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ON FLYING TO ETHICS CONFERENCES:

CLIMATE CHANGE AND MORAL RESPONSIVENESS

JAMES DWYER

Abstract

Last year, I flew to two bioethics conferences, one in Europe and one in North America. These were good things to do, or so I thought. But I worry that flying and other activities are contributing to climate changes that will affect the health of vulnerable people, the life prospects of future generations, and the balance of the natural world. Thus, in this paper, I consider how I should respond. To begin, I describe briefly how climate change will impact human health. Then I note how climate change raises issues about justice. But I focus on issues about moral responsibility and responsiveness.

Last year I flew to two bioethics conferences, one in Europe and one in North America. I also flew to Taiwan to teach abroad for a year. These were good things to do, or so I thought. I contributed to educational events, learned more about bioethics, and visited with friends and colleagues. But I worry that flying and other activities in my life are contributing to climate changes that will affect

the health of vulnerable people, the life prospects of future generations, and the balance of the natural world.

I sometimes imagine a dialogue with a young person, twenty years from now, when the climate crisis is much worse.

Young Person (YP): What were you people in bioethics thinking? You flew to conferences all over the world, emitting tons of carbon, to talk about whether it is right to separate conjoined twins or take a dying person off a respirator?

Me: Those weren't the topics that I talked about. I tried to address some broader issues about social justice and moral responsibility.

YP: But even then, the health of the planet was in critical condition. What were people in bioethics thinking?

Me: Most people thought that the twenty-first century would be the century of biology. So they focused their attention on ethical issues about new developments in molecular biology, genetics, reproductive technologies, and medical treatments.

YP: Well, it is the century of biology, but not in the way you thought. It's the century of the biosphere. You should have focused on climate science, ecology, and resource limits.

Me: I tried. I brought these issues up in classes and at conferences. But what I did was too little, too late.

YP: But why didn't you reduce your own emissions? And why didn't you try to change your community and country?

Me: I don't really know. I spent most of my time studying and teaching. I thought that education would help, but education is a slow process—slower than climate change. I guess I always felt a bit uncomfortable with political activism.

YP: But the problem should have called you out of your comfort zone.

Me: Well, I didn't quite realize how urgent the problem was.

YP: But you should have known. The evidence was there: in reports, in books, in films. There was enough evidence to act, and too much not to act.

Together, the voices in this dialogue work to describe my situation: privileged, confused, and concerned.

I am concerned that I am contributing to changes that will harm present people and future generations in a very serious way. I could ignore this concern,

and get on with my life. But that doesn't seem like a very ethical response. I could smile at the irony of burning a lot of jet fuel to fly to places to talk about ethics, justice, and health. Although Socrates used irony to further moral examination, the use of irony in this case seems like a way of avoiding moral examination and moral responsibility. Or I could examine the moral problem, consider different approaches, and delineate more adequate responses. That's what I intend to do.

In this paper, I use my habit of flying to ethics conferences as the occasion for reflecting on my contribution to and my responsibility for climate change. But my reflections extend beyond flying to conferences because other activities in my life also involve greenhouse gas emissions. Because I want to explore how I should respond to the problem of climate change, I use both personal narrative and theoretical reflection. Approaches that combine the personal and the theoretical have a long and distinguished history in feminist thought. These approaches serve several purposes. They help to show how the author is situated—economically, socially, and historically. They use experience to ground and direct reflection, to keep it from spinning off into purely academic debates. And they bring reflection closer to the task of social change. These purposes seem quite relevant to the problem of climate change.

In the first section of this paper, I describe how climate change poses risks for human health. In the second section, I describe who is most vulnerable to the risks of climate change and who contributes most to the problem. Since people and generations who contribute very little to climate change will be the most vulnerable to the impacts, I note how climate change raises issues about justice. But I don't dwell on these issues because I believe there is a rough convergence about the basic issues of justice and because I want to focus more attention on issues about responsibility and responsiveness. In the third section, I give an account of my attempt to respond to the problem by reducing my own carbon footprint. I also note some basic problems with this response. The problems lead me to Iris Marion Young's account of responsibility for structural injustice. In the fourth section, I use her account to further my reflections and direct my response to the problem. To conclude the paper, I summarize my tentative conclusions.

Climate change and human health

Many societies have been developing industry, clearing forests, and practicing agriculture in ways that produce more and more carbon dioxide, methane, and other greenhouse gases. By emitting more of these gases than can be absorbed, societies are changing the temperature, humidity, precipitation patterns,

and wind patterns in the atmosphere (IPCC 2007a, 2). These changes, which are reflected in both gradual changes and extreme weather events, will have a profound effect on human health. I want to consider the adverse effects in four broad categories.

First, the direct effects of climate change will be substantial. Heat waves will lead to deaths from thermal stress. This effect will be most pronounced among the elderly, people who are homebound, and people who do physical labor. Storms and flooding will also have direct effects on human health. They will kill and injure people, destroy homes, damage infrastructure, and displace people. Gradual changes will also have some relatively direct effects. Rising sea levels may inundate low-lying areas and increase the risk of storm surges in other areas.

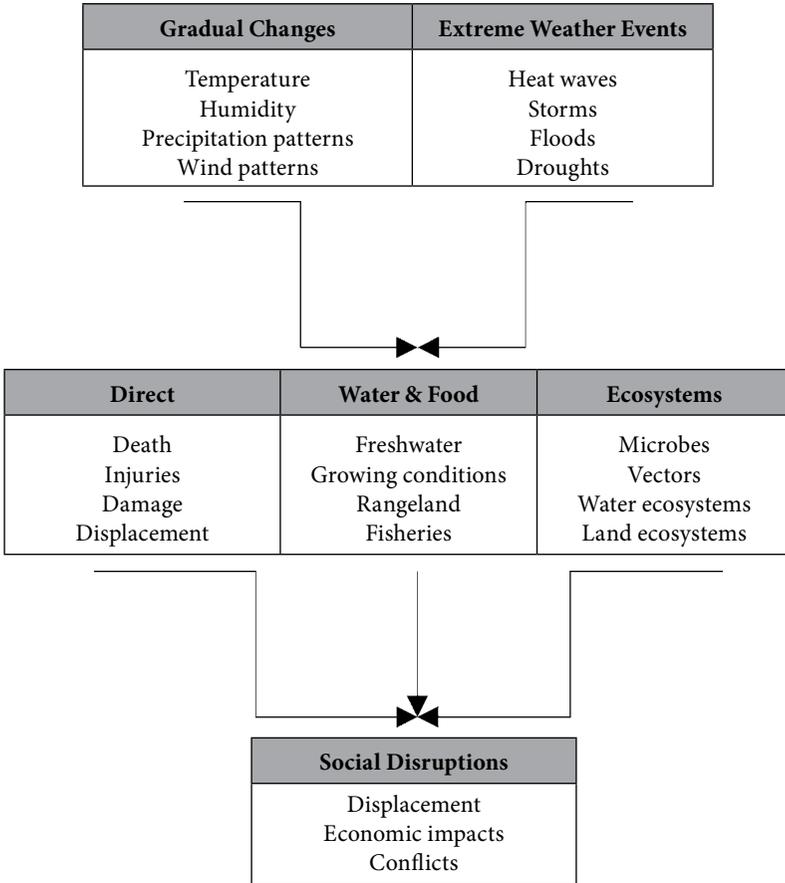
Second, even larger threats to human health may arise from the effects of climate change on water and food resources. The water supplies of people who depend on melt water from glaciers and snow will decline (IPCC 2007b, 5). Droughts and regional decreases in precipitation will stress water resources that are already overdrawn in many areas (WWF 2008, 18–21). And climate change will adversely affect agriculture in many regions; the effects, in conjunction with social conditions, may lead to an increase in malnutrition.

Third, climate change will affect ecosystems. Rising sea levels have already affected coastal wetlands and mangrove ecosystems that act as buffers against storm surges. Air temperature, sea surface temperature, storms, and the El Niño/Southern Oscillation (ENSO) can affect microbes and vectors that cause diseases like malaria, dengue fever, schistosomiasis, cholera, and salmonella (McMichael et al. 2006, 862–63). Outbreaks of cholera in Bangladesh have been correlated with changes in sea surface temperatures and the ENSO.

Fourth, all these effects may lead to social disruptions that impact population health. Rising sea levels, storms, floods, and droughts could displace millions of people, creating an unprecedented number of environmental refugees. Both extreme weather events and gradual changes will cause economic disruptions that will increase poverty among those who are most vulnerable. Climate change could even increase international conflicts over resources like freshwater. The following diagram summarizes the risks that I have described.

Is it possible to quantify these health risks? The World Health Organization (WHO) commissioned a study to estimate the burden of disease that was attributable to humanly induced climate change (McMichael et al. 2004, 1543–1649). The authors of this study specified the increase in health risks associated

Diagram 1: How climate change impacts health



with units of temperature change, and then calculated the percentage of deaths and illness associated with heat waves, floods, malaria, diarrhea, and malnutrition that was due to recorded changes in climate. They estimated that climate change was responsible for 160,000 deaths in the year 2000 alone. This is a conservative estimate, based on an increase in temperature of about 0.5° C. The Global Humanitarian Forum also commissioned a report to estimate the present harms of climate change. The authors of this report estimated that climate change causes 300,000 deaths each year (GHF 2009, 9–12 and 84–87). As both reports make clear, climate change is already the cause of significant mortality

and morbidity. Future health prospects will be much worse if we follow the business-as-usual approach or if we provoke nonlinear changes by crossing thresholds that we don't yet understand (Dwyer 2008, 283–85).

Distributions, contributions, and justice

The adverse effects of climate change will not be evenly distributed across populations, regions, and time. Certain groups are more vulnerable because of their geographical, social, and economic positions. Populations that live near low-lying coasts, river deltas, and river floodplains are at high risk from flooding (IPCC 2007b, 7). This risk group includes populations in small island states, Bangladesh, sub-Saharan Africa, and other regions (GHF 2009, 15). Both the Arctic and the Himalayan regions are also at high risk of flooding. Some regions will be at heightened risk of drought (ibid.). Most models project more severe droughts for sub-Saharan Africa, central Asia, parts of Latin America, and Australia. Crop yields from rain-dependent agriculture could decrease by 50 percent in some African countries (IPCC 2007b, 8). Some of the populations, nations, and regions at highest risk will be hard-pressed to respond because they have low adaptive capacity.

Adaptive capacity is the ability to respond to environmental changes in ways that cope with bad things, develop good things, and allow life to go on. The ability to cope with the health risks of climate change will depend on both material resources and social organization—on economic development, political structures, social solidarity, education, public health programs, and so on. Specific adaptive responses might include building sea walls, altering construction, responding to floods, conserving freshwater, changing farming practices, controlling vectors, treating diseases, and so on. In general, nations that are wealthy and well-governed will be better able to adapt to climate change and to buffer themselves against health risks.

Just as some societies are more vulnerable than others, some groups within society are more vulnerable than other groups. Within a given society, people's vulnerability depends on geography, wealth, social position, gender, and other factors. People whose livelihoods depend most directly on a stable climate will be especially vulnerable: small farmers who depend on rain, families who depend on fishing, people who depend on forests products, and so on. Social and geographical aspects of vulnerability will sometimes diverge—for example, wealthy people who live on the coast of Florida are at risk by geography but not by social position. But often the aspects will converge (GHF 2009, 58–61)—for

Table 1: Per capita emissions

Rank	Nation	Carbon
2	Kuwait	9.30
11	United States	5.20
15	Canada	4.61
33	Japan	2.71
76	Sweden	1.47
92	Chile	1.18
101	China	0.86
129	Costa Rica	0.50
142	India	0.39
176	Ghana	0.12

example, poor farmers in low-lying areas of Bangladesh are vulnerable in many ways. In many regions, climate change will disproportionately affect women because most poor people and agricultural workers are women, and women spend more time getting water and collecting firewood.

I want to consider not only the relative risks of climate change, but also the relative contributions to the problem. Table 1 shows yearly per capita emission rates for some representative countries, measured in metric tons of carbon (Boden et al. 2007). Note that if the values were expressed in metric tons of carbon dioxide, the rates would be 3.5 times higher.

Per capita emissions in the United States are twice as high as in Japan, a high-income country; five times as high as in Chile, a moderate-income country; and fifty times as high as in Ghana, a low-income country.

Because the emission rates are averages, they do not show the differences within countries. In every country, some people emit less than the average and some emit much, much more. Also, since the rates are for one year, they do not show cumulative emissions. Past emissions are relevant since CO₂ persists in the atmosphere and influences climate for a long time. Given the amount of carbon that has already accumulated in the atmosphere, an increase of 1° C is probably inevitable, and an increase of 2° C is increasingly likely.

Since some people and generations contribute more to the problem, while other people and generations are at greater risk, climate change brings issues of

justice to the fore. Issues of societal justice arise because of the distribution of emissions, health risks, adaptive measures, and power within societies. Issues of international justice arise because the countries that are producing the most greenhouse gases (especially on a per capita basis) will not suffer the most, and yet they have the most control over international negotiations. Issues of intergenerational justice arise because present behavior will profoundly impact the environment in which future generations will have to live.

A lot of good work has been done on these issues of justice (Gardiner et al. 2010; Gardiner 2011). This work addresses complicated details: how to deal with uncertainty, how to factor in past emissions and past knowledge, how to deal with claims based on special needs, how to allow emissions and economic growth in developing countries, how to deal with population growth, and how (if at all) to discount the future. As we should expect, different authors suggest somewhat different proposals for allocating future emissions (Gardiner et al. 2010, 16–19). The differences seem most prominent when we focus on two points: the importance of past emissions in an overall approach that is reasonably just, and the importance of intergenerational justice in an overall approach that is balanced and just. Yet behind the different approaches and proposals, there is a wide (not universal) overlap on a basic point of justice: it is unfair that societies and populations with high emissions are not doing more to reduce greenhouse gases and to help vulnerable people adapt to changes that will occur. Since I share this basic judgment of justice, I want to focus on issues about how to respond. Fruitful discussions of responsiveness and responsibility presuppose some rough and overlapping judgments of justice, but these discussions can proceed without agreement on particular details and theories of justice.

As a consumer

My first response was to try to reduce my own carbon footprint (readers who want to estimate their carbon footprints and ecological footprints can consult the Berkeley Institute of the Environment and the Global Footprint Network). To avoid the more disastrous consequences of climate change, emissions need to peak very soon and fall very rapidly. If global emissions peak by 2015 and fall 80 percent by 2050, then temperature increases can probably be held below 2° C. Less ambitious goals are simply not realistic and reasonable. It is unrealistic to think that temperature can increase more than 2° C without imposing unreasonable risks on the most vulnerable.

So as a first response, I decided to try to reduce my own emissions to 20 percent of the American average. I realized that this was only a first step because a global reduction to 20 percent might fairly ask those Americans who live above a poverty threshold to do more (Gardiner et al. 2010, 222–26). But it seemed more important to start with some target than to argue and negotiate endlessly with myself about whether 10 percent would be more reasonable than 20 percent. After deciding on a target, I didn't know where to begin because almost all activities in industrial societies are linked to carbon emissions: eating dinner, drinking coffee, using a computer, taking a shower, flying to a conference, and so on. So I listed some categories—food, electricity, heating, consumption, and transportation—and tried to make changes in each category.

I began with food. Livestock production is responsible for about 15–20 percent of all greenhouse gas emissions (McMichael 2007, 1259), but I had stopped buying meat a long time ago. So I looked for other changes. I bought soy milk instead of dairy products, reduced fish consumption, and ate more vegetables, legumes, and grains. I also tried to reduce the food-miles behind my meals. My typical breakfast of oats, walnuts, and soy milk traveled many miles. The oats came from the Pacific Northwest, the walnuts from California, and the soy milk from the Midwest. I live in New York.

I had already switched to compact florescent bulbs, but I looked for other ways to reduce my electricity consumption. I turned off my computer when I wasn't using it, and I tried to remember to turn off the power strip at the end of the day (since computers use electricity even when they are off). At work, I switched off lights that weren't being used. And in waiting rooms, I tried to turn off televisions that weren't being watched.

At home, I turned down my thermostat to 16° C (61° F) and bought a nice pair of wool long underwear. I installed a low-flow showerhead in the shower and aerators in the faucets. And I bought a wooden rack on which I hung clothes to dry—a fine example of a low-tech response that is common practice in most of the world. Drying clothes in this way added some needed humidity and brought back pleasant memories of my childhood.

I bought some canvas shopping bags and took them with me when I went shopping. I bought two pairs of chopsticks, put one in my briefcase and one in my backpack, and gave up using disposable chopsticks at East Asian restaurants. I stopped buying so many books and started using the library more. That was a relief. When I was a university student, I couldn't afford to buy more than a few books a year, but I borrowed books from the library and read a great deal. Then,

after I started teaching, I slipped into another habit: I would buy a book because it seemed interesting and related to my work, but it often sat unread on my bookshelf, staring down at me. Now I'm trying to return to my original habit.

I always walked a lot, but now I walk even more. When I decided to buy a place to live, I bought a condominium within walking distance of work. Although the condominium is not LEED certified, it is a recycled school that was built in 1920. For trips that could be done in one day, I tried to take the train. And I discovered the Greyhound bus again. I had ridden Greyhound quite a bit when I was a student, but now I was struck by how much American modes of transportation reflect class divisions. It is as if buses, trains, automobiles, airplanes, and private jets serve to divide people into social classes.

Although I did make many changes, I didn't do everything that I could have. I didn't compost my vegetable scraps, buy a more ecological toilet, or install energy-efficient windows. And I didn't give up flying to ethics conferences. That was the elephant in my living room. As much as I modified my way of living, I couldn't reduce my carbon footprint (and overall ecological footprint) to a reasonable level without drastically reducing the flying. So I looked into carbon offsets. But the more I learned about carbon offsets, the more ineffective and morally dubious they seemed (Kollmuss 2007, 9–14).

After all these efforts, I came to have doubts about the whole approach of responding as a consumer. The first problem with the consumer approach is that it takes so much time and thought. You have to study life-cycle analyses of all items and activities. And when two analyses differ, you have to sort out the differences and make judgments about reliability. Let me give one example. I assumed that food-miles were a good measure of carbon-intensity, at least for foods in the same category. But then I read about a study in the United Kingdom that compared local apples with New Zealand apples. The local apples involved more carbon emissions because they were transported by inefficient small trucks. To sort out all these issues requires a good deal of time and a good grasp of scientific studies. Maybe I just have to accept that it takes a lot of time and thought to live an ethically responsible life in an industrialized country in the twenty-first century.

The second problem with the consumer approach is that it involves ineffective sacrifices. Some changes were not sacrifices at all—I came to affirm them as good. Carrying chopsticks in my briefcase and backpack was a good thing; the chopsticks were easy to remember and pleasing to use. Installing and using a low-flow showerhead was easy and neutral; the shower was just as good. But

taking shorter showers and foregoing trips to ethics conferences seemed like sacrifices. Maybe I should view these sacrifices as part of the cost of justice. After all, an important role of justice (in one account) is to set limits on conceptions of the good (Rawls 1999, 392–96).

The problem is not that sacrifices are required, but that many of these sacrifices are ineffective and misguided. They simply don't address the crux of the problem. Suppose that I succeed in reducing my carbon footprint by reducing my use of fossil fuels. What happens then? Given the market economy in which I live, the demand for fossil fuels drops (slightly), so prices fall (slightly). Since prices are lower, others use more; and since fossil fuels cost less, renewable energy becomes relatively more expensive. To respond to this problem, we need to change the current market structures, by means of a carbon tax, a cap-and-trade system, or some institutional change.

In industrialized societies, emissions are linked with consumption, so I tried to reduce my overall consumption. But suppose that I (and other people) succeed in reducing overall consumption. What happens then? Overall consumption falls, the economy contracts, people are laid off work (both at home and abroad), and vulnerable groups of people suffer. To respond to this problem, we need to change the economic system so that gainful employment and economic well-being do not depend on high levels of consumption and high levels of emissions. What needs to change is not just my pattern of consumption but a central feature of the economy. There is a mismatch between an individual consumer response and what needs to be done.

As a citizen

Although the response as a consumer seemed like the right thing to do, it didn't address the structures and background conditions that are the crux of the problem. This response also presupposed a view of responsibility that didn't quite fit the nature of the moral problem. I will try to explain and correct these flaws with the consumer approach.

The problem of climate change calls for actions that will reduce emissions and increase absorption (mitigation). It also calls for actions that will increase adaptive capacity and help low-income societies develop in sustainable ways (adaptation). These actions may include carbon taxes, caps on emissions, sustainable development, new forms of economic life, protection of rain forests, changes in agriculture, better urban design, better public health, more social solidarity, and so on. Changes like these require collective action, social coordination, and

institutional change. They require political action, understood in the broadest sense. They may even require forms of engagement that work to create the political will to take appropriate action.

When Iris Marion Young considers responses to sweatshops in the global apparel industry, she comes to a similar conclusion: that an appropriate response to the problem requires political action (Young 2006, 123). The sweatshops reflect and instantiate structural injustice. Although some bosses are vicious and exploitative, the injustices are not principally due to personal failings. They result from social structures, processes, conditions, and norms. Because we participate in and contribute to these social structures, we have some responsibility for them. Young says that this responsibility

can be discharged only by joining with others in collective action. This feature follows from the essentially shared nature of the responsibility. Thousands or even millions of agents contribute by their actions in particular institutional contexts to the processes that produce unjust outcomes. Our forward-looking responsibility consists in changing the institutions and processes so that their outcomes will be less unjust. No one of us can do this on our own. Even if it were possible to do so, a single shopper would not change the working conditions of those toiling in sweatshops by refusing to buy all items she had reason to believe were produced under unjust conditions. The structural processes can be altered only if many actors in diverse social positions work together to intervene in these processes to produce different outcomes. (Young 2006, 123)

I want to elaborate Young's view of political action and her view of responsibility because these views help to illuminate the problem of climate change.

Responding to climate change, like responding to apparel manufacturing, requires us to think more in terms of political engagement than consumer choice, to think of ourselves more as citizens than as consumers. But political action and citizenship need to be understood in a broad way. In *Responsibility for Justice*, Young explains what she means by political action and responsibility. She writes that

this is a specifically *political* responsibility, as distinct from privately moral or juridical. Taking responsibility for structural injustice under this model involves joining with others to organize collective action to reform the structures. Most fundamentally, what I mean by "politics" here is public communicative engagement with others for the sake of organizing our relationships and coordinating our actions most justly. (Young 2011, 112)

Included in this view of politics are actions that citizens take in civil society. Young makes this point explicit: “Those who share responsibility for structural injustice may also find ways of making social changes, moreover, through collective action in civil society independent of or as a supplement to state policies and programs” (ibid.). A good example of what Young has in mind is the anti-sweatshop movement on American university campuses (147). This movement is pressuring universities to ensure that apparel with their names is produced under more just conditions.

The emphasis on political action and citizenship does not grow out of a general conviction, like Jean-Jacques Rousseau’s, that civic engagement is “the privileged *locus* of the good life” (Taylor 1985, 334). The emphasis grows out of specific reflections on problems that involve structural injustices. Young does not privilege any area, aspect, or account of human good. She focuses on certain kinds of problems that arise in the attempt to live an engaged and responsive life. Then she tries to give an account of responsibility that is appropriate to these problems.

Many discussions of responsibility tend to be rather legalistic. They try to set out the conditions under which it would be right to punish people for acts and omissions or to hold them liable for harms and losses (Austin 1970, 175–204; Hospers 1982, 361–84). And most accounts of legal responsibility tend to be backward looking. A particular harm is identified in the past; then an individual person is held liable if a clear causal chain connects the harm to that person’s actions and if that person was at fault (usually having acted intentionally or negligently). Discussions of legal responsibility are important because punishing people and holding them liable are common, perhaps necessary, social practices (Fingarette 2004).

Although the liability model of responsibility reflects an important practice and is a useful tool in some contexts, the attempt to apply legalistic versions of this model to the problem of climate change is fraught with difficulties. It might be worthwhile trying to overcome these difficulties if the application was illuminating. But the liability model does not illuminate some key features of the problem. The first difficulty concerns harm and causation. Most of the harm of climate change is not a past harm but a future risk: a lowering of the life and health prospects of people in the future. We need an account that illuminates responsibility for future risks. But even if we focus on past harm, it is hard to specify exact victims and to establish causal chains. For example, the best we can say is that a certain percentage of malnutrition is due to climate change. Young notes that the

primary reason that the liability model does not apply to issues of structural injustice is that structures are produced and reproduced by large numbers

of people acting according to normally accepted rules and practices, and it is in the nature of such structural processes that their potentially harmful effects cannot be traced directly to any particular contributors to the process. (Young 2011, 100)

We could, I suppose, try to assign a small percentage of future harms to billions of individual actors, but that focus ignores the role of structures and how they connect individual actions. The whole approach is too individualistic for the problem. It doesn't direct our response in an insightful way.

The second difficulty concerns intention. In participating in and contributing to the structures of a high-carbon society, I did not act intentionally to harm anyone. We could say that I acted negligently, but that's not a very illuminating description of what I did. Here's a better description: I took advantage, within accepted practices, of structures and background conditions in order to advance some otherwise worthwhile aims (for example, going to ethics conferences). What we need to call into question and change are the structures, background conditions, and accepted practices. What we need is an account of responsibility that illuminates the problem of the unjust effects of these structures, conditions, and practices.

As a complement to the liability model of responsibility, Young develops a social connection model of responsibility. It is not my intention to give a full exposition of this model, but I want to note some features of it that fit the problem that I am trying to address. Most of the structures and background conditions in industrial societies developed in periods when we didn't need to take carbon emissions into account. Now we do. The economic structures, for example, tend to externalize many of the harmful costs of fossil fuels—especially the costs to vulnerable people and future generations. By both habitual and planned actions, I act in ways that contribute to these structures. With others, I act to produce and reproduce them. For this I need to take some responsibility. Young writes:

The ground of my responsibility lies in the fact that I participate in the structural processes that have unjust outcomes. These processes are ongoing and ought to be transformed so they are less unjust. Thus I share with others the responsibility to transform these processes to reduce and eliminate the injustice that they cause. My responsibility is essentially shared with others because the harms are produced by many of us acting together within accepted institutions and practices, and because it is not possible for any of us to

identify just what in our own actions results in which aspects of the injustice that particular individuals suffer. (Young 2011, 110)

Because I participate in carbon-intensive economic structures that are unfairly affecting the health prospects of vulnerable people, I should take some responsibility to act with others to transform these structures.

I don't want or need to contend that Young's account of responsibility for structural injustice is a radically different *conception* of responsibility—that there are no points of overlap with conceptions that emphasize liability. For my purposes, it is important to show two things. First, that this account of responsibility focuses attention on features that are important when the injustices are structural. Second, that this account helps to illuminate and direct responses to the problem of climate change. I want to illustrate these points by comparing the sketch that I've given with an essay by Walter Sinnott-Armstrong (Gardiner et al. 2010, 332–46).

After Sinnott-Armstrong sets out some assumptions about climate change, he focuses on a particular question: whether a person has an obligation not to go for a Sunday drive, just for fun, in a gas-guzzling car. After a detailed review, he finds no defensible ethical principle to show that there is such an obligation. In particular, he finds that the harm principle does not apply because of features about causation. In legal reasoning and many contexts of everyday life, we only pick out an act as a cause if that act is intentional (or negligent) and stands out from the usual background conditions. For example, a person striking a match may count as the cause of a house fire, but the presence of oxygen would not. With these features in mind, Sinnott-Armstrong says that “we should not hold people responsible for harms by calling their acts causes when their acts are not at all unusual, assuming that they did not intend the harm” (335). This claim involves a general point about causation, a claim about responsibility, and an assumption that holding people responsible is the key concept. I want to consider each of these points.

Although Young would not agree with Sinnott-Armstrong's claim and assumption about responsibility, she would agree with the general point about causation. Indeed, in her discussion of the liability model, Young notes similar features about causation (Young 2011, 95–101). She notes that unjust structures are often part of the usual background conditions, that their harmful effects are not intended, and that the harmful effects are difficult to assign to individual acts. These features of causation, and their role in the liability model, move Young to develop a complementary model of responsibility.

In addition to discussing some general features of causation, Sinnott-Armstrong makes some particular and controversial claims about causation and responsibility. He claims, “No storms or floods or droughts or heat waves can be traced to my individual act of driving” (336). And he adds that there is “no individual person or animal who will be worse off if I drive than if I do not drive my gas guzzler just for fun. Global warming and climate change occur on such a massive scale that my individual driving makes no difference to the welfare of anyone” (337). Although Young notes that it is difficult to trace an individual harm to an individual act in this kind of context, I don’t think she would agree that these acts make no difference. But the key point from Young’s perspective is that responsibility for structural injustice is not tied to this account of causation. Even when it is unclear whether my particular acts cause particular harms, I bear some responsibility to try to change unjust structures if I participate in and reproduce these structures. In the case of climate change, there is no need to prove that a particular act of driving or flying causes a particular harm. The structures of carbon-intensive societies compromise the life prospects of vulnerable people. And I bear some responsibility for those structures. But the focus is not on holding people responsible—an expression that is closely tied to the liability model. Rather, the focus is on sharing political and moral responsibility.

In an indirect way, Sinnott-Armstrong seems to agree that the idea of political responsibility is more encompassing and more important in this context. At the end of his essay, he writes, “My fundamental point has been that global warming is such a large problem that it is not individuals who cause it or who need to fix it. Instead, governments need to fix it, and quickly” (343–44). Rather than focusing on consumer acts like driving, he believes that we need to “fulfill our real moral obligations, which are to get governments to do their job to prevent the disaster of excessive global warming” (344). Although this shift in focus is promising, there are important differences between his assertions and the account I sketched in this paper. Whereas Sinnott-Armstrong simply asserts that people have important obligations to get governments to address the problem of climate change, I tried to use Young’s account to explain how people come to have responsibilities to bring about structural change.

I also used Young’s account to explain why people need to take collective actions to discharge these responsibilities. Sometimes these actions aim directly at governments. But sometimes, especially when governments are unresponsive, these actions take place in civil society and are somewhat independent of and supplemental to what governments do. In responding to injustices in global

apparel manufacturing, the choice is not between acting as a lone consumer and trying to get the government to improve working conditions. Often people need to act, in association with others, in ways that address the structural injustices at multiple levels. Because climate change presents problems of structural injustice, it also presents similar opportunities for political action in the broadest sense.

Some tentative conclusions

Climate change has affected, is affecting, and will greatly affect the health prospects of vulnerable people and generations. Since I don't really doubt that these effects are unjust, I focused on how I ought to respond. After I described my attempts to respond as an individual consumer, I noted the problems with that approach. I argued that what is needed is political action. In that way, I addressed the question of *what kind of response* I should take. Then I argued that I should take responsibility because, in the process of advancing my goals and projects, I participate in structures that unfairly disadvantage many vulnerable people and generations. In that way, I addressed the question of *why I should take responsibility*. Since these structures, more than my individual emissions, are what compromise people's health prospects, I need to take some responsibility for transforming these structures. So I also addressed the question of *what I should take responsibility for*.

But in this paper, I haven't addressed the question of *how much responsibility I should take*. I participate in and am privileged by many unjust structures, and so I should take some responsibility for transforming them. But how much responsibility should I take? The exploration in this paper does not provide an answer, but two points seem relevant. As Young says, "Persons and institutions that are relatively privileged within structural processes have greater responsibilities than others to take actions to undermine injustice" (Young 2011, 145). I now see a habit like flying to ethics conferences as one indication, among others, of a relatively privileged position within the structures of carbon-intensive societies. The second point is that responsibilities also increase with the seriousness of the problem. I now see more and more clearly just how serious the problem of climate change is.

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