions in Aristotle's sense.

Instead, we need to bypass the black box of the phenomenology of the agent and accept a wider account of a causal link between the agent and the consequences. Fischer and Ravizza (1998) situate the key criteria for responsibility in guidance control, regardless of the accessibility of alternatives. According to them, an agent has guidance control if she recognizes herself as the source of the action, namely, if she owns the mechanism doing the action (usually, the body), and if she is a relevant candidate for social reactions. This latter requirement is inspired by Strawson who suggested that an agent is responsible insofar as she is "an appropriate candidate for the reactive attitudes" (1962). Notably, all these three conditions are observable by others. For Fischer and Ravizza, it is enough that the agent has "taken responsibility" in the past to be considered responsible for all her subsequent actions and omissions. Usually, they argue that individuals make certain kinds of mechanisms their own by taking responsibility for them partly as a result of education. In the early childhood, the individual learns to see upshots in the world depend on her own choices and bodily movements and, in turn, to see herself as a fair target of reactive attitudes by others, such as punishment and praise (Fischer and Ravizza 1998, 241). Through this historical process of seeing themselves as agents, individuals are taking responsibility for their future actions and omissions.

This account gives symmetrical treatments to actions and omissions as instances of guidance control. It also recognizes responsibility as the result of a historical process inseparable from the web of social reactions. Then, to be considered causally responsible, it is enough for the agent to have made a difference in the occurrence (including the continuation) of an event or a state of affairs. This includes letting something happen, namely, passive support. And it also covers giving advice to another agent, leading the latter to act in certain ways. In these cases, causal responsibility is mediated by inaction or actions of other agents influenced and encouraged by the primary agent. It is still possible to claim that without the individual agent's action or omission, a specific event would not have occurred, or a specific state of affairs would not continue. But there are many environmental problems for which it is hard to draw such a causal line between the individual agent and a globally harmful effect.

Climate change is an archetype example of causation determined by cumulative effects. In philosophy, Derek Parfit argued about these kinds of cases with his thought experiment of harmless torturers. It goes: an individual is presented with a switch that, if turned, increases the amount of electrical shock a stranger is

experiencing. The individual switch it on, and, as the stranger does not even seem to notice the slight change, leaves the room. But as hundreds of other people make the same decision, the victim is eventually screaming in pain. Parfit goes on concluding that: "Even if an act harms no one, this act may be wrong because it is one of a *set* of acts that *together* harm other people" (Parfit 1984, 70). What is remarkable in this formulation is that no specific group of individuals playing the role of harmless torturers has to be identified or treated as responsible as a group. Regardless of who belongs to the group, the individual action is wrong.

Then, instead of looking for an agent or a specific group as a scapegoat, it seems important to identify the source of harm first, and then to trace back causation (Morgan-Knapp and Goodman 2015). The source of harm in many environmental problems is a specific, usually common, practice that is repeatedly done by a collection of individuals, supported by other practices enacted by other individuals, and formatted by the cultural imaginary (Bayart 1996, 226; Geertz 1993, 92). Practices are relatively stable and self-sustaining because of a loop effect between their symbolic reality and the material resources and structures they are based on (Haslanger 2018).

Once the sources of harm are identified, it becomes possible to assign different degrees of causal responsibility to agents involved in different ways. Agents are causally responsible not only for the direct consequences of their actions, but also for consequences flowing by domino effects from their actions, and for consequences mediated by other agents' actions (Attfield 2009).[3] Depending on the level of harm and the distance of causation between the agent and the harm, the causal responsibility assigned to each agent for each effect must vary in degrees. The severity of harm and its very existence must, of course, be taken into consideration. Since they are the first reason why we want to assign causal responsibility, they cannot themselves be the sole criteria determining the degree of responsibility. Thus, I suggest that the main criteria for determining the degree of causal responsibility of an individual agent is the relative distance separating the agent from the harm in the causal chain.

The distance in the causal chain separating the agent from the harm refers to the number of interventions by other individual agents that is needed for the harm to occur after the agent's action. These interventions are the human-influenced events and conditions that affect the course of the causation after the agent's action itself. Other agents' actions and interventions can greatly influence the severity and the extent of the harm done. Thus, the causal responsibility attached to the single action of giving advice will be of a lesser degree, but not nullified.

[3] Attfield already suggested that responsibility can be mediated through the actions of others, spatial and temporal distances, uncertainty and diffusion. I use the word mediated in a more limited meaning, restricted to mediation by other agents.

Criteria for Responsibility Ascriptions

Within the collection of individuals who are causally responsible for an environmental harm to different degrees, who qualifies for responsibility ascriptions depends on the capacities of each agent. Three main factors affect the capacity of an agent to be responsible: her state of knowledge, her easiness to change of behaviour, and her vulnerabilities and powers. They all relate to the availability of alternatives to the agent.

First, it is necessary to clarify what alternatives were thinkable for the agent. An obvious component of this aspect is the knowledge held by the agent. If the agent is ignorant of the very existence of a problem, or of an alternative technological tool, she is simply unable to conceive using it. But this goes further as we all only partly choose what we want to learn about. We are all trapped in transparent bowls inside which we shape our thoughts and judgements, without noticing the very existence of the transparent walls surrounding us (Veyne 1971). Like goldfishes unaware of their own transparent fish bowls, we turn in circles inside our own sociocultural imaginary, and we watch in disbelief others' actions and reasoning. Our own bowl is our basic frame of reference to understand, judge and act on our world. In short, what might be the obvious best option from your standpoint might not be accessible to the imagination of another agent rooted in a different culture from yours. Pluralism of worldviews came to light strikingly with globalisation, and it strongly influences what is considered to be known, knowable, and predictable. To keep it short, we can distinguish three possible states of knowledge of the agent regarding the potentially harmful consequences of her action: deliberate, predictable yet ignored, and unknowable. Then, I argue that the degree of responsibility of the agent decreases with the level of ignorance of the agent regarding both the possible consequences of her action, and the possible alternative courses of action she might have chosen. From an observer perspective, this can only be assessed while taking into consideration the sociocultural background of the individual agent, with a strong emphasis on the transparent walls of the cultural imaginary she lives in.

Second, responsibility should vary depending on the easiness to act otherwise. Once an alternative course of action or lifestyle is conceivable by the agent, practices of the particular social milieu the agent lives in often put a spoke in the wheels of the agent's will to change towards a less harmful behaviour. Practices largely affect what we think as acceptable behaviours and actions, and what changes of behaviours appear to be doable. Because practices are sites where the agent exercises her autonomy, they are also probed to normative judgements and ethical justifications. When the agent challenges, resists and opposes some specific practices, she exposes herself to social pressures, exclusion and isolation. We can distinguish three different options that may be available to the agent once she identified a practice that has harmful consequences. The easiest and safest option is for the agent to change her behaviour slightly. More challenging is that the agent chooses to follow an alternative practice, which requires more efforts, but usually does not present high risks for the agent herself. Finally, the agent

might frontally challenge a practice and publicly denounce it, risking a backlash from blame up to death. This last hardest option raises questions related to activism and the acceptation of protest in different socio-cultural contexts. Here, I argue that the easier the alternative behaviour was for the agent, the more responsible she is for the harm she caused and for changing her behaviour in the future.

Last but not least, there are two basic thresholds under which the agent can be excused of her responsibility for some particular harm: fulfilment of basic needs (Shue 1995, 1999) and mental health (Hart 1961, 194–197). I argue that when it comes to environmental harm, an agent cannot be held responsible if the only alternative options she had to reduce the harmful consequences did not allow her to fulfil her basic needs (and the ones of her family) at least as much as the harmful option she used (like Cripps 2013). Conversely, bystanders to the situation of a vulnerable agent forced into committing harmful actions have a responsibility to empower the agent up to the point where she becomes able to act otherwise. If they omit to do so, then they have a causal mediated responsibility for the harm produced by the action of the vulnerable agent. The responsibility of less vulnerable agents increases along with their powers regarding a particular issue, that is, what one should do depends on what one can do. Another limitation to the powers of the agent is her mental health. The purpose of assigning responsibility is not to paralyse her with guilt, but to empower her to take reparative and preventive actions. Consequently, I follow Hans Jonas in reversing Kant's "should implies can" to "can implies should" (1979, 230). Based on the powers technology gives to humanity nowadays, Jonas argues that not only responsibility depends on capacity, but vulnerability (or the lack of capacity) makes the other capable agents responsible (Larrère 2014).

In sum, these three criteria allow us to decide on a degree of capacity-responsibility, to be balanced with a degree of causal responsibility discussed before. This is a complex enterprise and requires case-by-case analysis. Moreover, this is not enough to assess what the—relatively—powerful agents are expected to do to prevent a harmful consequence when they are not directly causally responsible for it, but might have a mediated causal responsibility for it, in virtue of being a member of the social structure. To do so, we need to draw borders and to fix priorities regarding who and what is to be considered as the most important object of care. In other words, it requires us to clarify what is considered as harm in the context of environmental problems.

Defining Environmental Harm Relatively to Sustainability

For a theory of responsibility to be applicable globally, we need to define harm and the direction of reparative and preventive actions in a way that does not rest on cultural or religious premises regarding what "good" is. It urges us to go to the lowest common denominator for global ethics (Virvidakis 2014, 869). Despite the diversity of worldviews, we all have in common vulnerability towards brutal environmental changes. Vulnerability makes sense only if we value human existence. "We" refers to anybody engaging in the dialogue. As such, "we" is already validating the premise, because any potential reader or listener of this premise would be alive. By being

alive anybody must have something that they judge valuable in their own existence as individual, or at least in their existence as part of the human network. Some will say that we bump into the difficulty of defining what "human existence" is. However, the purpose of this premise being to reach consensus, its readers will inevitably be human beings and so must have at least a non-problematized understanding of what human existence is. Such an intuitive understanding is enough for the sake of my argumentation. Then, a healthy and meaningful environment is a necessary condition for human existence. Healthy means, foremost, healthy for human beings. I do not mean here to personify the environment as a being that can be healthy or sick. What is healthy for human beings is also very ambiguous and depends on what is valued in human existence, on the physical and mental vulnerabilities of the individual human in question, and on the worldviews endorsed by her and her community.

I define harm and "good" actions relatively to sustaining a healthy and meaningful environment for human beings to live fulfilling lives. Sustainability is not only the preservation of a healthy environment as a chemico-physical receptacle, but also the transmission of dynamic and living webs of meanings. Thus, it encompasses providing the conditions not only for the survival of the human species and basic needs of individual human beings, but also for the development of healthy relations between human beings and of meaningful individual lives. Continuation lies at the heart of this dynamic concept of sustainability that can evolve through time and be adapted in different sociocultural and geographical areas. All in all, it gives us a criterion to evaluate harm and benefits of actions and omissions. In other words, are considered harmful any project, habits, lifestyles or actions that undermine the conditions for their continuation or fulfilment. Thus, any step towards any irreversible or nearly irreversible destruction (relatively to human-life span and human knowledge and powers) are considered harmful.

Finally, the fundamental ignorance we all have regarding the complexity of environmental systems urges us to adopt a strong precautionary principle (Glazebrook 2010, 176–179). For the sake of precaution, keeping as many tools and options as possible is essential, therefore preserving diversity, from biodiversity to diversity of knowledge. This discussion opens a plethora of other interdisciplinary questions, but here is not the place to address them (Schmidt et al. 2016, 192; Jax et al. 2013). For our purpose of drafting an understanding of individual responsibility for environmental problems, it is enough to have the direction of harm and goodness relatively to sustainability. To investigate the agents involved as sources of a particular harm clarifies who is responsible for it. Moreover, sustainability also gives us the direction for future reparative, preventive and adaptive actions.

Forward-Looking Responsibility to Take Actions

Responsibility to take actions rests among the people who are causally responsible, at least in a mediated way, for a particular harm. Except for definite irreversible harm, harm is usually a dynamic process that unfolds through time. Actions necessary to tackle it can be considered reparative, preventive and adaptive. Expected actions are oriented towards sustainability and must be calibrated with

the capacity of the agent, as discussed above. Yet, agents are not isolated and atomistic individuals. On the contrary, they are deeply entangled in webs of relationship with others, let it be through economic ties, by sharing a same culture or place of living, by being members of a social structure and of multiple overlapping groups such as family, workplaces and nation. Actually, insisting on an isolated conception of the individual appear to be a strategy to avoid taking responsibility for one's impacts on the multiple relationships one is de facto engaged in (as argued by Hiller 2011 and Young 2010).

We discussed earlier three levels of easiness to change behaviour related to social acceptance. The easiest option of slightly changing one's behaviour is the most commonly advised because it seemingly applies to everyone regardless of their social status, culture, or of the political system they live in. Most of the time, these changes touch consumption habits, from boycott to recycling. If they are important steps in raising environmental awareness, they usually have only low effects and are not sufficient to bring the social changes necessary to prevent irreversible harm (Maniates 2001). Yet, almost everyone is causally responsible for having consumed a product that could contribute to severe environmental harm (even if it seems insignificant such as a plastic bag). Moreover, the predictability of the consequences of consumption of potentially harmful products being high, unless the other options do not allow the agent to fulfil her basic needs, all the above criteria are filled for the consumer agent to be fully responsible to change her consumption habits.

More demanding pro-environmental actions include actions by agents to change the social structure itself. Excluded from the realm of individual responsibility by extreme atomist individualization theories, these actions are sometimes referred to as indirect or mediated (Kent 2009, 138; Kollmuss and Agyeman 2002). They range from voting and writing to government officials and companies managers, to actually taking more pro-environmental decisions related to management as a relatively powerful member of a group. They depend on the membership of a group (state, company, cultural or religious community, etc.), and on the political system or the internal organization of the group. Being a recognized member of a group usually gives some legitimacy to the agent to make some claims about structural decisions of the group. Moreover, membership also carries trust, which is essential for the agent's claims to be heard and given importance.

Along this line, several authors argues that individuals have a duty to create institutions that encourage environmentally friendly practices (Caney 2005, Lawford-Smith 2012, Tan 2015). For example, Cripps argues that "sets of individuals—as not-yet-organized collectivities or potential collectivities" can acquire duties to organize as necessary to "respond collectively to collective problems" (2013, 3). In addition, Lawford-Smith supports social-scaffolding for climate change related decision-making because the complexity of environmental problems caused by habits pushes us to create and support policies and institutions to reduce the "number of moral choice-points in a day or make them significantly easier to resolve" (2016, 75). Aligning myself with them, I agree that, *when possible*, collaborating with others to change a harmful practice is essential and even takes priority over direct individual isolated actions (without erasing the responsibility to take them).

But collaborating to take collective action is effortful and can be risky. Membership in a group is not static or granted. Individuals can more or less easily be excluded or deprived of their apparent rights for having a voice. Moreover, often, agents are entangled in multiple, partially overlapping memberships that might mutually conflict with each other and might be used to delegitimize their claims within one group. The dynamicity of membership is also a sign of their plasticity and propensity to changes. The more an agent has power within a group, the more she carries responsibility to orientate the group's structural actions towards sustainability, because of her higher degree of capacity-responsibility. "Power" here does not only refer to financial, educational, or material resources, but more importantly to trust and legitimacy from the perspective of other members. This obviously involves individual risks of exclusion and backlash, but as long as these risks do not impact the fulfilment of her basic needs, the agent still carries responsibility to take mediated pro-environmental actions within the group.

In democracies, citizens are supposed to have a relatively important mediated power to influence governmental actions, laws and regulations, through voting, participatory decision mechanisms and elections. The importance of this power varies greatly among different self-described democratic systems. Depending on the protection citizens are warranted by the enforcement of the legal system in their region, namely, depending on the risks it represents, citizens are responsible for drafting pro-environmental laws and policy briefs, for voting and supporting these, for electing pro-environment representatives, etc. (e.g. Parkin 2010's pragmatic account). That is, their political responsibility is not limited at the local level, but extend to the national level, and to the international level in the form of pressuring their diplomatic and governmental representatives to take pro-environmental stands in the realm of international agreements and laws (Droz 2019). Along this line, McGary argues that in democratic contexts, individuals are responsible for dissociating themselves from harmful practices, at the very least by publicly denouncing them and by refusing "to accept any enrichment that occurs as a result" (1991, 83). In democracies, citizens can be considered as responsible to protest against practices that are judged harmful, because the political system warrantees their rights to do so. When protesting does not involve important risks for the agent, it is then her responsibility, because harmful practices are reinforced by silent observation and compliance. If possible, the agent can also be expected to refrain from any association with groups engaging in actions that she judges harmful (May 1991). Obviously, this is not often possible, as we are born members of groups and being a member of a group or not is not only the agent's decision, but also the decision of members of the group and of members of other groups (e.g. sexism and racism) (Scheffler 1997).

Notably, even if the harmful effects of one's action are temporally and geographically distant from the agent, her causal responsibility is not reduced. This goes at the opposite of a common intuition about environmental problems that because harm is spatially and temporally distant from the agent, then her responsibility is less clear and urgent (Räthzel and Uzzell 2009). Nevertheless, when it comes to who is responsible to take what reparative actions, capacity and powers are the determining factors, more than causal responsibility for the harm (Walzer 1977, 297). As powers to take reparative actions are unevenly distributed, it is tempting for individuals with

fewer resources to delegate responsibility to the state or to seemingly more powerful individuals and organizations. Yet, because the environmental problems we are discussing here are emerging from accumulated effects, "none can be released from responsibility by the acts of others" (Vanderheiden 2011, 217). Individual responsibility to take reparative and adaptive actions regarding environmental problems is irrevocable, regardless of the seemingly insignificance of the changes that can be accomplished by an individual's actions.

Considering environmental individual responsibility as irrevocable also implies that it is not affected by beliefs regarding what others do. Lawford-Smith makes the individual obligations to engage in collective actions conditional upon beliefs to avoid that the agent "does a share that is futile or counterproductive" (2012, 466). Conditionality does apply to clear-cut cases in which it is crucial to assess which member of the group fulfilled her obligation regarding a specific collective duty (as in the examples Lawford-Smith discusses). But my account of individual environmental responsibility aims at covering the entire lifestyle choices and habits of a specific agent, not only her duty to take one specific action. Moreover, as we all contribute to environmental harm in some way or another, our environmental individual responsibility cannot be fulfilled by doing an isolated good deed, or by the good actions of others. Still, beliefs regarding what others do affect what kind of reparative actions the agent should take because, obviously, we would not want individuals to bother taking futile or counterproductive actions. Importantly, for many environmental issues, the foremost "reparative action" an individual should take is self-limitation and refraining from engaging into and supporting harmful practices. Self-limitation behavioural changes are an essential part of individual environmental responsibility and are totally immune to beliefs regarding what others do.

Lastly, agents holding social roles beneficiary of greater powers and resource are responsible to make greater efforts towards designing a more sustainable social structure and infrastructure. Importantly, environmental responsibility does not eclipse other responsibilities for social justice. On the contrary, social and environmental responsibilities support each other, as they all involve designing a less harmful social structure, and as environmental sustainability is a necessary condition for social stability and flourishing. Actually, social and environmental responsibilities tend to overlap when observed from a long-term perspective, as the most vulnerable to environmental harm are often poorer and socially marginalized populations.

Conditions Under Which Responsibility is Properly Ascribed

Now, not every agent cares enough to voluntarily invest her efforts and resources to take responsibility for environmental problems. If only voluntary, responsibility lacks the important dimension of dealing with perpetrators rejecting their responsibility and free-riding on the collective efforts. Some kind of enforcement of responsibility is crucial to avoid the reproduction of injustices internal to the group and weak and inefficient reparative actions because of the ill intentions of a few. Then appears the question of who can hold whom responsible under which conditions.

Because of the mediated component of responsibility, this question interestingly overlaps with the question of who should do what reparative action. Individual agents who have the power to do so are responsible to hold other agents responsible for their actions and omissions, as long as the latter are not only causally responsible but also responsible according to the three criteria of capacity, crucially, *as long as they are not in vulnerable situation where their basic needs are not fulfilled*. This last point cannot be emphasized enough. Indeed, it would be sadly ironical for more powerful agents to accuse vulnerable agents. Such echoes can be heard from comparably wealthy individuals and groups claiming that they will take actions when poorer people stop polluting.

Regarding legitimacy and trust, a consequentialist perspective is crucial. Indeed, a vehement accusation of responsibility for a particular harm might be welcomed with disdain and aggressivity, especially if the accuser is seen by the accused as a member of the dangerous otherness. Feeling threatened, accused individuals and groups might react by crystallizing their positions as antagonists instead of engaging in a dialogue about reparative actions. So, if ultimately anyone who might be affected by the harmful effects could be considered as a potential legitimate accuser, it is necessary to carefully consider the situation before making abrupt claims that may breach the dialogue and induce backlashes.

Moreover, when accusing an agent who is notably responsible for a particular environmental harm, it is important to acknowledge that one might not be aware of the details regarding the capacity of the accused. First, to what extent agents could think of alternative before engaging in an action causing harmful consequences is equivocal to assess by anyone other than the agent herself. The observer can only rely on what one can "fairly expect" of an agent situated in a particular cultural imaginary and holding a particular worldview (Fletcher 1996). To do so, the observer must listen to voices from similar socio-cultural backgrounds and holding similar beliefs like the accused. She then must assess the predictability of the harmful consequences and the availability of alternatives taking this particular standpoint in consideration. Second, the observer must assess what risks the accused would have been taking by doing comparatively better actions regarding environmental effects, especially what social and psychological retributory backlash she would have been exposing herself to. Third, the observer must make sure that the basic needs of the accused and of her family are fulfilled and would not have been negatively affected by taking the alternative desirable actions. If these conditions are met, namely that the agent is recognized to be responsible on grounds of her capacity to have done otherwise and on ground of her contribution to causing a harmful effect, and if the agent still has powers to take reparative actions, then she can be held responsible by other agents.

If despite reproach, public shaming and boycott, a powerful agent responsible for significant harm still resist from taking responsibility and engaging in reparative and adaptive practices, then to hold them responsible legally might be necessary. This presents several difficulties, starting with the high variety of the legal systems, and the fact that the large majority of them is severely ill-equipped to address environmental problems. Setting these aside, environmental problems caused by accumulated effects are also legally problematic insofar that the causal links can be dubious.

The ambiguity of the causal relation can be addressed in different ways. David Miller argues that in democracies, is it crucial for persons to be held responsible exclusively for their own actions and choices, and not for the one of others (2004, 245). Yet, he includes as choices displays of "cooperative practices" and enjoyment of benefits coming from the harmful practices of others. In the same vein, Christopher Kutz argues that individuals who cooperate with a harmful practice have "participatory intentions, that is, intentions to do their parts of some collective act", and therefore, that they can be considered complicit of a crime (2002, 563). In the legal context of the United States, he further suggests three possible defences, namely, to include all the surrounding circumstances in the re-description of the crime, to insist on the significance of the counterfactuals, and to transform assistance cases into encouragement cases (Kutz 2007, 297–298). These are only a few of the possible difficulties to include mediated responsibilities for environmental problems in law. It is to legal scholars of each particular legal system to further discuss these.

Conclusion

I argued for non-atomistic individual responsibility towards environmental problems caused by the accumulated effects of repeated actions by multiple individuals such as climate change. Considering as objects of responsibility ascriptions not only actions but also omissions, ways of life and habits, I suggested that the main criteria for determining the degree of causal responsibility of an individual agent is the relative distance separating her from the harmful effect, namely, the number of interventions by other individual agents that contributed to causation. Temporal and geographical distances between the action and the harmful effect do not, in any case, reduce individual causal responsibility. Then, this degree of causal responsibility must be balanced with the degree of capacity-responsibility, determined according to three criteria affecting the availability of alternatives to the agent: her state of knowledge, her easiness to change of behaviour, and her vulnerabilities and powers related to her basic needs.

Then, the more a member of a group has power, the more she carries responsibility to use them to improve the social structure and infrastructures relatively to sustainability and precaution. In democracies, this makes citizen responsible to protest any harmful practices, as long as it does not threaten their safety and basic needs. Within a group, withholders of legitimacy and trust are also responsible to hold others responsible, but only if the accused is recognized to be responsible causally, on grounds of her capacity to have acted otherwise, and if she still has powers to take reparative actions. Finally, it might be necessary to hold non-compliant individuals legally responsible for their harmful effects. To develop the legal tools to enforce responsibility towards environmental problems requires the expertise of the particular legal system. Here, I merely discussed individual moral responsibility for environmental problems caused by accumulated effects from an ethicist perspective, providing suggestions that seems to me to be flexible enough to be conceivable and convincing to individuals and scholars from different socio-cultural and legal backgrounds.

Acknowledgements Monbukagakusho (Japanese Government) Scholarship N.150559.

Funding Funding was provided by Ministry of Education, Culture, Sports, Science and Technology, Monbukagakusho (Japanese Government) Scholarship N.150559.

References

Attfield, R. (2009). Mediated responsibilities, global warming and the scope of ethics. *Journal of Social Philosophy, 40*(2), 225–236.

Bayart, J.-F. (1996). *L'illusion identitaire*. Paris: Librairie Arthème Fayard.

Caney, S. (2005). Cosmopolitan justice, responsibility, and global climate change. *Leiden Journal of International Law, 18*(4), 747–775.

Corlett, J. A. (2001). Collective moral responsibility. *Journal of Social Philosophy, 32,* 573–584.

Cripps, E. (2013). *Climate change and the moral agent, individual duties in and interdependent world*. Oxford: Oxford University Press.

Cullity, G. (2015). Acts, omissions, emissions. In Moss (Ed.), *Climate change and justice* (pp. 148–164). Cambridge: Cambridge University Press.

Droz, L. (2019). Transnational civil disobedience as a catalyst for sustainable democracy. In H. Takikawa (Ed.), *Rule of Law and Democracy – 12th Kobe Lecture IVR Congress Kyoto 2018*, ARSP, pp. 123–134.

Feinberg, J. (1970). *Doing and deserving, essays in the theory of responsibility*. Princeton: Princeton University Press.

Fischer, J., & Ravizza, M. (1998). *Responsibility and control, a theory of moral responsibility*. Cambridge: Cambridge University Press.

Fletcher, G. P. (1996). Blackwell companions to philosophy. Hoboken: Wiley-Blackwell

Fraser, N. (2008). Abnormal justice. *Critical Inquiry, 34*(3), 393–422.

Geertz, C. (1993). *The interpretation of cultures: selected essays*. London: Fontana Press.

Glazebrook, T. (2010). Myths of climate change: Deckchairs and development. In R. Irwin (Ed.), *Climate change and philosophy, transformational possibilities* (pp. 162–180). London: Continuum Studies in Philosophy.

Golding, M. P. (2005). Responsibility. In M. Golding & W. Edmundson (Eds.), *The blackwell guide to the philosophy of law and legal theory* (pp. 221–235). Hoboken: Blackwell Publishing.

Hart, H. L. A. (1961). *The concept of law*. Oxford: Oxford University Press.

Hart, H. L. A. (1968). *Punishment and responsibility, essays in the philosophy of law*. Oxford: Oxford University Press.

Haslanger, S. (2015). Distinguished lecture: Social structure, narrative and explanation. *Canadian Journal of Philosophy, 45*(1), 1–15.

Haslanger, S. (2018). What is a social practice. *The Royale Institute of Philosophy Supplement, 82,* 231–247.

Hiller, A. (2011). Climate change and individual responsibility. *The Monist, 94*(3), 349–368.

Jax, K., et al. (2013). Ecosystem services and ethics. *Ecological Economics, 93,* 260–268.

Jonas, H. (1979). *Das prinzip verantwortung: Versuch einer ethik für die technologische zivilisation*. Frankfurt am Main: Insel Verlag.

Kent, J. (2009). Individualized responsibility and climate change: "if climate protection becomes everyone's responsibility, does it end up being no-one's?". *Cosmopolitan Civil Societies Journal, 1*(3), 132–149.

Kollmuss, A., & Agyeman, J. (2002). Mind the gap: Why do people act environmentally and what are the barriers to pro-environmental behavior? *Environmental Education Research, 8*(3), 239–260.

Kutz, C. (2002). Responsibility. In J. L. Coleman, K. E. Himma, & S. J. Shapiro (Eds.), *Oxford handbook of jurisprudence and philosophy of law* (pp. 548–587), Oxford University Press.

Kutz, C. (2007). Causeless complicity. *Criminal Law and Philosophy, 1,* 289–305.

Larrère, C. (2014). Vulnérabilité et responsabilité: Un autre Jonas? *Alter, 22,* 181–193.

Lawford-Smith, H. (2012). The feasibility of collectives' actions. *Australasian Journal of Philosophy, 90*(3), 453–467.

Lawford-Smith, H. (2016). Difference-making and individuals' climate-related obligations. In H. Clare & D. Roser (Eds.), *Climate justice in a non-ideal world* (pp. 64–82). Oxford: Oxford University Press.
Maniates, M. F. (2001). Individualization: Plant a tree, buy a bike, save the world? *Global Environmental Politics, 1,* 2.
May, L. (1991). Metaphysical guilt and moral taint. In L. May & S. Hoffman (Eds.), *Collective responsibility: Five decades of debate in theoretical and applied ethics* (pp. 239–254). Savage: Rowman & Littlefield.
McGary, H. (1991). Morality and collective liability. In L. May & S. Hoffman (Eds.), *Collective responsibility: Five decades of debate in theoretical and applied ethics* (pp. 77–87). Savage: Rowman & Littlefield.
Miller, D. (2004). Holding nations responsible. *Ethics, 114,* 240–268.
Morgan-Knapp, C., & Goodman, C. (2015). Consequentialism, climate harm and individual obligations. *Ethic Theory Moral Practice, 18,* 177–190.
Parfit, D. (1984). *Reasons and persons*. Oxford: Oxford University Press.
Parkin, S. (2010). *The positive deviant*. London: Earthscan.
Räthzel, N., & Uzzell, D. (2009). Changing relations in global environmental change. *Global Environmental Change, 19,* 326–335.
Reiff, M. (2008). Terrorism, retribution, and collective responsibility. *Social Theory and Practice, 28*(3), 442–455.
Samuel, S. (1997). Relationships and responsibilities. *Philosophy & Public Affairs, 26*(3), 189–209.
Schmidt, J. J., Brown, P. G., & Orr, C. J. (2016). Ethics in the anthropocene: A research agenda. *The Anthropocene Review, 3*(3), 188–200.
Shue, H. (1995). Avoiding necessity: Global warming, international fairness, and alternative energy. In I. Shapiro & W. DeCew (Eds.), *Theory and practice, NOMOS XXXVII* (pp. 239–264). New York: NYU Press.
Shue, H. (1999). Global environment and international inequality. *International Affairs, 75*(3), 531–545.
Smiley, M. (2017). Collective responsibility. In E. N. Zalta (Ed.), *The Stanford encyclopedia of philosophy*. Stanford: The Metaphysics Research Lab.
Stone, C. D. (2004). Common but differentiated responsibilities in international law. *The American Journal of International Law, 98,* 276–301.
Strawson, P. (1962). Freedom and resentment. In Gary, W. (Ed.) *Proceedings of the British academy* (vol. 48, pp. 1–25). Oxford: Oxford University Press.
Tan, K.-C. (2015). Individual duties of climate justice under non-ideal conditions. In Moss (Ed.), *Climate change and justice* (pp. 129–147). Cambridge: Cambridge University Press.
Vanderheiden, S. (2011). Climate change and collective responsibility. In N. A. Vincent, et al. (Eds.), *Moral responsibility library of ethics and applied philosophy* (Vol. 27, pp. 201–217). Dordrecht: Springer.
Veyne, P. (1971). *Comment on écrit l'histoire suivi de Foucault révolutionne l'histoire*. Paris: Point Seuil « Histoire » .
Virvidakis, S. (2014). Moral minimalism in the political realm. In Julien, D., Fassio, D., & Meylan, A. (Eds.), *Liberamicorum*. Geneva: University of Geneva.
Walzer, M. (1977). *Just and unjust wars*. New York: Basic Books.
Young, I. M. (2010). *Responsibility for justice*. Oxford: Oxford University Press.