Pulling it all together: 20 things that each of us can do to save the planet

In this course, we have looked at not only at what the climate crisis is, but what each of us can do about it. These include personal actions, collective activism, political action, communication, and so forth. We have also noted that these are often deeply interconnected.

Today I would like to bring all these together into a list of twenty things that each of us can do about the climate crisis. Actually, it is two lists of ten, with the first focusing on individual actions, the second political and collective actions.

This lecture is intended as something of a capstone for the course. Hence it is in part a recap, especially as I quote myself in places. Still, I think that it will be useful to bring all this together.

Incidentally, if you find this recap a little redundant, great, as it means that you have been paying attention! However, do watch it through, as there is quite a bit of new material here. Moreover, it is also intended as something of a review for the final exam.

As I noted in the section on Cowspiracy, author Jonathan Safran Foer recently published a book entitled *We Are the Weather: Saving the Planet Begins at Breakfast*, where he argued that each of us should adopt a plant-based diet if we want to save the planet from catastrophic climate change. Hence, saving the planet begins when we eat breakfast and otherwise.

It would be great if saving the planet were that easy. However, as we have seen, unfortunately it is not. In fact, as I have noted, the fracking industry is responsible for more methane emissions than the beef industry. And CO2 is a far greater emission problem than methane.

We can certainly help save the planet at the breakfast table - in fact, I list two ways that we can do so in the first list below - but we cannot stop there, as it simply will not be enough, not nearly enough.

Moreover, we need to be clear about something: regardless of what we do, the planet will obviously continue on. Hence, the phrase "saving the planet" almost always implies that we are saving it for ourselves, humanity. As humans are just one of many species of beings that inhabit the earth, a more equitable and less anthropocentric way of stating what the phrase leaves unsaid is "saving the planet [for all life on it]."

Still, I think that Foer is on to something, as what he proposes is certainly what I would call a humanities approach, as he focuses on anthropogenic (i.e. human-caused) climate change as a result of human action.

Nonetheless, we need to act at more than just the breakfast table.

Here are ten examples of what we can do that are in this vein:

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1) at markets and restaurants, when we buy enough to eat – and no more.

Food waste is a huge problem in the US. and globally. As Peter Kalmus succinctly observed, "[a]bout 1/3 of global greenhouse gas emissions are due to food production, and about 1/2 of this (15% of global emissions) is due to livestock, mainly cows." And as Project Drawdown noted, we can drawdown more greenhouse gas emissions by addressing food waste than by switching to largely plant based diets. However, while being freegan may have more impact than being vegan, the ideal personal solution is to largely eat a plant-based diet and waste as little food as possible. This includes eating food that we would otherwise discard, such as the leafy green tops of beets.

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2) at meals, when we eat for the good of the planet and its climate.

Although the word has not yet entered the popular imagination, perhaps the best way to eat is to eat as a "climatarian": someone who eats for the good of the planet and its climate. Certainly being vegan or freegan is good, but being a combination of the two is great. And being a climatarian means that we look carefully at even the vegetables that we eat. As we have seen, eating asparagus in the Winter in most of North America is often no better for the climate than eating chicken or pork, as it is generally flown in from South America – and air travel has a huge climate footprint.

Incidentally, as Project Drawdown noted, the #1 thing that we can do to roll back global greenhouse gas emissions does not involve wind turbines, solar panels, electric vehicles, or any sort of similar technologies. Instead, greater gains would come from changing the way that we eat. When combined ______, wasting less food and switching to largely plantrich diets would result in a staggering reduction of 137 gigatons of CO2 or equivalent gasses every year.

In comparison to this reduction, globally shifting from fossil fuels to electricity generated by photovoltaic (solar) panels will roll back less than half this amount of emissions. The

adoption of electric vehicles? Far less than ten percent. We should, of course, work on exploring a variety of technologies to help reduce our emissions, but it is important to keep their relative impact in perspective.

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3) in the bedroom, when we use contraception and limit family size.

Globally, there are 85 million unintended pregnancies every year. 32 million of these (i.e. 38%) result in births. In the US, nearly half (45%) of all pregnancies are unintended. Hence, having both having access to effective birth control and actually using it is of central importance. This is both a deeply personal issue as well as a public one, as access to birth control is restricted across the planet for religious and other reasons. In Latin America and the Caribbean, for example,97% of women do not have unrestricted access to an abortion as an option of last resort.

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4) in the classroom, when we fairly and equally educate boys and girls.

We need to educate more girls and women, which dramatically curbs population growth, as the more education a person with a uterus has, the fewer children they have. Together with family planning, this would roll back 103 gigatons of GHG emissions – more than anything other than changing the way that we eat (i.e. the above-mentioned synergy of wasting less food and switching to largely plant-rich diets).

This is not to say that we should place responsibility for this particular issue with girls and women. To the contrary, the responsibility lies with the institutions that restrict a person with a uterus's access to education and control of their own body. And too, it is obviously the case that contraception is a male responsibility as well.

What I find so interesting about this approach to curbing greenhouse gas emissions is that it is a win-win-win. First, rolling back 103 gigatons of GHG emissions could have a real and significant impact on the climate crisis. Second, educating women and girls across the planet is also terrific in its own right. Even without the environmental gains, we should obviously make every effort to do this. And third, as far as I am concerned (speaking in part as a father of a daughter), every person with a uterus on the planet should have control, including reproductive control, of their own body.

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5) on the way to work, when we walk, bike, or use public transportation, rather than owning a car.

For the average American, 25% of our climate footprint comes from owning a car, as a typical car in the US. emits about 4.6 metric tons of CO2 or equivalent gasses per year.

However, the carbon released in making a car is also a huge problem. As I noted in the lecture on electric cars, "if you buy a succession of cars during your adult life, one every 11 years, and leave them in your driveway and never drive them, you will have totally expended your CO2 allotment for your lifetime. And, of course, this does not leave an emission allotment for anything else, such as for food, clothing, housing, and everything else that we need to live – including actually driving that car!"

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6) at home, when we choose to live in an appropriately sized dwelling or co-housing, instead of an average (i.e. oversized) American house, let alone a McMansion.

The largest chunk of the average American's climate footprint – about a third of it, in fact – comes from our homes, from heating and cooling them, as well as home energy use, such as lighting and appliances.

So, what, then, is to be done? It is simple enough: Move to a micro-apartment or certain co-housing communities, as this can greatly reduce your climate footprint.

For the average American, over half of our climate footprints come from the above two sources; cars, which account for roughly 25% of our greenhouse emissions, and our houses, which account for 32%. However, as we have seen, the good news for transportation and housing is that there is a simple way to approach both: move to a city. City living can mean dramatically less car use (in Manhattan, only one in five people commute to work by car) and generally smaller, more efficient housing.

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7) on vacation and when traveling, when we choose slow travel over air travel, which is, environmentally, the worst way to get around.

Air travel only accounts for about 2% or 2.5% of total greenhouse gas emissions globally. However, somewhat paradoxically, air travel can literally double the size of their climate footprint of one Americans. The problem is that traveling by air is a practice exclusive to the wealthiest, most privileged people, as 19 out of 20 people on the planet have never set foot in an airplane. Even among Americans, half do not fly annually. By some estimates, 80% of flights are made by just one percent of all people on the planet.

You may not think of yourself as a global elite or as a member of the "jet set," but if you fly, you are. If you are a frequent flyer, put a hundred random people in a room and you will be contributing more to the climate crisis in this way than anyone else in the room. You may not think of yourself as a member of "the one percent" (i.e. the world's wealthiest and most privileged people), but you would be among the one percent doing the lion's share of all this flying.

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8) in stores and online, when we choose not to buy yet more unnecessary stuff.

In one sense, minimalism is hardly new, as most human beings throughout history have probably gotten by with the bare minimum, or nearly so, needed for life. Even today, for a broad swath of people across the planet, this is likely still true. But what we are talking about here is voluntary minimalism. Relatively wealthy people who could buy lots of stuff, but choose not to for environmental or other reasons. In that sense, minimalism is a "First World solution" to a "First World problem." However, since the developed world is far and away the largest contributor to the climate crisis, this is an important intervention.

Many people believe that responding to the climate crisis on a personal level will mean we have to do without quite a bit, which means that we will have to live drab lives of deprivation. What is interesting about minimalism is that this group of individuals voluntarily has decided to do without quite a bit because they believe that this is a better way to live. This was also Thoreau's message.

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9) off-line, when we barter, borrow, rent, and otherwise exchange, as well as repair things, rather than buying still more stuff.

In the documentaries Being the Change: Live Well and Spark a Climate Revolution and Tomorrow (Demain), we met a number of people, including climate scientist Peter Kalmus and his family, as they attempt to live sustainable lives. I also put two short videos on the syllabus with similar theme: "Visualizing a Plenitude Economy" and "The High Price of Materialism."

In different ways, each of these films drew attention to people working together, who, by bartering, borrowing, renting, and repairing things, significantly reduced the relentless acquisition of stuff.

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10) with buying, not only by buying less, sharing, and keeping things longer, but also by only buying from companies with environmentally sound and socially just practices.

The documentary *The True Cost, as well* as the episode of Patriot Act on "The Ugly Truth Of Fast Fashion," exposed the horrible consequences of free (rather then) fair trade. This not only impacts the planet and its climate, but people all over the globe directly. Social justice, environmental justice, and climate justice are often not only related, but deeply and inexorably intertwined. Hence, when buying, you have the opportunity to "vote with your dollar" to support fair-trade products that were made under decent working conditions and the manufacture of which did as little harm as possible to the environment and climate.

Incidentally, when taken together, these last three things that we can do relating to stuff can have profound consequences for each of us in the developed world, as a quarter of the average American's climate footprint comes from all the stuff that we buy.

This list of ten things is by no means complete, but you get the idea. Note that all of the above involve personal and cultural changes rather than new or more technology.

Similarly, but on a somewhat different note, saving the planet can also begin in the following ten ways:

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11) at the polling place, when we cast our vote for candidates, from local to federal, advocating for sweeping climate policies, such as carbon pricing and the Green New Deal.

Personal climate action, while important and indeed essential, is simply not enough. For example, around 28% of methane emissions comes from meat (generally beef) production. However, an even greater amount comes from fossil fuel extraction, principally from hydraulic fracturing (aka fracking). Consequently, just switching to largely plant-based diets does not address the largest methane problem that we are facing.

The problem is that we cannot, practically speaking, end hydraulic fracturing through personal action. How, then, do we stop fracking? It is simple enough: we need to vote and become politically active, calling for legislation to end fracking.

As I never tire of telling people, if you can do only one thing to help mitigate the climate crisis and you do not have a lot of time to devote to the issue, you're in luck, as the single most important thing that you can do takes just an hour or two per year: voting. Who doesn't have an hour or two a year to help save the planet?

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12) again at the polling place, when we vote for candidates and initiatives that put people and the planet ahead of corporate interests.

Not only should we cast our votes for candidates advocating for sweeping climate policies, such as carbon pricing and the Green New Deal, but if we were to think more broadly, as there are a range of other problems and injustices in the world, both environmental and social, that need our attention.

For example, the beef industry not only contributes the climate crisis through the release of methane, but causes a range of other environmental problems, such as habitat loss (40% of the land in the US. is used to feed livestock animals), the use of many trillion gallons of water, waste removal, pathogen runoff, a range of issues relating to herbicides, pesticides, and fertilizers, etc. We need to vote for the environmental initiatives that address issues like this.

Similarly, as the film The True Cost revealed, there are important and heartbreaking social justice issues across the planet, including the US, that need to be addressed – and this can only happen through political action.

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13) prior to the polling place, as we explain to five or more of our friends and family the importance of voting on behalf of our planet, it's climate, and all the life that lives on it.

As we have seen, communication is of central importance, not only in communicating to people who are not yet convinced of the importance, let alone the urgency, of the climate crisis, but friends who may be aware of the problem but are not significantly acting in response to it.

Because voting can have more impact than any action that you can take regarding the climate crisis, such as switching to largely plant-based diet or reducing food waste, explaining the importance of voting on behalf of our planet and all its life and climate to five or more friends, may ultimately have many times more impact than any diet change that you can make. Of course, do everything that you can, including changing your diet, but keeping the relative importance of everything in focus is important.

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14) at gathering places. when we join together and collectively demand climate action, such as with the Sunrise Movement.

As we have seen, nearly two out of three people in Copenhagen bike to work or school. This did not happen just through personal or political actions. Instead, what brought this about was the tireless work of activists for many years. After more than a decade of this pressure, city politicians ultimately relented and began putting in the necessary infrastructure to make biking not only safe, but pleasant in the city. Without these activists, this change simply would not have happened.

What we need is a generation of activists to pressure politicians in the US and across the globe for sweeping climate action.

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15) by protesting and through acts of peaceful civil disobedience, such as Greta Thunberg's protest outside the Swedish parliament.

Greta Thunberg was, just a short time ago, in many ways a pretty average high school student (though in other ways, an altogether extraordinarily one with the ability to see the climate crisis as a black-and-white issue and sustain a laser-like focus on the problem). Still, her modest act of civil disobedience, her "school strike for the climate," has ultimately changed the world.

Incidentally, as Wikipedia notes, prior to her school strike, Thunberg's first action was to challenge "her parents to lower the family's carbon footprint and overall impact on the environment by becoming vegan, upcycling, and giving up flying."

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16) with reading, as we learn more about the crisis and what is being done – as well as why nearly enough isn't being done.

Unfortunately, one of the things that is slowing action on the climate crisis is that it is exceptionally difficult to read through to the truth of the matter. Why? As we have seen, fossil fuel interests are spending many millions of dollars every year to confuse the public about the climate crisis.

Any college-educated American deserving of the degree should be able to carefully read through the facts concerning an issue like the climate crisis to conclude that it represents a real and present danger to our country and planet. Indeed, a high school education should be enough to sharpen the necessary reading skills. Educators like myself need to make sure that we are graduating students with these skills.

And everyone needs to take the time to sit down and carefully read about the climate crisis and what we can do about it.

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17) with rethinking, as we, as individuals and as a diverse range of human cultures, take a long hard look at how we inhabit this planet.

The title of Naomi Klein's first book on the climate crisis, *This Changes Everything*, could easily be turned into a command: if we are going to successfully survive this, "we need to change everything."

Yes, we can hope that technology will save us. And let's be clear, technological solutions are definitely welcome. However, it is both naïve and dangerous to think that technology alone can do this. Instead, we need to accept the fact that we have to make sweepingly change to how we inhabit this planet. Our mass consumerism, which seeming has no bounds, is a case in point.

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18) by sharing what we know and do with others, so that they too have a better understanding of the climate crisis and what can be done.

In one of the lectures on climate and generation, I noted that knowledge is not itself power. By that I meant that knowledge is only power when I act upon, otherwise, knowledge is power squandered. This is not to say that knowledge is not important, as it clearly is the first step to power. Rash and haphazard action without knowledge can be more disastrous than not acting or knowledge.

While we can each individually learn about the climate crisis, sharing this knowledge (i.e. communication) is crucial if we are to all get through this. As we have seen, this not only includes communicating to people who are in denial of the crisis, but to friends and family sympathetic to the cause who sincerely want more knowledge and to know what can be done. And as we have also seen, we could effectively communicate through not just her words, but also our actions.

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19) by joining with others in initiatives, from local to global, such as freegan or bicycle collectives, so that we can support each other.

Yes, it would be possible, for example, to be a freegan on your own, but as Peter Kalmus compellingly argued through his example, the support of others should be enthusiastically welcomed. By this I mean not only the help of others in collecting discarded food, but the emotional help and strength that others can offer.

After all, as being a freegan may well result in your friends thinking that you are a little odd, wouldn't it be nice to have a whole group of freegan friends who admired and were grateful for your work at this form of climate activism?

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20) with us, as we become (to echo a phrase often attributed to Gandhi) the change that we want to see in the world.

This may sound like an odd observation coming from someone who just recorded over 30 lectures, but talk is cheap. This fact is frequently brought to light by our detractors. For example, Al Gore arguably sets himself up for easy criticism by flying in private jets.

This issue is related to the idea that knowledge alone is not power. After all, if we have the knowledge that flying is an environmental disaster yet continue to do it, then we have not only squandered that knowledge, but have arguably announced to the world – through our actions – that, as far as we are concerned, it is not knowledge worth acting upon.

This is why people like Greta Thunberg try to live by the principles they endorse, by, for example, refusing to fly.

Again, this second group of ten things is not an exhaustive list, but it should be clear that none of the above (on either) list requires much by way of technological innovation, but rather just people both embodying change and joining together to demand it.

Note that both the first 10 and the second 10 of the things on our list suggest personal, cultural, economic, and political changes, rather than technological solutions, to a crisis caused by human beings. Again this is not to say that technological innovations are not needed to address the climate crisis, but this is not nearly enough by itself.

Also note that the 20 things on our list are aimed at wealthy people in wealthy countries. Since the poorest 3 billion people on the planet have emitted just 5% of the greenhouse gasses in the atmosphere, only a few things on these lists apply to them. Moreover, there is one thing that people in low- and moderate-income countries could do that would be absolutely huge, if they could somehow succeed in doing it: convince people in wealthy countries to stop emitting so many greenhouse gasses!

There is one more approach that needs to be mentioned. While what I am about to say is primarily intended for you, my students, as you will soon be thinking about careers that you can embark upon, it really applies to anyone. After all, I began a second career as a professor in my early 40s. Proving that it is never too late to take up the challenge of acting on something that you feel is important.

Students often come to me asking what sort of professions that they could take up that would have an impact on the climate crisis. They are often thinking about a major in environmental studies. Alternately, knowing that I approach things from the perspective of the humanities, they are thinking about careers of this sort.

But the simple fact is that almost anything that you think of can have a profound environmental and climate impact. For example, we have seen first-hand that communication is profoundly important through communicators like Kip Anderson, who made the film *Cowspiracy*. This not only applies to filmmakers, but to anyone. The episode of Patriot Act that you may have watched underscores that even (perhaps especially) comedians can have extraordinary impact.

Possibilities certainly abound in the STEM fields, as well as, of course, law, politics, and policymaking. Urban planners come to mind as especially important.

And, as was made clear in the documentary Wasted!, even chefs can play a very important role here.

When I was in graduate school, one of my advisers gave me some really good advice: you should focus on whatever you feel really passionate about. Not everyone follows this advice, as many people who devote their lives to doing good in the world go into fields that they feel will have the most impact.

The simple fact is that pretty much any field can have an impact on the climate crisis. If this is not readily apparent in your case, I urge you to do a little research. My guess is that within a few minutes of online research you will find people who share your interests that address the climate crisis. If you can't find any, shoot me an email and I'll think about it as well.

In any event, I am curious to hear what you think about the above 20 things that each and all of us can do to intervene in the climate crisis.