

*Anton Leist*

## Why Participate in Pro-Environmental Action? Individual Responsibility in Unstructured Collectives

*Abstract:* The degradation of natural resources in the environment is, technically speaking, a form of depleting a public good. Public goods are notorious for free-riding among egoists, but the marginality of individual contributions provides no less an obstacle, both to moral duty and motivation. This article discusses the problems of minimized and missing causal involvement on the empirical side and, in the applicability of classical moral arguments, on the ethical side. It suggests that individual responsibility is derived on the basis of implicit advantage-taking from participation in collective action.

It is true. Most of us are realists concerning environmental matters which involve goods like air or water quality, fish stocks, biodiversity, biotopes and landscapes, or (last, but certainly not least) avoidance of climate change. We are realists in knowing that economic incentives have to be involved if action to the benefit of such public goods is to happen. Only old-fashioned Green politicians enlist supporters for environmental aims by beleaguering their consciences, most politicians smartly refer to the economic advantages of Green technology. Even if economic motives are indispensable, though, we also know that they are not sufficient to secure environmental ends. Quite a share of ‘Green technology’ is not expedient for environmental aims at all.<sup>1</sup> In many cases, aiming for profit is aiming for individual goals, whereas basic environmental aims are public ones. As is well known, economic incentives do not promote a just distribution, here of environmental bads and goods, but regularly create injustice. More dramatically, confronted with public goods, economic motives lead to the ‘tragedy of the commons’, a total collapse of a not insignificant part of the natural conditions for production and consumption (Hardin 1968; 1998; Ostrom et al. 1999; Gardiner 2001; 2011, esp. 443ff.).

Thus, there *is* need for *moral* motives and judgement, even if only to correct and complement environmental policy. But, this said, we are struck with perhaps even deeper problems if the most representative environmental goods are public goods. These goods are well-known for being prone to the race to the bottom just

---

<sup>1</sup> What readily comes to mind is high-powered hybrid or extremely sporty Tesla E-cars. For a more general diagnosis see Akenji 2014.

mentioned if consumers are *self-interested*. As a manifestation of the prisoner's dilemma, today this is common lore.<sup>2</sup> But, still more remarkably, there is also a similar problematic situation on the side of *moral motivation*—and this seems to be more dramatic since the tragedy-of-commons story is normally told in order to point to a possible solution through moral behaviour! If moral behaviour is also helpless, falling back on the Hobbesian dictator seems to be the only, fatal end.

Of course, the problem for morally motivated agents with public goods is not the same as for the egoistically motivated. It is the 'huge numbers', 'irrelevance' or—in the terminology used in this article—'marginality' problem. Given the large number of consumers in a public good, individual behaviour seems to be marginal concerning the change in the good, even if providing costs for the individual agent. It seems marginal not only concerning the good, but also regarding the collective behaviour—the activities of all other consumers in the public good. Effects of *collective* behaviour in sum are bad, but all *individual* activities seem miniscule and insignificant. In the most radical view on the case, individual acts are not only miniscule, but causally non-existent or neutral: there is nothing about these goods we can change individually at all.

If one puts this down in terms of moral responsibility, the 'marginality problem' turns into the problem of whom to stick the responsibility badge onto. A 'set' of consumers of the public goods is using these goods up, but a set is not an agent and cannot clearly be the object of moral responsibility. At the other end of the continuum, the single agent is not consuming literally, and if this is a precondition for being morally responsible, this agent must not be made to bear the badge either. The single agent is not consuming literally, because public goods are not handed out in individual allocations, different agents are sharing in the public good quite differently and hardly anybody knows to which extent he is exploiting the good effectively.

The conclusion is that environmental public goods are consumed, but nobody seems responsible. If we think, plausibly, of moral responsibility as a precondition for all potential ways of arriving at a moral judgment, or to spur moral motivation concerning these goods, the conclusion is disastrous.<sup>3</sup>

Following the argument thus far, it becomes clear that there are several elements (three overall) involved in the calamity. Firstly, environmental goods are mostly public goods which invite, even if they do not compel, being used in a way which is aggregately collective and basically individual. This makes the problem at hand an *aggregative action problem*. For illustration throughout, I will restrict myself to air-quality and pollution on the one hand, and individual contribution to pollution on the other.<sup>4</sup> Secondly, there is the *causality*

<sup>2</sup> For illustrative introduction, see Gardiner 2011, ch. 4.

<sup>3</sup> One can doubt this *basic* role of responsibility for *all* moral judgements. In *section 5* below it will be shown that justice, something *prima facie* rather *different* to individual responsibility, is converging with it in unstructured collectives. The same should be the case in structured collectives. An explicit argument on this convergence will not be made here, however.

<sup>4</sup> There is obviously a great difference between inner-city pollution and contribution to climate change, the latter concerning a *global* public good. But throughout I take a local public good to be serious enough to illustrate and motivate the aggregative action problem.

question involved. Is it really true that we individually do not have a causal impact in these situations, or what would be the criteria determining how to decide this? Thirdly, even if it seems plausible that modern *moral theories* are strongly connected with individual agency, what are their resources to grapple with collective responsibility if this would be the one place to start? These three elements—primarily conceptual ones—are at the root of our problem. We have to see more clearly what is involved in ‘collective action’, ‘causal contributions’ to public goods, and how to deal ‘ethically’ with individual action in the context of collective behaviour.

The roadmap of this paper is as follows. *First*, to bring aggregative action into closer view it is helpful to remind ourselves of the well-known distinction between structured collectives and unstructured collectives or aggregates. Do environmental goods indeed correspond to pure aggregates? *Second*, what problems are involved if individual shares in public goods are marginal? Is causality dropping out totally or, if not, how is the minimal individual involvement evaluated ethically? Is it turning moral responsibility into similar minimal relevance? *Third*, starting an inquiry on moral theories, I will draw on several ethical arguments in order to point out the difficulty with individual action towards public goods for non-consequentialist ethical approaches. *Fourth*, I will comment on act-consequentialism and a recent proposal by Kagan (2011) to solve its well-known problems with ‘moral mathematics’ (Parfit 1984). *Fifth*, following up on remarks by Kutz (2000) on ‘systemic’ and ‘holistic obligations’, I will suggest a principle of individual responsibility which takes responsibility as growing from individually taking advantage in widespread collective practices.<sup>5</sup> The basic idea is: If we regularly draw advantages from practices, we have to, in all fairness, not only participate in bearing the costs, but also assume responsibility for the consequences.

## 1. Public Goods and Aggregates

If ‘collectives’ is understood as all sorts of assemblages of individuals, one usual distinction is the one between *structured* collectives and *aggregative* collectives, abbreviated as ‘*aggregates*’. Accumulations of individual agents are ‘structured’ if the individuals making them do have a common aim. A common aim is an aim which in most cases cannot be achieved individually. Minimally concerning structure, a structured collective could be a crowd with individuals holding up protest placards, maximally a flight crew with a highly trained internal division of complementary tasks. A typical structured collective amply discussed in the literature is the capitalist company as one form of corporation, which is structured internally in a sophisticated way, both normatively and functionally.<sup>6</sup> This

<sup>5</sup> Despite this introduction through the collective level it is only *individual* responsibility I am after. I will keep silent on whether there is something like ‘collective responsibility’, understood normatively,—something one better should if one wants to remain an ontological individualist: see Sziget 2014.

<sup>6</sup> See work on corporations by French 1984; 1995; May 1987; Pettit 2007. ‘Corporations’ include companies, parties, churches, and universities. From an interest in the environment,

is what aggregates are *not*. They do not have a common aim or internal division of tasks.

How are we to characterize aggregates positively? They are *social* collections of individual agents due to a certain degree of coordination of individual behaviour. Coordination is what makes individuals following individual aims be social. ‘Coordination’ is meant here in the minimal sense of consciously or sub-consciously taking note of others’ behaviour in order to achieve individual ends successfully.<sup>7</sup> In his famous introduction of the concept of ‘social action’, Weber mentions the case of individual cyclists avoiding collision (Weber 1978, 23); in his not less famous analysis of ‘coordination games’ Lewis suggested calling back when interrupted on the phone (Lewis 1969). Skiers on crowded slopes, single dancers in stuffed discos, students in an auditorium listening to a lecture depict similar situations. Individuals as members of aggregates know of each other and they take note of others to the extent necessary to follow their individual aims successfully.

If we bring environmental problems into closer contact with individual and aggregative action, it is not fully clear how they connect. First of all, environmental goods do not fit absolutely into the classical frame of ‘public goods’. *Non-rivalry* as one condition for public goods does work in the largest sense of environmental goods, but not in local applications. If a certain degree of contamination in a river is accepted for firm A, a second firm B will be constrained to do likewise. Visits to a national park may be non-rivalrous up to a certain amount of visitors, but not beyond. And obviously, Edelweiss had to be put under law in order to prevent its extinction. If subdivided, biodiversity is not a public good. Nevertheless, the contamination of air and water, biodiversity globally, open landscapes and use of the atmosphere are cases which come close enough to the defining characteristics of public goods, *non-excludability* and *non-rivalry*, and correspondingly share the problematic situation of free-riding on these goods.

What we can conclude from this is that the more global a perspective one can take on an environmental problem, the more fitting the pure concept of public goods becomes. This, unfortunately, is the case with climate change. The non-existence of a common normative framework or, in other words, a structured collective lets all consumers of the public good be related to each other on socially extremely thin terms: terms, at best, of knowledge and vaguely common interests. We *know* that we all share in the consumption and depletion of a good, but are not endangered enough to build up an effective organization to regulate this.<sup>8</sup>

---

companies might be most important in this list.—Qualms about the problem of moral responsibility by aggregates were first stirred by Held 1970.

<sup>7</sup> More elaborate forms of coordination need institutions and thereby structured collectives to impose norms on individual members. Social public goods like streets, bridges or radio can be provided only by taxes collected by governmental institutions and ordered by law.

<sup>8</sup> The IPCC is an organization at work in making the public good of the atmospheric CO<sub>2</sub> sink known to us, as do the WHO Europe, the European Environmental Agency and the European Commission for the air quality in Europe. All of them are active for documentation only.

Coming back to ‘aggregates’: is the concept acceptable as a (however thin) social action correspondent to public goods? Normally, the logic of public goods as depicted in the economics literature (Hardin 2003) combines purely individual benefits from these goods, and not with aggregates. So, should we give up any discussion of aggregates or collectives? No, because we are discussing public goods not in the usual context of economics, but *morally*. And morality presupposes an awareness of a human community, that is, a sense of the social preconditions and consequences of individual action. Morality is a system of norms regulating individual behaviour in regard to *others*. Individual behaviour in aggregates—for example the aggregate of polluters—provides this (however thin) precondition for morality.

To have a concept handy for the later discussion of moral responsibility, let me define an ‘*informed aggregate*’ as a set of agents aware of the additive consequences of their actions. This seems to be given, within the bounds of current scientific knowledge, to some degree today with most individual consumers of public goods.

## 2. Moral Responsibility and Causality

In order to start an inquiry about the causal aspects of actions and their consequences, we first have to distinguish between consequences of actions in the form of material (physical, including chemical) *events or states*, and their categorisation as *benefits and harms*. There exist empirical *laws* governing the relation between actions (as events) and material states, and *principles* of evaluations to interpret material states as benefits or harms.<sup>9</sup>

As far as the law-like relation goes, what seems important is the distinction between a *gradual or scalar* and a *non-gradual or non-scalar* relationship between actions and their results. We could distinguish further between a purely physical or a human-related relationship, having either a gradual or a non-gradual structure. Physically, there could be a gradual build-up of the determination of an event, for example a stroke of lightning, with the outcome being non-gradual. Here we are most interested in humanly defined *thresholds*.

Is this already to be found on the evaluation side? In a sense yes, but a threshold for health (for example) is not evaluative in a moral sense. A relation between many actions and a physical event will be non-gradual, if considered with the aid of a threshold, for example the threshold of causing cancer. Health/disease and life/death are the two most important values/disvalues to think of. These are ‘non-moral’ values in the sense of being the *object* of moral norms, but not themselves moral requirements. Benefits and burdens are neutral as to whose benefits and burdens they are, and whether thus morally right or wrong.

---

<sup>9</sup> Of course, if we were compatibilists, causality would also reach up to the second level, that of benefits/harms and evaluations. As causality is primarily a common sense notion connected with actions, it cannot be constrained to the merely physical level, even if laws are not easily come by for actions. See Hitchcock 2007 for an overview on causal concepts.

Will there be a narrowly identifiable *relation* between physical states and values? For example, will there be a narrowly identifiable relation between a certain amount of pollution in a given space/time and a definite amount of cancer cases among the population living in this space/time? Certainly not, as there are a number of further conditions influencing whether an individual reacts to pollution with cancer. Pollution in a specific space/time area will make it more or less *probable* whether cancer in the population develops. This kind of relation is often depicted using the term *risk*. Physical states of a certain kind impose risks on the health and life of a population. Risk to health and life is, again, an evaluative concept. Risk to health is not as bad as a developed disease, but, depending on its extent, it is bad enough.<sup>10</sup>

Now to *causality*. If we think of the effects many individuals have concerning a public good, pinning this down in terms of causality could look like this:

*Joint-determination*: Agents  $A1, A2 \dots An$  produce partial effects  $a1, a2 \dots an$  which are distinct, each one necessary and together sufficient for the aggregative effect E.

Illustrated in the case of pollution: all individual polluters contribute to the aggregative level of pollution individually, and all of their contributions are *necessary* for the aggregative level.

Joint determination is very plausible in cooperative endeavours among a smaller number of agents, as for example a flight crew or a team of bank robbers. But it is less adequate if the number of contributors is large or extremely large. Three phenomena seem to conflict with joint determination:

- *Fuzziness*: States within the causality relations are materially quantified and the quantities are fuzzy. Due to additional conditions beyond control (or simpler: due to random variations), different quantities in causing states produce different quantities in actual states. Example: Same amount of pollution causes different number of cancer deaths each year.
- *Overdetermination*: Enough individual contributors are present to achieve a threshold level in overall non-gradual development with good or bad effects. Example: Enough polluters pollute to achieve a threshold of cancer-causing pollution.
- *Marginality*: A huge number of consumers consume the services of a public good and, due to extremely unequal proportions between the public

---

<sup>10</sup> In principle the following discussion on causality should be understood, therefore, in terms of probabilities and, so far as human evaluation comes into play, in terms of risk and risk-taking. If I forego deeper reflection on probabilities and risk this is due to the marginality and aggregative action problem as an *ethical* and not an *epistemic* problem. It seems to me that the moral and the knowledge-side of things can be disentangled here fully. Therefore, the 'precautionary' principle also is not of immediate relevance to the dispute here. Whichever precaution may be defensible, it will be defensible in collective as well as in individual situations of action—approving thereby the epistemic problem to be neutral to the individual/aggregately collective distinction. For typical epistemic contexts which ask for the precautionary principle see Kriebel et al. 2001.

good quantified and the number of consumers, individual consumption is marginal. Marginality means zero or near zero.

As far as I can see, fuzziness and overdetermination are not too serious problems for joint determination, whereas marginality is.

Here, first, to *fuzziness*. This points to random processes involved in one's causal impacts on the environment. But conditions of arbitrariness are given in all causal relations, as well as in all actions if seen as causes for effects. From this one would not conclude that there is no moral responsibility for actions. Or more sharply, one would not conclude that arbitrariness in causal relations severely diminishes the phenomenon of moral responsibility.<sup>11</sup> In cases with foreseeable random effects one makes use of the term *risk*. Consuming public goods individually will contribute to different levels of risk—'risk' here to be specified further in terms of costs of different kinds.

Now to *overdetermination*. Is there something like this in environmental goods? I take it that an uncontroversial answer here is 'yes', insofar as at least one 'basic' threshold is involved. A basic threshold would be the one from which increasing health-impairing effects can be detected. There may be further thresholds beyond this basic one, defined by different conditions and different forms of disease. Simplifying, however, I assume that the further deterioration of a public good beyond the basic threshold of health impairment is *gradual*.

But there are two sorts of thresholds, a purely physical one (such as the triggering of an avalanche) and a humanly defined one (such as health impairments). What we are interested in is the latter. For an actual action of ours which consumes a health-related public good, it is crucial whether or not there is overdetermination in crossing the threshold *or* production beyond the threshold. If the deterioration of the good is already well beyond the threshold and further deterioration is gradual, our contribution becomes relevant—or 'necessary', causally spoken. If we are still below the threshold and there *is* overdetermination for crossing it, i.e. more are contributing than necessary to advance beyond the threshold, our own contribution is irrelevant and not necessary.

And just this latter case is problematic, both for joint determination and moral responsibility. Then the common result is being produced without any single contribution to be necessary, and if moral responsibility is read in a causal way, no one contributing at this space/time would be morally responsible for reaching the threshold. One further problem coming up here is the more explicit *definition* of a threshold. Regarding pollution, one could think that a threshold for health-impairment is to be defined by a physical state description referring to an amount of contamination which causes the first symptoms of health impairments. Above this level, say, there will be a gradual increase of further causing impairments. If this is the adequate description, individual polluting contributions have to be judged from the actual state in one's environment, on basis of knowledge one can or could have of it. One has to know that one's

---

<sup>11</sup> For a defence of moral responsibility against 'moral luck' objections, see Moore 2009, 22–24.

contribution is or is not causally relevant, and this seems to be something which can be known.

Things become more difficult, if one formulates the threshold not in a *quantitative* physical sense but *qualitatively* by referring to the foreseeable (or retrospectively identified) harm. The problem is quite clear in an example like the one discussed by Kutz, the ‘bombing of Dresden’ (Kutz 2000, ch. 4). If the ‘bombing of Dresden’ happens whether or not I am on board of a bomber plane, my joining the collective action neither is necessary nor causally responsible for the bombing of Dresden; and I, it seems, even if on board of a plane am absolved from all responsibility. Similarly, if we focus, now concerning pollution, on a small-scaled description like the ‘impairing the health of citizen X’, it becomes unclear whether my driving a car is necessary for X’s health impairment.

How to define the threshold within collective achievements is immediately relevant for when individual contributions are marginal or not. So let us focus on the third problem for morally responsible joint action, *marginality*. This problem is being discussed on two different levels of seriousness. In both cases collective action causes a public bad, resulting in many individual harms. Whereas in one sort of cases, individual contributions *are causally* existent but so minimal, that they seem to invalidate ‘normal’ moral responsibility, in another sort of cases causal contribution seems to *drop out* fully, cancelling thereby a standard condition for moral responsibility. Let us distinguish these two sorts as ‘too minimal’ and ‘non-causal’ cases. The non-causal cases can be ones of causal overdetermination, but more typical examples in criminal law are ones where the agent wanted to contribute to (collective) harm, but other agents preempted his action or external circumstances suppressed effective consequences to flow from his action (see Kutz 2007, 295–9). These two sorts of cases are different in seriousness, as the non-causal cases ask for dramatic repair: either loosening the link between moral responsibility and causality, or for suggesting a non-standard analysis of causality, given that counterfactuality is the standard one (Lewis 1970; 2000; Moore 2009, chs. 13, 18–19; Kutz 2000; 2007; Hitchcock 2010; Petersson 2013). All of this on the presumption that moral responsibility has to be saved.

If we restrict ourselves to analysing local pollution, are the more difficult cases asking for a non-causal interpretation dropping away? It seems easy to answer ‘yes’, as *my* non-contribution *generalized* to all polluters would end collective pollution. But it is my polluting contribution *on the back of* all the others’ pollution we have to focus on, and *this* constellation generalized. Here again the way how the causal result is described is relevant. Physically, it seems clear that my polluting has some effect on the environment, however small if compared with the aggregated one. It may not contribute to the harming of someone specific, either because the threshold is not yet crossed, physical circumstances counteract, or there is overdetermination. All of this, however, can be—here for the case of pollution—answered by describing the consequences of my polluting as raising the *risk* for harm to others. I am risking to some degree the health of others, even if I do not harm effectively on of them specifically. This, at least, is very plausibly the case in pollution.



It might seem that there could be physical thresholds built into the causal relationships between polluting influences and pollution states in specific space/time-continua. Say, I am polluting the air on my balcony by smoking a cigarette—or exhaling smoke once, or exhaling once even without smoking. This could have, I presume, a ‘pollution effect’ which remains below the physical threshold of calling the air on my balcony to be ‘polluted’. (In any case a contribution thereby to the ‘pollution-state’ of my city will be non-existent, if not by smoking so certainly by breathing.) Now, are we sure that regular individual contribution to pollution (heating, driving, etc.) is different to this case? Even if causing *some* different state in the surrounding air nearby, does it exceed the physical threshold of measurable changes in the air, however miniscule? Without jumping to speculative metaphysics I do not have an answer here and again will help myself with probability, i.e. the increased risk.<sup>12</sup> If we accept that even smoking a cigarette is a causal form of pollution, I am contributing to increasing the risk of health impairments through pollution, however minimal.

Not least through this example the remaining problem becomes obvious. Even if we do not have to find a fully non-standard solution as in the *non-causal* sort of cases, the contrast between the minimal individual involvement and the collective output is still striking. If my regular contribution to polluting were comparable to one-time smoking—and it well could be even if I happily drove Sinnott-Armstrong’s (2005) ‘gas-guzzling car’—, how to evaluate such responsibility morally? The problem is striking if we think of the still more dramatic contrast in case of *global* public goods (climate change), but it seems already impressive enough in everyday pollution.

Before trying to answer in *section 5*, let me run through the classical ethical theories, non-consequentialist ones in *section 3* and consequentialism in *section 4*. This is only to deepen the problem and to make clear, that we face an aspect in the collective-individual-relationship not having been on the human agenda so far. Otherwise, an answer within standard morality should be ready at hand.

### 3. Several Ethical Replies

As a foil even for non-consequentialist ethical responses a rough idea of ‘consequentialism’ is helpful. Therefore, let us start with this:

(C) Actions should be judged morally according to whether they are having the foreseeable *best consequences* among the alternatives possible.<sup>13</sup>

<sup>12</sup> Some of human activities, like breathing, may remain below the threshold of even increasing the risk. But these are not the typical ones to be commented morally.

<sup>13</sup> Consequentialism can be defined as being mindful of everything “that could make outcomes better or worse” (Parfit 1984, 25), including motives, beliefs, emotions, etc. As these are elements or side-effect of actions, it seems consistent to start with actions themselves.— Note that the literature is not fully consistent in terminology. Some take maximization to be necessary only for ‘utilitarianism’ and use ‘consequentialism’ without it. Kagan’s use of ‘consequentialism’ (followed here) collapses with ‘utilitarianism’ as used by others. See Kagan 1998, 219.

How could the marginality problem in public goods contributions be answered? Could there be, *first*, a ‘backtracking’ way of arriving at individual responsibility which starts from collective output? Collective responsibility in the *causal* sense here is not on doubt. There is nothing fishy about the causal relation in the *collective* case if we are not too pedantic concerning the metaphysical existence of a set. And we seem to know the aggregated effects.

There seem to be two interpretations to this idea. First, deriving individual responsibility from the collective output might need something like ‘collective responsibility’, itself *not based* on individual responsibility. Individuals then would be ‘sub-responsible’ on basis of the collective responsibility given. We think somehow like this in the context of structured collectives, like a company. But even then it is problematic to suggest collective responsibility to be given ahead of, and beyond, individual responsibility. Rather, remaining within normative and ontological individualism, structured collectives put their individual roles and responsibilities together from the basis of individual responsibilities, defined and controlled by the normative structure of the collective. An excellent way to make the same point is to claim that collective responsibility depends on individual responsibility, since it has “ultimately to operate through the motivations and normative commitments of individual actors” (Kutz 2000, 192). Among several reasons to avoid trans-individual collective responsibility is the one of its conflict with normal causality, active on the individual level (Szigeti 2014).

Secondly, could one do *without* presupposing non-individualist-based collective responsibility? I indeed suggest something like this in the end. What is missing, so far, is the normative point in this way of deriving individual moral responsibility. If an assemblage of people is causing *some* harm, how should this be transferred into individual responsibility, if causality does not help here and we all are involved somewhat differently? A normative basis is needed for this, if collective responsibility cannot be presupposed.

*Second*, there are the two classical ethical methods to think of, generalization and rule-consequentialism. Both have been extensively commented on, regularly with a negative result.<sup>14</sup> Generalization, or the question, ‘what if everyone did that?’, if aiming at consequences, come down to the same thing.<sup>15</sup> Now, if my contribution were marginal in the sense of nearly zero, with a very large collective, the regular counter-argument is the following: if there *is* or *is not* a critical amount of pollution and my own contribution is marginal, I myself cannot make a difference either way! In terms of consequences my contribution is not changing anything in the world—why then follow the rule (standing for the collective output)?

---

<sup>14</sup> ‘Rule-consequentialism’ complicates *C* by asking for the best consequences of rule-following, and applies the according rule to single actions. See the dispute by, for example, Sinnott-Armstrong 2005 and Sandberg 2011. Kagan 2011, 112, accepts that these two ethical views would work, but rejects them because of their conflict with act-utilitarianism (C).

<sup>15</sup> For the non-consequentialist Kantian variant as a *contradiction in the will*-test, see Kutz 2000, 132–5. This variant drops out for good, leaving only consequentialism on the scene.

Does this criticism presuppose act-consequentialism? Act-consequentialism (C) includes a maximization principle: judge your potential act according to what would have *the best* consequences! Criticism of generalization/rule-consequentialism only asks for *some* consequence as a necessary condition. Or to put it differently: this criticism is critical towards the deontic character of a rule which results from ‘*intrinsic*’ value—value without *any* relation to something empirical, wants or needs and empirical changes in the real world relevant to them. If you are (like me) an intrinsic value-sceptic you will accept this criticism of generalization; not so if you think intrinsic value to make sense. It is impossible here to argue further for the value-sceptic position.<sup>16</sup>

*Third*, some think that virtue-ethics solves the problem of marginality. This is a large topic and I restrict my comment to an argument for ‘Green virtues’ by Jamieson.<sup>17</sup> It is a complex question, to begin with, which virtues would help with public goods. The (mostly economic or economics-inspired) literature on public goods often simply talks of ‘cooperativeness’, something (noted by Jamieson) too general to promote the virtues appropriate for environmental conflicts. For these Jamieson suggests ‘humility’ (towards nature), ‘temperance’ (reducing consumption) and ‘mindfulness’ (awareness of indirect and distant side-effects) as the most basic Green virtues (Jamieson 2007, 181–2). These attitudes are certainly also propagated by present-day Green critics of ‘Western’ lifestyles. What we need to know is, however, why these attitudes answer the marginality problem.

What does Jamieson say in favour of Green virtues in order to have them meet the marginality problem? His argument starts from diagnosing a general ‘calculative attitude’ as endangering our attitude towards the environment. And he thinks that because of being wedded to maximizing consequences, utilitarianism is burdened by this destructive calculative attitude. Then he makes a conclusion in the opposite direction and claims that, to free ourselves from the calculative attitude, we have to grasp the opposite, non-calculative attitudes. Only in this way could we be successful in reaching what utilitarians aim at, but cannot achieve, the best state overall.

This argument is unsatisfactory on two counts. First, the problem of marginality is not a problem of calculative attitude or of vices narrowly connected with act-utilitarianism (C). It is a much more general problem, one for all intrinsic value sceptics. So, even if his argument would convince act-utilitarians it would not work for others. Second, following up on this, in order to answer the marginality problem, what Jamieson needs to show is that the Green virtues

---

<sup>16</sup> But see similarly Kutz 2000, 193f. This metaphysical divide is the crucial one, neglected by Sinnott-Armstrong and Sandberg. Both (Sinnott-Armstrong 2005, 307; Sandberg 2011, 238) criticize generalization by help of specific applications of the test, like the question whether to refrain from having children. If the criterion is the overall effect of nobody having children, something obviously serious, this seems a reason for any one not to have children. But, by arguing via specific analogues like procreating one has to provide a reason for the comparison. And here is an important difference: enough real people *do have* children, which exonerates my not having children. The same would have been the case with pollution a hundred years ago, but now enough real people *do not* forgo polluting and *thereby* make individual pollution a moral problem.

<sup>17</sup> Jamieson 2007. See also criticism by Sandberg 2011, 245–7, and Wündisch 2014.

are *categorically* binding ones under *any* circumstances. I have to forego driving a car *whatever* the practical situation is. If I were allowed to use a car in the special case of an emergency, this would be a relapse into ‘calculation’. If I am allowed to calculate in one situation, why not in many others too?

This highlights, I think, the limits of an argument for Green virtues. Green virtues are welcome if implemented as ways of strengthening lifestyles answering the negative effects of consumerism on the collective level. But, unless they are combined with absolute prohibitions, they do not answer the marginality problem. Traditional (Aristotelian) virtue-ethics, to remind us, is of course anything but an absolute doctrine. *Phronesis* is just the capacity to find out what it is situationally adequate to do. Benefits and harms—that is: consequences—of course play a necessary role in virtue ethics, even if not in a narrow calculatory way as in simple (one-level) act-utilitarianism. Without the consideration of consequences, *phronesis* would have very much less to consider. Many conflicts between alternative acts can only be helped further by incorporating consequences. Green virtues, too, are afflicted with the marginality problem, rather than helping with it.<sup>18</sup>

#### 4. Consequentialism and Marginal Contribution

To make the profile of a consequentialist moral judgement more visible, let me define a ‘qualitative consequentialist’ principle of judgment like this:

(Cq) A single action (or a series of acts) is morally good or bad (gradually) according to the (gradual) extent of good and/or bad consequences it has.

Here, consequences are not only a necessary condition for an act to be good or bad, but are a qualitative measure of the *degree* of moral goodness or badness. ‘*Qualitative*’ here contrasts with ‘quantitative’. Quantitative measures (including units of measurement and a zero-point) are inapplicable to human behaviour, whereas qualitative ones—the ‘better than’ or ‘worse than’ of everyday language—are *unavoidable*. *Ceteris paribus* it seems unavoidably ‘better’ to contribute 100 units to the Red Cross than 50. And consequentialists need not have sleepless nights about the limits of this method: let us qualitatively judge wherever it *is* possible! Quite often it is.<sup>19</sup>

Note further that *Cq* focuses on the *total* expected utility, negative *and* positive consequences together. Could this, applied to public goods, lead to an overall positive balance? Again I restrict myself here to pollution. To a high percentage, pollution arises from industry, traffic (land, sea) and domestic heating and lighting. All three sources produce positive utility. On the other hand,

---

<sup>18</sup> In fairness to Jamieson it needs to be mentioned that he is not specifically in search for an answer to the marginality problem, but is pleading for an environmentally adequate moral theory in general. The problem is mentioned as crucial, however, in his discussion of utilitarianism: Jamieson 2007, 167.

<sup>19</sup> Even if, at first, ‘qualitative’ in contrast to ‘quantitative’ here refers to *moral* judgements, to the extent that consequentialists parallel value descriptions and *moral* value descriptions, the distinction collapses with the one mentioned so far.

they are causal for cancer. This is simplifying since pollution also causes chronic illnesses which need not lead to death. Abstracting from these and focusing on the total number of deaths, we could plausibly ask whether a turning point to overall negative consequences is not reached if a certain number is documented. And indeed, the European Commission reports 600,000 deaths per year.<sup>20</sup> However we try to evaluate human life and compare it with the *benefits* derived from polluting sources, the overall balance should be negative, even given this number.

This is a collective result, so how are we to calculate the individual responsibility among a population of 750 million in Europe? Should we simply compute it from the comparison of numbers? This would be the backtracking move discussed in the last section. Besides coming up with a very small quantitative contribution per individual (0.0008), there is quite an uneven contribution of causes and benefits within this large collective of Europeans, and as long as the collective is an aggregate there are no internal normative rules regarding how to distribute responsibility.<sup>21</sup> If we accept for the present, as I think plausibly, that European citizens *are* still merely an aggregate concerning pollution, individual responsibility for the collectively caused number of deaths cannot be backtracked.

The method of starting with the collective effect out of the way, the consequentialist has to turn to individual effects. This provides a serious problem for *Cq*, as *Cq* judges moral quality corresponding to utility (see footnote 19). If disutility approximates zero, the corresponding moral critique turns towards zero, too. Is there a way for the consequentialist to argue any further? Kagan offers a scheme of boosting individual effects by considering possible shifts across thresholds (Kagan 2011). The example he discusses is the threshold of a further ordering of 25 chickens at the local butchers. If an individual customer in buying a single chicken were to trigger this order, she would be responsible not only for the factory farming treatment of the *one* chicken she is buying, but for these *25 further* chickens as well. As the factory farming treatment of chicken is quite negative, the mild pleasure of the chicken eater is outstripped by the aggregated pain experienced by 25 chickens.

How are we to transfer this argument to pollution: Is there a threshold my individual pollution can break through? Given the discussion of such a health related threshold earlier, this seems highly unlikely. Even if I have a minimal causal impact by my pollution, either I am still below a threshold and am not able to break through it by my single contribution; or I am already beyond the threshold and contribute gradually, however minimally. In the first case my contribution drops out totally, in the second it would be (evaluative correspondence

---

<sup>20</sup> For 2012: [http://ec.europa.eu/environment/resource\\_efficiency/news/up-to-date\\_news/04042014\\_en.htm](http://ec.europa.eu/environment/resource_efficiency/news/up-to-date_news/04042014_en.htm).

<sup>21</sup> The marginality of individual contributions could be answered by fixing the value of a life as extremely high, or even infinite. But this would neglect our concrete practices which imply that life needs sometimes to be expressed in monetary terms, somewhere around one or two million Euros.—Concerning European polluters, analysed as an aggregate: Depending on the political activities within the EU on pollution, it becomes disputable when it turns into a structured collective!

presupposed) morally negligent. Different to the chicken-example a public goods threshold is too ‘large’ normally to be impressed by individuals.

Another way perhaps of thinking of a threshold could be to take every further *single death* as such a threshold. A certain amount of illness-producing elements have to be inhaled regularly, and under the aggregative impact of these a deadly disease evolves. Would it enhance my marginal contribution to pollution if it were to be seen in the light of such a threshold? No, certainly not. Rather it would make my contribution still more marginal. Earlier I tried to estimate the individual contribution to 600,000 deaths per year in Europe. If we now think of being responsible for only *one* death in an aggregate of 750 million agents, this would further reduce the proportion rather than enhance it! Of course, not all Europeans are causally responsible for one death, but a much smaller number is. If you take the citizens of a city with high pollution, say of one million inhabitants, this again makes a very minimal contribution and not an enhanced one.

So, in sum and concerning pollution, there hardly seem to be thresholds available which are comparable to the example discussed by Kagan. Some consequentialists try to find an enlarging factor in the act-consequentialist method by thinking of catastrophic environmental consequences. Most apt for this perhaps is the speculation of ‘triggering points’ within global climate change which within 50 years would shift a still controllable development into an uncontrollable one, with perhaps billions of people dying. As pollution and greenhouse-gas emissions are running in parallel to some extent, this might be seen as another way of arguing by using a threshold.

There are several caveats to this attempt, though. First, the empirical prognostics for tipping points are contested, with some scientists thinking that the climate process has already crossed important tipping points.<sup>22</sup> Second, considering 7 billion people as responsible for the development, the relevance of individual contributions would be, in an extreme way, further reduced. Third, and perhaps most importantly, whether or not a tipping point in the global climate change is crossed will need an aggregative contribution of emissions which, I imagine, exceeds the pollution of Europeans in one year. All of this is widely speculative, of course, but in order to make this argument watertight, the consequentialist would need to make these quantities precise, something which is hardly possible. Intuitively, the shift to the *global* public good does not help to improve the applicability of the consequentialist argument.

To conclude, the line of thought in the last section and this one could be summarized by the unpleasant conclusion that individual contributions to public goods, and especially those of the environment, twist themselves free from the moral judgment provided by most well-known moral theories. This at least is the impression for those of us who think that there *must be* individual responsibility in these matters. If you are sceptical towards wide-spread sensitivities, and especially those of a ‘Green’ sort, you could also be happy about the exonerative

---

<sup>22</sup> Schellnhuber and others talk of 17 tipping points which refer to different large-scale events in the process of the climate change (Lenton et al. 2008). Following from this, the diagnosis would have to be made more detailed.

effect of this inquiry so far. On the other hand, are we already at the end of possible argument? I think not.

My reflection thus far has circled around the usual requirements for individual responsibility which are focused on direct and empirically controllable relations between actions and effects. But must causal involvement be of such a *direct* kind? Could there be an *indirect* manner of involvement which we have missed so far? This will be the thread followed in the remaining section.

## 5. Participating in a Harmful Practice

Individual contributions in public goods are marginal, collective ones are not. Every grip on individual ones can therefore only arise from the collective side—and based on a relevant sort of relation to it. To make a new start, let me begin from Kutz's inspiring remarks on individual responsibility in unstructured collectives as arising from a 'systemic view'.<sup>23</sup> This systemic view includes 'quasi-participation' in an implicitly determined collective due to a shared 'way of life', as well as a 'symbolic' or character-based kind of responsibility. Symbolic actions, to begin with, are meant to express 'who one is' without necessarily having an eye on the consequences. If one does not drive a powerful car, or does voluntarily not drive a car at all, this is a symbolic expression of one's attitude towards cars.

Symbolic expressions are obviously quite important for many of us in social contexts, and as a rule they make social exchange easier. Here, however, again (remember my remarks on Jamieson) symbolic action is meant to solve a special, 'philosophical' problem unknown in everyday social life. It is meant to give sense to an attitude which is thought to be important despite having no consequences in practice at all. We do behave like this in certain 'existential' situations, declaring innocence in the face of someone clearly not listening, or saying something essential for us in a situation of death. So, symbolic if non-consequential actions are sometimes of extreme relevance to the agent herself. They can be essential expressive acts of self-identity. But making the argument of individual responsibility depend on such acts *presupposes* already that the agent *has* something like an 'environmental consciousness'. Whether he *ought to* have it in face of his insignificance to the world is, however, just the question to be answered!<sup>24</sup>

---

<sup>23</sup> See Kutz 2000, ch. 6.2.4. He is trying to answer here: "Can individuals warrantably regard themselves (and be regarded) as accountable for [...] collective harms, despite the absence of participatory intentions and causal differences." (2000, 167) Kutz does not give an elaborate defence of why individual causality is missing. He takes this as given due to overdetermination in the Dresden bombing case, and adds nothing further concerning pollution, which he has in mind here. In agreement with the argument in *section 2 I* of course fully agree with this conclusion, if not with the way he reaches it.

<sup>24</sup> Symbolic action cannot provide a satisfying argument on its own, which does not totally invalidate its relevance. As will be seen in a moment, it can be a form of accepting individual responsibility under appropriate conditions. Kutz suggests something similar with his concept of "holistic obligation" (Kutz 2000, 202).

Similar to symbolic motivation, Kutz seems satisfied to point to the mere *possibility* of quasi-participation.

“[...] even in the absence of a discrete identifiable collective act whose unwanted consequence is the harm in question, agents *can* think of themselves as participants in a collective venture.” (2000, 189; my italics)

The collective act mentioned here does not include an identifiable collective intention. When, for example, drivers are steering their cars in parallel on the highway they are not following a *collectively* common aim. Their individual intentions are widely different, even if they also have the intention of driving in common, and this even in the more extended sense of driving safely, driving in the same direction, up to a certain speed, in awareness of others, etc. But these are *individual* intentions common in the sense of being shared, not in the sense of constructing a ‘we-intention’, for action-theorists the core of a group intention.<sup>25</sup> They may also share a certain ‘drivers’ ethic’ or certain preferences (cheap fuel or personal comfort), but these again are only individually held and this makes them a set or cohort, not a collective structured by we-properties.

There is no plausible way, I think, to derive individual responsibility *directly* out of sharing a practice of individual actions like driving, and the same goes for domestic heating or using industrial products with externalized environmental costs. But Kutz also rightly hints both at the existence of “networks and collaborations” behind a shared practice and the complicity in taking advantages of a shared practice (“cheap fuel and disguised public subsidies of automobile travel” (188)). How a responsibility results for the collectively produced harm could not be seen if this were to remain an empirical fact simply of involvement. What is necessary to add in reconstruction (something not explicit enough in Kutz’s treatment) is the *taking advantage* of the shared practice by all individuals.

A *principle of responsibility* arising out of advantage acceptance seems to be at work here:

(AR) If someone over some time intentionally accepts the advantage of a practice shared with others he becomes *co-responsible* for the collective costs and negative consequences of this practice, should there be any.

As far as driving is concerned, *AR* is normally accepted for the *costs* of putting the practice to work in the first place. It is accepted that drivers have to contribute to the public costs of constructing and maintaining the traffic network. This often also goes as far as to collectivize the costs of noise abatement measures, like the building of walls alongside highways, or of environmental measures like the running of the route through a costly tunnel to keep a biotope intact.

Here again, the individual car driver could argue that his sole activity is so minimal that there is no moral reason to burden him with costs. The remarkable

<sup>25</sup> A we-intention would be built up by *reciprocal dependency* of driving safely, the product of which would be the we-intention to drive safely. But it makes sense for single drivers to drive safely, even if others do not—and then even more so. What a ‘group-identity’ of drivers could look like is best seen in professional lorry drivers or classic car drivers. But these are special sub-groups among drivers.



point of fact, however, is that his enjoying the advantages of driving is possible *only as a collective practice*, and that in sharing these *advantages* he binds himself to the collective costs of the practice. For egoists these costs would only be the ones of quite narrowly making the practice possible. From a moral perspective, however, the costs will extend to the negative *consequences* the practice has for others. As the two examples illustrate, this is, even if somewhat hesitantly, being gradually accepted for the environmental costs of highway driving. There is certainly no principled reason not to generalize this case. Surely, all consequences out of an accepted practice with negative effects have to be covered, however they materialize.

There is a still more basic moral principle at the bottom of advantage responsibility, which is one of *reciprocal justice*. If I accept freely and consciously the goods resulting from the activities of others, I should join in bearing the costs, both production costs and consequential costs. Only if most among a number of individual beneficiaries of a practice accept such a principle and act accordingly, the practice comes about and is maintained into the future. As there are burdens *and benefits* involved, the principle is not one of excessive moral demands, but rather the minimal one of fairness. It is also one of the advantage of self-interest because, without the collective acceptance of such a principle, there would not be a sustainable practice among the contributors of the costs in the practice. In sum, the moral basis of *AR* is extremely plausible.

In a more extended form, *AR* has been defended by Rawls as a ‘principle of fairness’ and has been criticized by Nozick.<sup>26</sup> Nozick’s criticism touches on the liberty conditions necessary for assuming responsibility for collective burdens if sharing its public benefits. His objection is by way of an example drawing on a “public address system” which has been organized among a neighbourhood of residents and enjoyed by the one person who so far has consumed the programme but not contributed to its maintenance. Is he obliged to contribute if he regularly consumes it? (As it is a radio system it ideally meets the public good conditions, being non-rivalrous, and we could similarly think of an environmental public good, e.g. the re-naturalization of a river, etc.) No, says Nozick, as he was not asked in the original planning.

According to Rawls, internal justice and voluntary acceptance are indeed necessary for falling under individual political obligation. Bypassing discussion of Nozick’s own example, would participation in car-driving contradict these conditions and thereby relieve the single driver of sharing his part in the costs? If he is actively driving, this will normally be enough voluntary consent—combined with a consent that even if he was not asked at the early construction of traffic networks, he would have accepted voluntarily because of all the additional advantages for himself. Resistance to contributing would have a point if costs were to be distributed extremely unequally among the set of drivers and there were no opportunity to influence the scheme. In democratic states this is, at least concerning car-driving, hardly the case.

Things are a bit different if there is something of an implicit consent to shirk the externalization costs of pollution. This is rather the state of affairs in many

<sup>26</sup> Rawls’ formulation is in Rawls 1971, 111–2, Nozick’s criticism in Nozick 1974, 90–5.

European countries at present. As there is so far no effective official obligation to contribute arising from externalized costs, as well as no ‘system of distribution’ of costs,<sup>27</sup> the point is not whether to bear these costs but rather whether to engage in the setting up of such a system. In this situation the individual duty would be to join first initiatives towards cost-bearing collectives for public goods if they have any realistic chance of becoming reality.

To take up Kutz’s idea, there is also an individual duty to protest ‘symbolically’ against a harmful collective practice if symbolic action is likely to have some impact within the counter-movement against the practice. Exactly when the conditions are ‘appropriate’ for symbolic actions—actions contradicting the collective practice of consuming a public good, but also having no causal consequence for the good—is a question of *phronesis*. Abstaining from driving a car in the present, collectively automotive, practice would make little sense, but driving an E-car may be different. The E-car might also motivate a number of regular drivers to join the counter-movement to pollution-causing traffic.

## 6. Conclusion

This last round of argument tried to show that there is some way to see oneself as individually responsible in the consumption of a public good with marginal involvement in physical terms. What is left open is the *size* of this individual responsibility and, given the proportions pointed to earlier, one might conclude that effective obligations are nevertheless quite minimal. But we have to free ourselves from argument by causality and consequentialism if now arguing within a participatory scheme of responsibility. And the argument has to be turned to the level of practical possibilities. It will not be possible in the near future to construct a cooperative system for effective pollution control among *all* Europeans (not to speak of a global cooperation on emissions), but it might be on the national, regional or municipal level. And we are open as to how to achieve this cooperative system.

As argued earlier, individual responsibility for public goods converges with participating in a collective which gives itself a structure of cooperation by rules of justice. In a very thin sense, the aggregates of public goods consumers in democratic political societies are always already embedded in such a cooperating system, by participating socially and politically in how to distribute the benefits and burdens of those resources which cannot be appropriated individually but need cooperation. Given the number of deaths due to pollution, similar to the (meanwhile smaller) number of deaths due to traffic accidents, it becomes a public task to control our individual consumption of such a good. If this is done *justly*, there is no way of avoiding our individual part in this process.<sup>28</sup>

---

<sup>27</sup> Even if the London congestion zone may be the sign for a change.

<sup>28</sup> Among several helpful critical commentaries to an earlier version of this article Gordon Walker pointed to a potential circularity involved in the proviso of individual contributions to be *just* ones. But it is only the fairness principle which is announcing itself here again. As in income taxes individual participatory advantages and costs should match each other somehow.

## Bibliography

- Akenji, L. (2014), Consumer Scapegoatism and Limits to Green Consumerism, in: *Journal of Cleaner Production* 63, 13–23
- French, P. A. (1984), *Collective and Corporate Responsibility*, New York
- (1995), *Corporation Ethics*, Fort Worth
- Gardiner, S. (2001), The Real Tragedy of the Commons, in: *Philosophy & Public Affairs* 30, 387–416
- (2011), *A Perfect Moral Storm. The Ethical Tragedy of Climate Change*, Oxford
- Hardin, G. (1968), The Tragedy of the Commons, in: *Science* 162, 1243–1248
- (1998), Extensions of ‘The Tragedy of the Commons’, in: *Science* 280, 682–683
- Hardin, R. (2003), The Free Rider Problem, in: *Stanford Encyclopaedia of Philosophy*, URL: <http://plato.stanford.edu/entries/free-rider>
- Held, V. (1970), Can a Random Collection of Individuals Be Morally Responsible? In: *Journal of Philosophy* 67, 471–481
- Hitchcock, C. (2007), Three Concepts of Causation, in: *Philosophy Compass* 2, 508–516
- (2010), The Metaphysical Bases of Liability: Commentary on Michael Moore’s *Causation and Responsibility*, in: *Rutgers Law Journal* 42, 377–404
- Jamieson, D. (2007), When Utilitarians Should be Virtue Theorists, in: *Utilitas* 19, 160–183
- Kagan, S. (1998), *Normative Ethics*, Boulder
- (2011), Do I Make a Difference? In: *Philosophy & Public Affairs* 39, 105–141
- Kriebel, D. et al. (2001), The Precautionary Principle in Environmental Science, in: *Environmental Health Perspectives* 109, 871–876
- Kutz, Ch. (2000), *Complicity. Ethics and Law for a Collective Age*, Cambridge
- (2007), Causeless Complicity, in: *Criminal Law and Philosophy* 1, 289–305
- Lenton, T./H. Held/E. Kriegler/J. Wall/W. Lucht/S. Rahmsdorf/H. J. Schellnhuber, Tipping Elements in the Earth’s Climate System, in: *Proceedings of the National Academy of Sciences* 105, 1786–1793
- Lewis, D. (1969), *Convention*, Cambridge/MA
- (1970), Causation, in: *Journal of Philosophy* 70, 556–576
- (2000), Causation as Influence, in: *Journal of Philosophy* 97, 182–197
- May, L. (1987), *The Morality of Groups: Collective Responsibility, Group-based Harm, and Corporate Rights*, Notre Dame
- Moore, M. S. (2009), *Causation and Responsibility. An Essay on Law, Morals, and Metaphysics*, Oxford
- Nozick, R. (1974), *Anarchy, State and Utopia*, Oxford
- Ostrom, E. et al. (1999), Revisiting the Commons: Local Lessons, Global Challenges, in: *Science* 284, 278–282
- Parfit, D. (1984), *Reasons and Persons*, Oxford
- Petersson, B. (2013), Co-responsibility and Causal Involvement, in: *Philosophia* 41, 847–866
- Pettit, P. (2007), Responsibility Incorporated, in: *Ethics* 117, 171–201
- Rawls, J. (1971), *A Theory of Justice*, Cambridge/MA
- Sandberg, J. (2011), ‘My Emissions Make no Difference’. Climate Change and the Argument from Inconsequentialism, in: *Environmental Ethics* 33, 229–248
- Sinnott-Armstrong, W. (2005), It’s Not My Fault: Global Warming and Individual Moral Obligation, in: *Perspectives on Climate Change. Science, Economics, Politics, Ethics. Advances in the Economics of Environmental Research* 5, 293–315

- Szigeti, A. (2014), Collective Responsibility and Group-Control, in: Zahle, J./F. Collin (eds.), *Rethinking the Individualism-Holism Debate*, Dordrecht, 97–116
- Weber, M. (1978), *Economy and Society*, Berkeley–Los Angeles–London
- Wündisch, J. (2014), Green Votes Not Green Virtues: Effective Utilitarian Responses to Climate Change, in: *Utilitas* 26, 192–205