What's Wrong with Climate Politics and How to Fix It

PAUL G. HARRIS

polity

Copyright @ Paul G. Harris 2013

The right of Paul Harris to be identified as Author of this Work has been asserted in accordance with the UK Copyright. Designs and Patents Aut 1988.

First published in 2013 by Polity Press

Polity Press 65 Bridge Street Cambridge CB2 rUR, UK

Polity Press 350 Main Street Malden, MA 02148, USA

All rights reserved. Except for the quotation of short passages for the purpose of criticism and review, no part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publisher.

ISBN-13: 978-0-7456-5250-4 ISBN-13: 978-0-7456-5251-1(pb)

A catalogue record for this book is available from the British Library.

Typeset in 10,25 on 13 pt Scala by Servis Filmsetting Ltd. Stockport, Cheshire Printed and bound in Great Britain by Clays Ltd. St Ives PLC

The publisher has used its best endeavours to ensure that the URLs for external websites referred to in this book are correct and active at the time of going to press. However, the publisher has no responsibility for the websites and can make no guarantee that a site will remain live or that the content is or will remain appropriate.

Every effort has been made to trace all copyright holders, but if any have been inadvertently overlooked the publisher will be pleased to include any necessary credits in any subsequent reprint or edition.

For further information on Polity, visit our website: www.politybooks.com

Contents

	About the Author	vi
	Preface	vii
:1	Introduction	1
Part	I: Diagnoses	
2	Cancer of Westphalia: Climate Diplomacy and the	
	International System	33
3	Malignancy of the Great Polluters: The United	
	States and China	64
4	Addictions of Modernity: Affluence and	
	Consumption	93
Part	II: Treatments	
5	People-Centered Diplomacy: Human Rights and	
	Globalized Justice	119
6	Differentiated Responsibility: National and	8
	Individual	144
7	Consumption of Happiness: Sustainability and	
	Wellbeing	171
8	Conclusion	197
	Notes	224
	References	245
	Index	277

This book is about you and me – and other people. It is about our role in climate change. It is a largely human-oriented look at climate politics, identifying solutions to climate change in the behaviors, motivations, needs, and rights of people, even as the ailments that afflict climate politics are often found elsewhere, notably in the flaws of international relations and the rivalries of major nations.

I believe that the treatments recommended here, while certainly not panaceas and far from the only interventions required, would help us to stop the ailments growing worse and potentially could do so in time to avert climate calamity. Perhaps most importantly, we have nothing to lose: the treatments proposed in this book would, if taken seriously and implemented, help to make the world a better place, with a healthier environment and more people who are broadly happier and better off. We would have a world focused on meeting true human needs rather than one that protects special interests and perpetually cultivates short-term desires.

I wish to give my thanks to everyone at Polity who has been involved in bringing this book to readers, especially Louise Knight, who invited me to write it, and David Winters, who kept prodding me to keep my nose to the grindstone. Anonymous reviewers have my appreciation for providing very helpful comments that have improved the final product. As always, I am grateful to K. K. Chan for support at home over more than a dozen years.

Paul G. Harris Hong Kong

CHAPTER ONE

Introduction

Something is terribly wrong with the politics of climate change. The earth's climate is being altered in profound ways, and there is growing certainty that many communities are facing calamity if we do not change our ways. Yet far too little is being done by the world's governments and other actors to address the causes and consequences of climate change. If the world does not move aggressively to stem emissions of greenhouse gases, the environment upon which humanity depends for its wellbeing and survival will change in truly profound ways.¹

The year 2010 puts the failure of climate politics in sharp focus: in that year, global emissions of carbon dioxide (CO₃), the most prevalent greenhouse gas, reached their highest level in human history,1 and global surface temperatures reached the highest since record-keeping began.3 Average global temperatures during the decade of 2002-2011 matched that of 2001-2010 (0.46°C above the 1961-1990 average), which was in turn 0.21°C warmer than 1991-2000, which itself was warmer than prior decades, making each succeeding decade warmer than the last, revealing a clear "long-term warming trend."4 This news comes on the heels of scientists reporting that climate change is not just a problem for the future but one that is affecting humanity and the environment right now.5 It is much too late to hold back climate change, but the longer we wait to respond to it the more difficult it will be to limit its most adverse impacts, and the more costly it will be to adapt.8

Ш

Climate change is a political problem every bit as much as it is a scientific one, and arguably its technical dimensions are less important than its political ones.7 Governments and other actors, even while expressing increasing interest and concern about climate change, very rarely act in ways that match the scale of the growing environmental and human tragedy. Indeed, things are only getting worse, despite all efforts to date. There are international treaties and an enormous amount of activity at all levels, but we still do not have definitive political agreements for genuinely mitigating, least of all halting, climate change, and not enough national and local communities, industries, and individuals are willing to do what is necessary to make this happen. Put simply, with too few exceptions, the politics of climate change, despite being increasingly energetic, has failed. In the words of Anthony Giddens, "at present, we have no effective politics of climate change."8

What is fundamentally wrong with climate politics? What can be done to fix it? The answers to these questions are nearly as numerous as the experts looking at the problem. Nevertheless, we can identify a few major and chronic "ailments" of climate politics that deserve special attention, and it is to identifying, describing, and treating these ailments that this book is devoted. All of them have a commonality: fundamentally, what alls climate politics is self-interestedness—selfishness of governments, selfishness of politicians, self-ishness of businesses, selfishness of other special interests, and ultimately selfishness of individuals. Foremost may be the tendency of the international political and economic systems to perpetuate and even encourage narrowly selfish behavior of nations and other actors, and frequently to forget that human beings are at the root of climate change."

This chapter begins to describe what's wrong with climate politics and starts to propose some treatments that will be examined in detail in later chapters. It briefly describes the "tragedy of the atmospheric commons" and summarizes some of the important steps that are being taken in response to this tragedy. It identifies some of what is "right" about climate politics, albeit with some significant caveats, before describing what is most wrong with it and what can be done to treat its most chronic and persistent ailments.

The tragedy of the atmospheric commons

The latest science of climate change paints a bleak picture of the future. In its most recent assessment, the Intergovernmental Panel on Climate Change (IPCC) reported that climate change will result in a range of unwanted impacts, such as more frequent, widespread, and severe droughts and floods; an increasing number of severe weather events; accelerating loss of biodiversity and damage to vulnerable ecosystems; and many adverse impacts on human communities, such as water shortages, the spread of disease-carrying pests, harmful effects on fisheries, and loss of inhabited areas and farmland to the sea - among myriad other unwelcome impacts. 10 While the IPCC predicted that many of these adverse effects would occur much later in the century, recent science tells us that they will occur much sooner - and in many cases may be happening already - and will likely be substantially more severe than the IPCC anticipated.11 In short, the IPCC science that underlies international negotiations on climate change and most governments' responses to it - despite much criticism that the IPGC has overstated the threat - has been, if anything, far too optimistic. Climate change is a bigger problem than most people realize.

Since the start of the industrial revolution in the late eighteenth century, the atmospheric concentration of CO₂ has increased almost 40 percent, rising from about 280 parts

X

per million (ppm) to more than 390 ppm, with most of that increase occurring since the mid-twentieth century,12 Predictions point to CO, in the atmosphere doubling again by the middle of this century,11 even as experts tell us that exceeding 350 ppm makes dangerous climate change unavoidable.14 Indeed, our pollution of the earth's atmosphere has increased sharply since we became aware of climate change. Incredibly, CO, emissions from energy use alone increased 50 percent in only one generation, from about 20 gigatons in 1990 to well over 30 gigatons in 2010, the highest level ever. 15 Despite the global recession, global emissions of CO, increased more in 2010 than in any year in history.36 In 2011, they grew an additional 3.2 percent, reaching their highest level ever - nearly 32 gigatons.17 Concentrations of greenhouse gases in the atmosphere are now at their highest for the last 650,000 years.18 Stabilizing carbon emissions at 450 ppm, which some scientists believe is what is needed to limit global warming to 2°C (a dubious benchmark set by governments to avoid the worst effects of climate change), would require cutting global greenhouse gas emissions by 50-85 percent by 2050 (compared to 1990).19 Yet current trends point to global greenhouse gas emission increasing 50 percent by then, to a level approaching 700 ppm CO, equivalent.20 According to the International Energy Agency, there are "few signs that the urgently needed change in direction in global energy trends is underway,"21

Climate change is not just unfortunate; it is a humaninduced tragedy. What makes climate change especially tragic is that nobody intended it to be this way. It is a problem caused by people and industries and nations working hard to advance economically. The problem lies in the convenient but pernicious reality that everyone is free to use the global atmosphere as a dumping ground. In practice, this means that everyone is free to pollute the atmosphere, and we have done so with abandon for hundreds of years. As with most environmental tragedies, all of this is a byproduct of actors, behaving quite normally to promote their perceived interests. Neither the corporations that have most callously encouraged our pollution, notably the world's coal and petroleum companies, nor other industries dependent on fossil fuel use, such as the automobile makers, want to cause adverse changes to the earth's climate. Climate change is a byproduct of their business practices. People are the main causes of the problem, whether directly through their use of energy or indirectly by their consumption of products and services. Certainly it was (and is) not the intent of individuals, even the wealthiest, to cause climate change. Harm to the atmosphere and all of the communities and people, not to mention ecosystems and other species, that depend on it now and in the future is an incidental consequence of normal human activities intended to promote the interests of those doing the polluting.

Most tragically, those who will be most harmed by climate change - the world's poor people and communities - are least responsible for causing it. Climate change is therefore not only an environmental problem; it is also a great injustice.22 Nobody wants to do these people harm, but this lack of intent does not mean that this tragedy of the atmospheric commons is not wrong.23 Surely much of our pollution has been wrong from the time we realized that it was causing climate change.24 As Stephen Gardiner has described it, climate change is a "perfect moral storm,"25 with affluent nations and their rich citizens able to shape events at the expense of the world's poor, with current generations able to promote their interests over those of future generations, and with the world lacking a robust theory (or theories) to guide us out of the problem. This storm is building as greenhouse gas emissions continue to increase and the planet continues to warm and undergo other adverse changes from past pollution.

This tragedy of the atmospheric commons has of course

7

not gone unnoticed. The world has gone to work in trying to address it. It is likely that more scientific resources have been put into studying climate change than any other natural problem. This scientific work has had important results. It has played a key role in efforts by many nations and other actors to begin taking action. Scientists, including those supported by governments and those contributing to the IPCC's work, brought the problem of climate change to the attention of the world and they have been central to helping governments gradually realize its great importance. The inevitable political struggle to decide what is to be done about it - in particular, which nations are most to blame for causing it and therefore are required to take the most action - has resulted in myriad agreements and initiatives among and within nations. However, the politics of climate change have not kept pace with the science. The science - more precisely the changes to the earth's climate and other adverse manifestations of greenhouse gas pollution - is advancing much faster than the politics, with ever more precise and dire predictions of the unfolding tragedy being revealed while domestic and international politics remain unable to respond forthrightly even to the climate science of previous decades.

To put the problem of climate politics in context and to show how much climate diplomacy in particular lags behind climate science, it is worth bearing in mind that the potential problem of human-induced (unnatural) global warming was first theorized in the nineteenth century. By the 1970s, climate change was receiving serious international attention by scientists, and the First World Climate Conference was convened in 1979. The Intergovernmental Panel on Climate Change was created in 1988 and the Second World Climate Conference was held in 1990. International concern was manifested in the 1992 Framework Convention on Climate Change (henceforth the "climate convention"), the 1997

Kyoto Protocol to that convention, and many related agreements that have been reached during the intergovernmental negotiating process ever since. These developments show that the problem is far from new and, more importantly, that scientists and governments have been very actively engaged in it for over three decades.

We can take at least three messages away from this evolution of the climate tragedy and related politics. First, warnings about a warming planet and changing atmosphere, with all the impacts for people and societies that they entail, are by no means new. We have known about the problem for decades, with the dangers to humanity having been widely publicized for more than a quarter-century. Second, the science is telling us that the future will likely be miserable for many ecosystems and for many millions (possibly billions) of people. The more we learn about climate change, the bleaker the future appears to be and the more confident we become of that bleakness. The science will always be uncertain about some things, but the danger is very clear. Third, the international politics, diplomacy, and domestic policies surrounding climate change are grossly inadequate to the task. The science improves by leaps and bounds, the dangers of climate change become more profound each year, but the diplomacy and national responses to climate change plod along at a diplomatic pace, falling further and further behind the aggressive responses that are needed to avert the worst effects. International conferences, even those populated by many of the world's leaders - such as the December 2009 climate conference in Copenhagen, Denmark - have resulted in tepid agreements that do not match the scale of action demanded by the science and which are most often voluntary and therefore unlikely to be fully realized.

Even as the international politics remain weak, failures to implement strong climate legislation within industrialized polluting nations, such as Canada and the United States, reveal problems domestically. With too few exceptions, businesses continue to make things worse, for example by encouraging people to consume things they do not need (even if on rare occasions they are encouraged to consume "green" products), and environmental nongovernmental organizations have not been up to the task of driving and implementing needed changes on the ground.

James Hansen starkly describes the failure of governments to tackle climate change effectively, even those governments that are doing the most. 27 Despite the urgent need to reduce greenhouse gas emissions and to phase out fossil fuel use within a few decades, most of these governments say that they can do this through new international agreements akin to the Kyoto Protocol. To this Hansen responds:

Ladies and gentleman, your governments are lying through their teeth. You may wish to use softer language, but the truth is that they know that their planned approach will not come anywhere near achieving the intended global objectives. Moreover, they are now taking action that, if we do not stop them, will lock in guaranteed failure to achieve the targets that they have nominally accepted.²⁸

How can Hansen be so confident in condemning governments? It is because of what they are doing: allowing construction of many additional coal-fired power plants (and permitting environmentally destructive coal mining), developing tar sand deposits, leasing vast new areas for oil and gas exploration, and encouraging hydraulic fracturing for gas, among a range of other actions that will free up enormous amounts of fossil fuels for combustion – just the opposite of what is required.²⁹ To make matters even worse, governments routinely subsidize these activities, making alternative energies relatively more expensive than they would be otherwise, and of course far more expensive than if the alternatives were subsidized instead.

Thus the tragedy of the atmospheric commons is growing worse, starkly revealing the failures of climate politics. The Having said this, it would be unfair to say that absolutely everything is wrong with climate politics. Many developments in recent years offer some reasons for hope, and certainly they can be built upon when aiming to overcome obstacles to cooperation and action to combat climate change. A worry, however, is that some of the ongoing and proposed solutions to climate change may themselves engender additional problems.

What's right with climate politics (with caveats)

Before turning to what most ails climate politics, it is important to recognize positive and fruitful developments, some of which have the potential for substantially mitigating climate change. Without any doubt, there has been tremendous progress in the world's attention to climate change and in efforts to address it. This progress ranges from the scientific to the diplomatic, from international to individual. To begin with, the science of climate change has improved greatly, reaching a very advanced level that provides increasingly detailed guidance to government officials and industry. This is in no small part due to the initiative of governments to invest in studying the causes and consequences of climate change. The number of scientists working on every aspect of the problem has grown over the last quarter-century, and funding for their research has grown significantly, as has the number of outlets for their work, notably expert journals.31 The result is that knowledge of forces driving climate change and the consequences for ecosystems and societies provides an increasingly clear picture of general changes and, in many instances, quite clear indications of the impacts to come. Consequently, there is now no reasonable doubt that

anthropogenic emissions of CO, and other greenhouse gases are contributing to unnatural global warming and other manifestations of climate change.

Much of this research has been driven by the international politics of climate change, notably creation of the IPCC, which operates under the auspices of the United Nations (UN) Environment Program and the World Meteorological Organization. The IPCC's periodic assessment reports have in turn been highly influential at all levels of climate politics, although they have also been subject to more than a little controversy. The findings of the IPCC and independent scientists have been translated into interest among leaders, publics, and businesses, and they have to varying degrees driven international responses, especially over the last decade as governments have become more aware of the need for stronger action to limit greenhouse gas emissions. In sum, the science is getting better and it is being taken more seriously.

Having said this, the science of climate change would likely be doing much more good were it not so heavily politicized,32 Incredibly, millions of people in some countries simply do not believe in climate change or do not believe it is caused by human actions. For some it is considered "natural" or part of God's plan for the earth. "Climate denial" has become one of the myths that underpin conservative political ideologies in some countries, and it has become a mainstay of right-wing political parties in Australia and the United States. Ideology and willful ignorance continue to trump science in these contexts, exacerbating fear in many developed nations, or at least in their legislatures, of the perceived costs of taking concerted action to reverse greenhouse gas emissions. Those same nations are often opposed to major foreign assistance programs that will be needed to help poorer countries adapt to (and eventually help to mitigate) climate change. Special interests have been able to prevent action by making the claim that the economic costs of addressing climate change will far outweigh the benefits. Some of this is caused by ideological blinders, some is outright ignorance – including that which has been actively fostered by special interest groups and the fossil fuel industry³³ – but it is all important for policy responses and individual commitment to take action (see chapter 3).³⁴

Despite enormous disagreements over the nature and extent of the problem, and despite profound differences among governments regarding their perceived national interests, diplomats have been able to arrive at a number of climate change agreements, notably the climate convention, the Kyoto Protocol, and subsequent related agreements that now constitute a quite robust international legal infrastructure - the climate change regime - comprising shared principles and norms for nations' cooperation in this issue area (see chapter 2). These international agreements are far too weak, but without them the world might be further behind in tackling climate change. In many cases, the agreements, particularly the Kyoto Protocol, have provided some impetus for nations to begin implementing policies that are already limiting their greenhouse gas pollution, albeit not nearly enough to begin solving the problem. The evidence for this is found most significantly in parts of Northern and Western Europe where some governments have been moving quite aggressively - at least relative to what has been happening historically, if not so much relative to the scale of the problem - to find ways to restrain and even reduce greenhouse gas pollution from within their borders. At the very least, we must give some credit to diplomats and international organizations for working hard in recent decades to create institutions and to start implementing agreements that have the potential to mitigate climate change, at least a bit.35

The Kyoto Protocol and other international initiatives have also given impetus, at least in part, to voluntary action around the world, including by regional governments, cities and local communities, civil society organizations, individuals, and more than a few businesses (and entire industries) that are increasingly taking the problem of climate change seriously, ³⁶ Some of these actors are genuine vanguards in leading the fight against climate change. ³⁷ By working together across domestic and international politics, they show that there is significant potential in multilevel governance to address the problem. ³⁸

Matthew Hoffman has described the plethora of "climate governance experiments" at almost every level. 39 Examples of some of these experiments include: social networking systems for environmental professionals; cooperation among municipalities on climate change mitigation, adaptation, education and the like; voluntary cap-and-trade schemes and carbon markets (where permits to pollute are traded); pledges by colleges and universities to cut greenhouse gas emissions; regional cooperation among nations on technology development and other actions to limit climate change; networks of cities to collaborate and share best practice; shared databases and registries of greenhouse gas emissions; partnerships to use "carbon finance" to enable major urban areas in the developing world to address greenhouse gas pollution; networks of local groups to encourage lowering of "carbon footprints"; government-to-government agreements to develop "carbon capture and storage"; labeling, standard-setting and greenhouse gas registries for use by businesses; partnerships between industries and nongovernmental organizations for greenhouse gas reductions; commitments by cities in Europe to go beyond European Union greenhouse gas cuts; agreements among religious leaders to encourage followers to protect the atmosphere; efforts by institutional investors and insurance corporations to pressure companies to address climate change; cooperative agreements between sub-state regions and foreign governments (for example, between California and the United Kingdom); and associations of business leaders to sharing best practice on climate change and environmental sustainability.⁴⁹

All of these activities notwithstanding, the pace and scale of action on climate change has been far too slow relative to the pace and scale of the problem. Even as greenhouse gas pollution increases, the planet becomes warmer and the adverse effects of climate change manifest themselves, the international community and governments have moved at what might be generously described as a measured pace. International agreements are slow to be reached and they are weak in their requirements for cuts in greenhouse gas pollution, not to mention their inadequate attention to addressing the consequences of inevitable climate change and to helping those who will suffer from it. Most developed nations have taken on commitments under the climate convention. in keeping with their historical greenhouse gas pollution, but for the most part they refuse to take concerted action without commitments from large developing countries, such as China and India, to also take action. Developing nations blame the rich ones and thus refuse to act, with the upshot being that few countries are willing to take robust unilateral action to address the problem.

Even if fully implemented – which is not happening – all international agreements on climate change would not be enough to reverse global warming. This is made worse because the climate regime's regulation of emissions is based on production rather than consumption, providing an incentive to essentially export greenhouse gas pollution from developed to developing nations. Indeed, many of the cuts in greenhouse gas emissions of the affluent nations have been replaced by even more emissions from developing countries, in part because polluting industries from the developed world

have moved abroad, with the emissions effectively being reimported via world trade. 42

Thus, despite the complicated and entrenched climate change regime, and despite the many experiments at all levels by national and local governments, individuals, and business to reduce greenhouse gas pollution and otherwise respond to climate change, the problem grows worse as time passes. International agreements lack teeth and they lack sufficiently wide participation. The political response to climate change has therefore involved baby steps when giant leaps are required.

One potential bright spot is technology. The improved science of climate change, and to some extent the politics, is fostering technological developments that are making stronger action potentially easier and more efficacious. New technologies are making energy use more efficient, for example in more efficient automobiles and factory equipment, and in offering opportunities to avoid pollution through new ways of doing things, for example video-conferencing to replace business travel. Some of the development and deployment of new technology is made possible by government policies, for example when governments encourage installation of windmills and other sources of alternative energy by guaranteeing them tariffs with rates of return sufficient for reasonable profit. Other technologies come from industry research aimed at capitalizing on costly energy supplies, businesses preparing for a future of stricter controls on greenhouse gas pollution, and entrepreneurs who see that there will be fortunes to be made in energy efficiency and other technologies that reduce the world's impact on the atmosphere. Technologies are also being developed, albeit very slowly and controversially, to capture carbon emissions from power plants (so-called carbon capture and storage) and to possibly "geo-engineer" the environment, for example by enhancing carbon uptake by the oceans.43

Related to the drivers of new technologies are economic innovations that are being brought to bear against climate change, particularly in schemes for emissions trading in which governments set emissions caps and allocate allowances for pollution from industries, allowing those that fall below their allowances to sell the surplus to others. Sometimes businesses do this internally, and some have pushed for it internationally. The key point is that market incentives are increasingly being created and used to limit and potentially drive down greenhouse gas emissions.

Technological and economic innovations will be a key tool for effectively addressing climate change. However, technology is no panacea and can even pose dangers. "Technophilic optimism," which assumes that technologies will allow economies to simultaneously grow and reduce energy use fast enough to combat climate change effectively, is not supported by historical experience.⁴⁵ Paradoxically, even energy efficiency, an important pursuit that needs to be stepped up, has potential drawbacks that will have to be addressed. For example, while more efficient technologies can lead to individuals using less energy in aspects of their daily lives, it can also enable more people to use more energy, leading to an overall increase in pollution. If "low-carbon" cars are developed without limiting the number of them on the roads, a "Jevons paradox" might result: as cars (or other devices) become more energy-efficient, they are likely to be adopted much more widely by consumers and thus more total energy will be consumed than before the new cars were developed.46 Even industries that become more efficient can become more harmful. For example, the airline industry has substantially improved the efficiency of airliners, but the impact of the entire industry has grown substantially as more people take to the air in more aircraft,

Thus, without careful management of the consequences, energy efficiency can paradoxically result in *more* energy use

overall, particularly as the developing world adopts western lifestyles. Development of clean technologies without simultaneously restraining traditional economic growth will not reduce pollution (see chapter 4).⁴²

There is even greater potential risk involved in other technological pursuits, notably geo-engineering and carbon capture and storage. ** Carbon capture from coal-burning facilities requires burning more coal (because the extraction of carbon requires additional energy), and the carbon that is stored underground might find its way back into the atmosphere, negating the entire carbon-capture enterprise or possibly making things much worse. *** Geo-engineering might involve a planetary experiment with unknown consequences for life on earth, and efforts that do not substantially reduce CO₂ emissions doom the oceans, which are already suffering from acidification caused by carbon pollution. ***

Solving the problem of climate change requires that we use less energy until environmentally benign, nonfossil-fuelbased sources of it become widely available. However, as with some existing technologies, for example nuclear power, the expectation that technologies can solve the problem of climate change and ongoing greenhouse gas emissions in particular diverts our attention away from acting aggressively right now to reduce our impact on the earth's atmosphere. In other words, technology, or the prospect of it, can make governments, industries, and individuals lazy about thinking about behaviors causing climate change and more immediate alternatives to them. People, governments and businesses remain largely in denial, thinking that we can wait a bit longer to tackle this problem.51 There is a faith that there is still time to find a solution. However, action is needed now - or truly massive effort will be required in the near future - if the world has any hope of avoiding the most dramatic impacts of climate change.

Education has great potential to overcome public apathy and reticence about changing behaviors and accepting (or pushing) government action to limit greenhouse gas emissions. ⁵² Climate change is not yet fully integrated into curricula at all levels in most countries, even in those where education is of high quality, to say nothing of where basic education is lacking. However, climate-education programs have increased in number, particularly in developed countries, since the 1990s. Likewise, media coverage of climate change issues has generally increased. This coverage waxes and wanes, often increasing just before and during prominent international climate change conferences, and falling thereafter. The steady news generated by climate scientists has inevitably resulted in more coverage in the popular press, on television, and through popular online sources of information. ⁵³

But not all of this coverage is helpful in informing the public; the press is often most interested in reporting controversies among scientists and their critics. In some nations, particularly the United States, much of the media coverage perpetuates the skepticism of those individuals, industries, and politicians that want to deny the reality of climate change.54 An example was reaction to the 2000 "Climategate" episode in Britain, occurring not long before the Copenhagen climate conference, in which scientists' email messages were hacked and used by skeptics of climate change to suggest that the science was somehow manipulated to make climate. change appear worse than it really is.55 Alas, if only this were true; instead, scientific findings confirm almost daily that climate change is under way and will have severely adverse consequences for the world. Thus the way that climate change is reported and taught in schools is vitally important because extensive polling research shows that people who understand the basic science of climate change support voluntary and government action to combat it. 16

Related to both education and media attention given to climate change is another positive development that could feed into more effective climate politics: growing awareness among young people of climate change, and indeed other environmental issues, consistent with some movement toward "post-materialist" values over the last half-century.⁵⁷ It is important not to overstate this development; young people of today may grow up to become just as polluting, if not much more so, than their parents. In the poorest communities, this may be inevitable in the short term because more material wealth and energy use is necessary to meet people's basic needs. The extreme danger is that more people around the world are becoming "new consumers" who mimic and multiply atmospheric pollution that has historically been caused by people in the developed world (see chapter 4).⁵⁸

Another thing that is right about climate politics is the recognition (often practiced in the breach, admittedly) that climate change is a matter of justice. Recognition has been particularly clear with respect to international justice. Nations have agreed that there is "common but differentiated responsibility" for climate change, with the developed countries that are historically most responsible for contributing to the problem obligated to take action first and to do much more than those who are less responsible.59 This is important because it means that the international politics of climate change have recognized the need for and the right to economic development in poor countries. Aggressive efforts to address questions of justice and inequality are central to addressing climate change.60 A question becomes at what point newly developed countries should take on obligations to reduce emissions alongside the world's developed nations.

These and many other indications of some progress in dealing with climate change (and related caveats) deserve to be recognized. Indeed, there is more progress than noted here, so it is not entirely unreasonable for an optimist to feel some measure of hope for the future. However, each bit of progress tends to present its own set of problems. Generally speaking, the overall problem is that those things that are right with climate politics have one big thing that is wrong with all of them: they are too little, too late. Put another way, what is right with climate politics is currently overwhelmed by, and often undermined by, what is wrong with it.

What's most wrong with climate politics

Despite there being quite a lot that is "right" with climate politics and the world's responses to the problem, things continue to grow worse. Surely the most fundamental failure of climate politics is the fact that global pollution causing climate change continues to increase at an increasing rate. Another great failure is that the resources needed to help those most vulnerable to the effects of climate change have been paltry so far, and will surely not meet demand in the foreseeable future (if ever). In a nutshell, what is wrong with climate politics surpasses what is right with it. This poses a big question: What exactly is wrong with climate politics? The answer, or more accurately the answers, to this question would require many books to describe, let alone to analyze fully. Nevertheless, it is possible to distill what is most wrong with climate politics. Fixing that would do a great deal to help mitigate both the causes and consequences of climate change. With this in mind, Part I of the book focuses on a few problems that are fundamental to the failure of climate politics, notably the self-interestedness of actors, from nations to individuals, and the selfishness that is built into the economic and social structures that influence people's lives. Fundamental to the problem is the all-too-frequent failure to recognize that human beings are at the heart of climate change.

Three diagnoses at international, national, and individual levels are *most* important for understanding the failure of climate politics:

(1) the cancer of Westphalia: the Westphalian international system, which encourages nations to fight for their narrow, short-term perceived interests and makes truly effective international cooperation on climate change extraordinarily difficult:

(2) malignancy of the Great Polluters: the United States and China, which together produce over one-third of global greenhouse gas pollution but which so far have each refused to compromise on the demand that the other commit to doing much more to limit its pollution; and

(3) addictions of modernity: the growing pollution that comes from material consumption, energy use, and other aspects of modern lifestyles that are spreading from the developed nations to the developing world as more people join the global middle class.

These ailments have been collectively chosen as the focus of what is most wrong with climate politics because they are fundamental drivers of many of the other problems that are preventing robust action on climate change. Just as physicians must treat the most urgent, systemic ailments of a very sick patient before addressing the less important ones, the diagnosis here is necessarily biased toward a few big problems. The nation-state system preoccupies policymakers, diplomats, experts, and even individuals with top-down, nation-centric solutions and thus distracts us from the roles of other important actors. The United States and China, while not the only national causes of climate change, find themselves at a point in history where they can, by themselves, prevent global solutions to the problem. And the modern (western) lifestyle – entrenched in the United States and most of the developed

world, and spreading fast to China and other up-and-coming developing nations — is utterly unsustainable from the perspective of climate change, and indeed from other perspectives, including those of wider environmental health and human wellbeing.

The cancer of Westphalia is extremely pernicious. The selfishness of nations has consistently trumped concerns about the dangers of climate change. International negotiations under the auspices of the United Nations have comprised many international conferences to produce an overarching framework convention followed by more negotiations to reach a protocol. Those negotiations have in turn been followed by yet more negotiations on how to implement the convention and the protocol, and continuing negotiations on what will come next. This process has already lasted a generation, and there is no end in sight. While clearly driving much of the action on climate change, international negotiations as practiced to date are simply not up to the task. The international process is unlikely to end soon - any more than, say, the halfcentury-long international negotiations on world trade are likely to be abandoned - but the process needs a fundamental rethink and requires a more multifaceted political approach. One of those facets is bringing human beings into the equation much more explicitly. The international negotiations have, in one sense, become a distraction or diversion from local action. They have enabled individuals and communities and entire countries to justify, at least to themselves, that it is rational and acceptable to sit back and wait for global solutions to be agreed by governments before the rest of us take much more concerted action.

With this in mind, chapter 2 describes the nature and impact of the Westphalian system of sovereign nations (so called because it is dated to the Treaty of Westphalia of 1648). Despite increasing action by civil society and various forms

of climate-related "governance without government" beyond the nation-state, this system has fundamentally influenced the course of climate politics, both internationally and within nations. 61 The preoccupation with nations and their narrowly perceived national interests is not surprising; this is how most problems crossing borders have been dealt with throughout modern history. Indeed, it has naturally followed that climate change has become the province of the premier collective organization of nations - the United Nations. Chapter 2 describes the UN-brokered climate change agreements and some of the fundamental international principles that underlie international negotiations on climate change. The chapter also explains how the relatively narrow and shortterm perceived interests of major nations have prevented the international community from agreeing to the robust policy responses that are required to avert the most serious consequences of climate change. Without a significant shift in emphasis away from the narrow interests of nations toward greater focus on the interests of people (and the environment on which they depend), diplomats will be unable to respond effectively and aggressively to climate change.

Chapter 3 looks at the world's most malignant (in the physiological sense) polluters: the United States and China. The United States was until the mid-2000s the largest national source of greenhouse gas pollution causing climate change, and remains the largest historical polluter. What is more, average per capita emissions in the United States are among the highest in the world (despite having fallen somewhat between 1990 and 2010). China is now the largest national polluter, but its per capita emissions remain much lower than US emissions, Nevertheless, its per capita emissions are above the global average, well above most developing nations, and rising quickly. Because the United States and China together account for more than one-third of global greenhouse

gas pollution, it will be impossible to address the problem adequately without their concerted action to stem and ultimately reverse emissions. However, neither of these nations is legally or formally required by international agreements to cut their greenhouse gas pollution. The United States refused to ratify the Kyoto Protocol, and China, as a developing country, is not required by the protocol to undertake greenhouse gas cuts. Instead of collaborating in earnest to mitigate global warming and limit the worst effects of climate change, the United States refuses to take robust action until China agrees to limit and eventually reduce its emissions.64 China refuses to act until the United States fulfills its historical responsibilities by cutting its emissions and providing major funding to poor countries affected by those emissions. The selfishness of China and the United States, as nations and national communities, has overwhelmed the now-obvious need for subsuming their perceived, short-term national interests to the requirement for bringing the tragedy of the atmospheric commons to an end.

Chapter 4 examines addictions of (and to) modernity that are the driving forces behind greenhouse gas pollution: the world's reliance on fossil fuels and the relationship between that reliance and material consumption. Rather than the numbers of people on the earth being the main cause of climate change, it is how much those people consume beyond their requirements that matters most. A distinction must be made between fulfillment of human needs and environmentally reasonable aspirations which too many people are now lacking, on one hand, and the "affluenza" of material consumption that characterizes the lives of most of the world's affluent people, on the other. One problem with the international political response to climate change is that it diminishes the role of people. As people become affluent, they consume at increasing rates, akin to an addiction that can never be

fully satiated. Consumption characterizes modernity, economic systems, and business models. This addiction is not new; what is new is that it is no longer the affliction of the developed nations alone. Today it is also a growing affliction of much of the developing world. As economies of developing nations grow, governments and people there are making the same unsustainable mistakes committed in the developed countries: nurturing a love for modern material goods, private automobiles, air travel, and the consumption of copious amounts of red meat and foods that are high in calories but low in nutrients (western "fast foods"). This increasingly speedy spread of material consumption around the world is not only accelerating emissions of greenhouse gases. It is also changing the political calculus for the world's responses to climate change.

A feature of this expanding tragedy is that just when knowledge and awareness of climate change have grown, few people, like few governments, are willing to change their behaviors substantially (if they are already polluting heavily). and the growing number of new consumers in developing nations are (not surprisingly) unwilling to forgo modern lives that engender greenhouse gas pollution just as was done by most people in the developed countries. Nor are many people, notably the affluent who can afford it, normally willing to pay substantially more for energy. People want to enjoy modernity as it is currently conceived, despite the consequences for both environmental and human health. Modern lifestyles, modernity more generally, and related conceptions of how to achieve happiness mirror what nations seek to achieve: more consumption and growth in material output, and the growth of capital to allow even more of this in the future. And even as some countries begin to adopt measures that enable and encourage people to live more sustainably, increasing pollution from growing material consumption and affluence

in the developing world overwhelms these efforts. The selfinterestedness of people – although not of the world's poor, and not always intentional selfishness – precipitates climate change and stands as a fundamental obstacle to addressing the resulting tragedy.

To be sure, experts will disagree on what is ailing climate politics. But these diagnoses are, at the very least, among the most critical. What can be done to treat them?

How to fix what's most wrong with climate politics

We can point to many treatments for what ails climate politics. It is important to address as many problems with as many solutions as possible. Part II of the book is again biased toward addressing the most urgent ailments with the most essential treatments for escaping the tragedy of the atmospheric commons. As with the diagnoses of the problem, experts will disagree on the best treatments. While the treatments proposed here are not the only important responses to climate change, they are among those that should be administered urgently. Much like an ailment of the human body, treatment can be applied both systemically and locally.

Among the most essential treatments for climate politics are the following, each generally oriented toward a different level of application – international, national, and individual:

- people-centered diplomacy: diplomacy and international agreements that put human beings, including the needs of the world's poor and the duties of the world's affluent people, at the heart of responses to climate change;
- (2) differentiated responsibility: a formula for international cooperation and domestic policies premised on putting the common but differentiated responsibilities of

individuals alongside the common but differentiated responsibilities of nation-states, thereby diminishing difficult obstacles to action put up by national interests; and consumption of happiness: a campaign to cultivate human happiness through full and rewarding lives that are premised on sufficiency and environmental sustainability rather than limitless yearning to find satisfaction and pleasure through excessive material consumption.

Chapter 5 begins with the first treatment: people-centered diplomacy. The politics of climate change have focused intently on the role of nations, especially at the international level, as one would expect from traditional international negotiations. This is understandable, but the fundamental drivers of climate pollution are not nations per se. Nation-states as legal entities are ultimately only ideas and institutions. It is people, especially the world's affluent people, who unnecessarily drive climate change. In contrast, those who will suffer the most from climate change are not nations or governments per se - the usual recipients of sympathy and of nominal aid related to climate change - but people, especially the world's poor. Their rights to a sustainable and livable environment are being taken away by behaviors of the world's affluent people. An antidote to the cancer of Westphalia involves moving away from the preoccupation with the roles of nations in responses to climate change. At the very least, it requires nations to do more to bring people into calculations of climate politics. Rather than being appendages of climate politics, people their rights, needs, capabilities, and obligations - ought to be the primary objects of international agreements and policies.66 Put another way, demands for climate justice and fairness among nations ought to be explicitly supplemented with climate justice for and among people.⁶⁷ This entails a move away from Westphalian notions toward global (what some

might label "cosmopolitan") conceptions of climate politics. Significantly, the remedy is not to abandon the international climate change regime. Instead, the aim is to reorient it more toward people, in the process treating the human causes and consequences of climate change while creating the conditions for more effective cooperation among nations, including the world's greatest polluters — China and the United States.

Chapter 6 examines the distinctions between the common but differentiated responsibilities of nations - an established theme in climate politics - and the common but differentiated responsibilities of individuals. The common but differentiated responsibilities of nations - with the developed ones taking the lead in all actions as the capable developing ones do their best - should be accompanied by common but differentiated responsibilities of individuals: affluent people, regardless of their nationality, should be brought into the global political equation. This better reflects the reality of what causes climate change and it provides a potentially viable way out of the yougo-first syndrome that currently pervades climate diplomacy generally and US-China relations in particular. Under this formula, some (developing) nations would remain legally absolved of responsibility, but their affluent citizens would join affluent people everywhere in taking action. This would bring more of the world's individual polluters into the equation and make agreement among nations politically easier. In short, the world's newly affluent individuals should no longer escape scrutiny. If they were to take action, more political pressure would be felt by affluent people in the developed world, and by their governments, to limit their polluting behaviors.

Focusing on China and the United States, chapter 6 shows how economic development and growth have altered both the practical and moral calculus of climate politics. Not only are these two nations legally exempt from greenhouse gas cuts under existing international agreements, by implication all of their citizens are also exempt. Most will agree that it is not only unsustainable but also absurd that the United States and all Americans continue to enjoy this legal immunity. It might be justifiable for China and especially poorer developing nations to do so because they are far less historically responsible for the problem. However, while per capita emissions of greenhouse gases in most of the developing world remain below those in the developed world, collectively developing countries now produce more than half of all greenhouse gas pollution. As a practical matter, this will have to be addressed in successful climate politics. A solution may be found in focusing on the newly affluent consumers in China, which now number in the hundreds of millions. Global ethics tell us that the pollution of an affluent person in China is just as wrong as pollution of an affluent person in the United States, even while China as a nation-state is less obligated (in terms of historical pollution) than is the United States. Thus one treatment for climate politics is to move beyond attempts to persuade China as a nation-state to act alongside the United States, instead working to persuade the Chinese government that affluent people in China (that is, a minority of the population) ought to act alongside affluent Americans (that is, most people in the United States).

Chapter 5 will focus on treatments for what is wrong with climate politics in international negotiations, while chapter 6 will examine treatments for overcoming the political stalemate between the largest national polluters. Those treatments are largely top-down, albeit with people as their objects. In contrast, chapter 7 is concerned with what governments can do and especially with what individuals can do, and why they should, in their self-interest, do it. A powerful world economic and social structure, premised on the heavy use of environmental resources, dominates and largely shapes the lives of individuals, corporations, and governments. Capitalism has

arguably brought great benefits to humankind, and its spread through globalization has resulted in improvements in human welfare in many developing countries. But one pernicious consequence of the global economy has been environmental destruction and unsustainable levels of pollution that are increasing as developing countries and their people grow and consume more natural resources and more of the material "goods" that characterize modern lifestyles. The economy in which we live simultaneously commodifies the atmospheric commons and encourages dependence upon – nothing short of an addiction to – carbon-based fuels; coal, petroleum, and natural gas. It is extraordinarily difficult to escape from this structure without redefining our goals and our lives.

An alternative to this addiction is a way of life that meets people's material needs, and their personal and societal aspirations, while stopping short of fulfilling their limitless (and unachievable) desires. Everyone needs to be free of poverty; everyone needs and deserves adequate nutrition, shelter, health care, education, and the like. But everyone does not need to consume vastly more than one requires. Indeed, despite common wisdom and messages in advertising and media, affluence much beyond a point of sufficiency does not generally bring happiness and human wellbeing - certainly not enough to justify causing enormous suffering to future generations. This is because affluence is routinely manifested in unnecessary material overconsumption rather than in consumption of experiences that make people truly happy. Indeed, excessive consumption can and does bring unhappiness. In contrast, a life of sufficiency can be both fulfilling to those who have it and environmentally sustainable (even with a larger global population). Climate politics and related government policy would do well to spread this message and to implement programs that make it possible and even easy for people to live more happily and more sustainably.

Conclusion

The diagnoses here for what ails climate politics are necessarily partial. They will have to be addressed alongside the many other things that are wrong with the world's responses to climate change. The recommended treatments in this book are also partial and indeed aspirational. But the same could be said about treating urgent health problems faced by individuals who have not responded to traditional treatments, or to more chronic problems, such as weaning individuals and societies off cigarettes. These are ongoing tasks that are well established in many developed societies, thanks to healthcare vanguards who continue to battle their cause. Meanwhile, more and more people are taking up smoking in the developing world, creating an even greater threat to human health. Despite this daunting challenge, most people will agree that the battle against smoking needs to continue, and indeed should be strengthened, to avert a global health crisis. It is also a major ongoing struggle to improve people's health in the West - to get people to "eat their vegetables," exercise, and so forth - even as modern diseases spread rapidly throughout the developing world as people there adopt western diets and lifestyles. Nobody doubts the need to address these health problems, but few would be foolish enough to think that remedying them will be the least bit easy. The cures need to be pursued nevertheless.

The same is true for climate change and associated politics in particular; there is much wrong and there are many potential cures. We need to face up to the disease and get to work on treating its most urgent causes – despite the enormous challenge. The aim of the chapters that follow is to help us focus more on doing just that. Part I Diagnoses