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THE PARIS AGREEMENT

Climate Change,
Solidarity, and
Human Rights

Judith Blau



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To a few former students
Annette, Asif, Berhane, Gordana, Keri, Marlese, Mim,
Nawsheen, Niobra, Rafael, Raj, Tanya

PREFACE

November 2016 may very well be remembered as the most decisive month ever for the fate of humanity. Indeed, for the fate of the habitable planet. On *November 4*, the Paris Agreement entered into force. It is the international treaty that binds states to make the transition from fossil fuels – namely fuels that are responsible for emissions that warm the earth – to renewable energy and establishes guidelines for rich countries – largely responsible for emissions now in the atmosphere – to aid poor countries acquire technologies for renewable energy, notably solar, wind, and tidal technologies. *November 6* was the opening day of meetings in Marrakesh, Morocco, to launch the Paris Agreement. (Officially, it was the 22nd Conference of Parties, or COP-22.)

Over 25,000 people attended. They included scientists, heads of state and ministers, farmers, representatives of faith groups, indigenous peoples, fisher men and women, CEOs of multinationals, people from nongovernmental organizations, and journalists. It became clear in the presentations and discussion sessions that most advocated that stricter limits be placed on planetary heating than earlier proposed – 1.5 degree Celsius rather than 2 degree Celsius– and that fossil fuels be eliminated by 2050, if not sooner. Then it was announced that November 2016 would probably be the hottest month on record and 2016 the hottest year ever since records were kept. It was evident to any one watching these meetings¹ that this announcement made attendees even more determined to convince the rest of the world that the sooner countries meet targets to end reliance on fossil fuels the safer we will all be.

But then, as if a bolt of lightning had struck, attendees learned in the early morning of November 9 that the man who had proclaimed, “climate change is a hoax,” was elected president of the United States. Anxiety mixed with anger, and a mood of despondency settled over the meetings for a day or two. But then the mood dramatically shifted as participants expressed even greater determination to forge international partnerships for collaboration and cooperation to combat climate change. In meeting after meeting, participants stressed that it was imperative to reduce the use of fossil fuels (notably, coal and oil), to end greenhouse gas emissions, and to adapt renewable energy (notably, solar, wind, and wave energy). Not only was the 1.5 degree Celsius limit affirmed by countries, but rich countries contended they would help less developed countries acquire renewable, or green, technologies. US Secretary of State, John Kerry, gave a powerful, positive, and bold speech, affirming the imperative of global cooperation to halt the pace of climate change,² and there were hints that China may take on the leadership role abdicated by the United States.³

To be sure, as this book goes to press, on November 19, 2016, it is still possible that Trump will be persuaded that planetary warming is inevitable and that he must commit to advancing the efforts the United States is already making to reduce the intensity and speed of climate warming. Four years are required of any party to exit the Paris Agreement,⁴ and, besides, many US businesses (including large multinationals) have already seized opportunities to develop green technologies, and US states (notably California) and cities (especially coastal cities, such as Boston, Honolulu, Miami, New York, and San Diego) are well along in their preparations to reduce emissions and to lessen the impact of sea rise. On the last day of the Marrakesh convention, the White House released an ambitious report setting out plans for the United States to reduce emissions and store (or sequester) carbon. The aim, it states, is to reduce greenhouse gases by 80%, by year 2050.⁵ It is not clear whether the report allayed the anxieties of the attendees or not, but the plan is unambiguous. That is, the United States will fully cooperate with other countries to ultimately aim (within the century) for zero greenhouse gas emissions.

It cannot be stressed enough that the entire world is at risk if the United States abandons its responsibilities under the Paris Agreement. This is because the United States is already one of the top two emitters in the world, and were it to withdraw from Paris, it would be responsible for an ever-growing proportion of the world’s emissions as other countries

reduce their own emissions. One can assume that prospects of this happening are not great because long before the United States could inflict much damage, the rest of the world would step in – to inflict, say, trade embargoes, sanctions, or boycotts. The consequences of allowing US emissions to go unchecked are too terrible to even imagine.

BACKGROUND

In Paris, on December 12, 2015, at their 21st international conference on climate change (COP-21), world leaders adopted the Paris Agreement by consensus. They agreed to hold the global average temperature below 2 degree Celsius above preindustrial levels and to pursue efforts to limit the temperature increase to 1.5 degree Celsius above preindustrial levels. They made pledges clarifying the steps their own countries would take to meet their own target objectives, and agreed that developed countries would assist developing countries to achieve renewable energy goals. In less than a year after the adoption of the Paris Agreement, on November 4, 2016, it became an international treaty, in fact, a treaty with unprecedented international support. Just to note again, the COP-22 conference in Marrakesh began just 2 days later, on November 6.

The cause of global warming is primarily carbon dioxide (CO₂), which makes up most of the greenhouse gases (GHGs) that trap heat in the atmosphere, warming the earth and oceans. Carbon dioxide is a by-product of the burning of fossil fuels (primarily coal, oil, and natural gas), which is thrown into the atmosphere as these are burned. It is not as if carbon dioxide somehow disappears. On the contrary, it remains in the atmosphere for a very long time, leaving traces up to 1,000 years.

The global concentration of carbon dioxide in the world's atmosphere today far exceeds what it has been over the last 650,000 years and it is about 30% higher than what it was about 150 years ago. As the planet warms, there will be consequences. Just to mention a few: melting ice in the Arctic and Antarctic will increase the rate at which the seas rise; some places on earth will be too hot for habitation as well as for crops; many countries (Small Island States) will simply disappear; many species of birds, animals, and insects will vanish; and, besides warming, the weather will become increasingly unstable and unpredictable.

Given the extraordinarily high levels of GHGs already trapped in the atmosphere, it is necessary to reduce GHG emissions to zero by 2070 to limit the global average temperature increase to meet the goal of 1.5

degree Celsius. Is it possible? Of course, it is possible; there are many sources of renewable energy: solar, wind, tides, and nuclear as well as geothermal, biomass, and biodiesel. Indeed, the more complicated question is this: How will the world's peoples achieve this? More specifically, what are the social foundations that make such global cooperation possible? My thesis is that our equalities and our differences unite us, in solidarity, in the pursuit of collective well-being and a habitable planet.

As human beings, we are all equal and we are all equally entitled to dignity and fundamental human rights. This is the premise of the Universal Declaration of Human Rights, many international treaties, and most country constitutions. In fact, this is what we mean by the terms "humanity" and "humankind." At the same time, we also fully recognize that no two humans are identical or the same; that is, we have different languages, families, personalities, and in all other ways we are different from one another. That we are all equal human beings and all different human beings may be a paradox, and, yet, it is a paradox that we happily accept. Besides, because we acknowledge that this duality is the basis of humanity; we have the capacity for empathy as well as for recognizing vulnerability. We assist children, the disabled, the elderly, the un-housed, and other vulnerable people who need our help.

In sum, because we are equal and because we are all different from one another, we have many (indeed, infinite) talents and interests, a great capacity for empathy, and a shared understanding of vulnerability. The urgent necessity to tackle the immense challenge of slowing – and ideally stopping – planetary warming requires us to recognize our uniqueness and equality. This will animate our underlying capacities for empathy, our understanding of our vulnerabilities, and heighten our appreciation of both our shared humanity and our own individuality. Nevertheless, there are obstacles, and there are three main ones. One is ongoing conflicts (that are not only catastrophic in and of themselves but drain human energy and resources). Another is indifference or ignorance (often confounded). A third is our failure to question destructive and homogenizing capitalism that imperils cultures, identities, and our unique idiosyncrasies.

For whatever reasons, compared with people in other countries Americans are not especially concerned about climate change and planetary warming. An accompanying tragedy of this is that we Americans do not know that the United States bears most responsibility for the CO₂ in the atmosphere today because CO₂ lingers in the atmosphere for up to around 1,000 years. This means that whatever was emitted during the

long period of industrialization (during the eighteenth and nineteenth centuries) remains in the atmosphere, as new and current emissions also accumulate. Yes, it is true that both the United States and China are the world's leading emitters today. Both are parties to the Paris Agreement. In this book I emphasize that, yes, while the challenges are extraordinary, the human ingenuities to tackle them are infinite. The first challenge for Americans is to ensure that the United States lives up to its domestic and international responsibilities to help keep the planet habitable.

NOTES

1. Marrakesh Conference of the Parties (COP-22), November 6–18, 2016: <http://www.cop22-morocco.com/>
2. John Kerry's press conference in Marrakesh: <http://unfccc.cloud.stream.world.de/webcast/us-secretary-of-state-john-kerry>
3. Valerie Volcovici and Sue-Lin Wong, "Trump Win Clears Way for China to Lead on Climate," November 12, 2016: <http://www.climatecentral.org/news/trump-win-china-to-take-climate-leadership-role-20870>
4. See Article 28, Paris Agreement: http://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf
5. The Whitehouse. United States Mid-Century Strategy for Deep Decarbonization. November 2016: https://www.whitehouse.gov/sites/default/files/docs/mid_century_strategy_report-final.pdf

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Why Solidarity?

Abstract The 1948 Universal Declaration of Human Rights affirms the equality of all people emphasizing that vulnerable people (such as children) deserve special protection. Yet, obviously, no two people are alike; we are different in infinite ways. Globalization, for all its many shortcomings and failings, has made us aware of our equality and our differences. This provides all the world's peoples with the incentive and ability to collaborate in solidarity so that we can collectively slow climate warming. The solution is not so esoteric; it involves abandoning fossil fuels as the sources of energy and switching to renewables – mainly solar, tidal, wind. In this chapter, I provide sources to read as well as examples of ingenious uses of renewable energy.

Keywords Universal Declaration of Human Rights · Globalization · Equal rights · Equality different · Renewable energy · Fossil fuels

The verdict is in and there is no turning back. It is imperative that we slow global warming. Yet, if the efforts and accomplishments of the past 2 years are any indication, the prospects are not entirely bleak, or at least world leaders and scientists are on board. In the past 2 years there were two accomplishments.

On December 12, 2015, in Paris, heads of state from 195 sovereign states agreed, in solidarity, that in spite of their many great disagreements and differences – ideological, historical, economic, cultural, and social – they

must and would cooperate to slow climate change. The Paris Agreement was approved by consensus. It was subsequently opened for signature and ratification on World Earth Day, April 22, 2016. On Saturday, September 3, 2016, President Barack Obama and Xi Jinping formally agreed to adopt the treaty, further accelerating the clock for enforcement of the Agreement. The formal stipulation was that it would enter into force on the 30th day after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55% of the total global greenhouse gas emissions have ratified it. This stipulation was met on October 5, 2016, when a total of 55 parties ratified it, with the effective date, November 4, 2016.¹

In a stunning “encore” to October 5, on the very next day, October 6, a United Nations aviation agency imposed restrictions on airplane emissions, requiring airlines to buy carbon credits from designated environmental projects around the world to offset growth in emissions.² Yet, amazingly, on October 15, 2016, in Kigali, Rwanda, 197 countries approved an important amendment to the Montreal Protocol to reduce hydrofluorocarbons (HFCs). In its announcement, the UN described HFCs in these terms: “Commonly used in refrigeration and air conditioning as substitutes for ozone-depleting substances, HFCs are currently the world’s fastest growing greenhouse gases, their emissions increasing by up to 10 per cent each year. They are also one of the most powerful, trapping thousands of times more heat in the Earth’s atmosphere than carbon dioxide (CO₂).”³

Yet, regardless of these great successes and exceedingly important agreements, there are profound international divisions fueled by wars and conflicts, as well as poverty and inequality. There are also science-skeptics; and the United States has its share of these. Also, as I later show Americans are less informed about climate change than people from many other countries, and yet it is important for Americans to recognize that we have contributed the most to global warming, and that is because emissions generated during the era of industrialization remain in the atmosphere even today. Of course, it is true that now China and the United States are the world’s worst polluters, highlighting the importance of both agreeing to abide by the terms of the Paris Agreement.

EQUALITY AND DIFFERENCE

The heating of the planet must be slowed down, and because the climate is globally shared, all the world’s peoples need to chip in. How do we do this? Although seldom noted – or indeed, appreciated – our shared

humanity is based on two principles: we are all equal and we are all different. The assertion, “we are all different,” seems obvious since it is empirically self-evident; after all, people speak different languages, have different interests, have different parents, and besides, have varied ethnicities, races, ages, and so on. To say, “we are all equal” is to say that we are all humans and all are entitled to dignity and to security, no matter what our ethnicity, race, language, and so on. Remarkably, globalization has already advanced practices and has provided experiences that are premised on this duality of difference and equality, since, after all, the world has “shrunk” with more international contacts that we have gained through travel, study, marriage, adoptions, trade, exchange programs, business ventures, and so on.

We have learned, or are learning, how to collaborate and cooperate across language and cultural barriers and social spaces. We can do this (it bears repeating) because we recognize that we are all equal and we are all different. Therefore, collaborate efforts far outweigh what we could possibly do alone. To be sure, this is a process but it highlights a social dynamic not recognized in 1948; the year the Universal Declaration of Human Rights (UDHR) was adopted. Indeed, 1948 was before globalization, the internet, the internationalization of the press, the expansion of multinationals, Study Abroad programs, and before much international tourism. We discover again and again the empirical truth of Article 1 of the UDHR that asserts, “All human beings are born free and equal in dignity and rights.” Yes, since 1948, we have discovered not only that people are equal, but they are also different. We not only collaborate across borders because we have no choice or few options, but we also collaborate across borders because we know the outcome will be much, much better than not doing so.

My assumption is that because we collectively and together face planetary warming and climate change, we will participate in collaborative undertakings that crisscross and transcend borders and differences of all kinds in order to draw from many talents, skills, and backgrounds. We will do so in order to ensure that we all share an understanding of how to slow warming and to ensure that we share the responsibility to support and recognize collaboration and to celebrate the collective focus to keep the earth habitable.

Sociologists will recognize some similarities between my conceptualization of solidarity and “organic solidarity” posited by Emile Durkheim.⁴ He highlighted the interdependence among people in complex societies.

After all, bakers need mechanics to fix their cars and mechanics need bakers if they want to have bread and cookies. Writing in 1893 he no doubt was thinking about solidarity within a town or city – certainly not the entire world – and, besides, he did not conceive of solidarity in interpersonal terms. Rather, invisible bonds connected people without the need for communication. Durkheim could not possibly have anticipated the internet or twitter!! Yet, a contemporary version of what I am proposing is “European solidarity,” which is based on interaction, compromise, and negotiations across diverse states with different economies, politics, and cultures.⁵ In fact, the Treaty of the European Union highlights the multiple ways that solidarity finds expression, as these excerpts illustrate:

to deepen the **solidarity** between their peoples while respecting their history, their culture and their tradition... respect for human rights, including the rights of persons belonging to minorities... These values are common to the Member States in a society in which pluralism, non-discrimination,... tolerance, justice, **solidarity** and equality between women and men prevail... equality between women and men, **solidarity** between generations and protection of the rights of the child... It shall promote economic, social and territorial cohesion, and **solidarity** among Member States... sustainable development of the Earth, **solidarity**... eradication of poverty and the protection of human rights... including respect for the principles of the United Nations Charter... sustainable development of the Earth, **solidarity** and mutual respect among peoples,... Member States shall show mutual **solidarity**... (emphasis added).⁶

WHAT’S AT STAKE?

Indeed, unless the rate of planetary warming is dramatically slowed, human civilization itself is at grave risk. By 2100, unless action is taken now, life for many will be intolerable. A few examples will illustrate why I say this. The average daytime temperature in some cities, towns, and communities located on and near the equator is expected to reach 170° F during the day by 2100.⁷ Heating the oceans would trigger the release of hydrogen sulfide from the ocean floor with devastating effects, including cancer epidemics among humans and widespread extinction of fish.⁸ Anthrax was released when Antarctic ice melted in the summer of 2016, resulting in the death of one child and about 2,300 reindeer, as well as

many people falling ill.⁹ Scientists fear that this was not an aberration. For a long time, scientists have recognized that thawing of the Antarctic will release methane, a greenhouse gas that accelerates warming.

On average, sea rise is expected to be about 5 to 6 feet by 2100, which will be high enough to put many large coastal cities at risk, including New York, Singapore, and Tokyo. But if the Greenland ice sheet melts, it is expected that sea rise will be 23 feet.¹⁰ In the United States, there will be an increase in the number of extremely strong hurricanes (Categories 4 and 5). Most Americans may not experience hurricanes, but they will experience heavy downpours, and more specifically, downpours that currently occur about once every 20 years are projected to occur between twice and five times as frequently.¹¹ Glaciers in the Everest region of the Himalayas, which are the source of drinking water for hundreds and millions of people, could be almost completely eradicated by 2100 due to melting.¹²

To slow global warming will require global teamwork, ingenuity, cooperation, and, indeed, global solidarity. All this can only happen if there is broad and all-encompassing support of universal fundamental human rights, which are the very foundation of human security – indeed, of human happiness. It is the people who do the lobbying, the petitioning, and the demonstrating – to demand that the rights of all are ensured. In America, and elsewhere, this has been the case for the advance of labor rights, women’s rights, the abolition of slavery, the minimum wage, farm workers’ rights, LGBT rights, disability rights, and children’s rights. It has been through collective action that these rights have been advanced.

Governments will respond, but they typically are slow because they are encumbered by laws and precedents and, therefore, cannot act fast enough. While states can pass laws and create legislation, it is only people who make demands, demonstrate, petition, and build coalitions. Increasingly, people launch campaigns at a global level, building diverse coalitions – East, West, North, South – based on common interests. As I show in [Chapter 9](#), there are many new social movements focused on climate change, with the goal of slowing planetary warming. This level of cooperation requires solidarity, which is local, national, and international. Of course, solidarity rests on the recognition of both difference and equality, and integral to solidarity is empathy, cooperation, and collaboration. This is to say, solidarity crisscrosses differences, creating bonds of cooperation.

DEMOCRATIZING INFORMATION AND KNOWLEDGE

I want to encourage readers to explore the literature and websites on climate change. What is remarkable about climate studies and the science of climate change is that scientists are especially clear when describing new developments, facts, and predictions. I believe that because they often write in clear English – at least in their works on climate change – they not only educate the general public, and, in turn, the members of the public will see the deeper and more precise implications that scientists themselves may not, or cannot, see. We have no excuse not to be informed about climate change.

There are some excellent web pages that people may find useful and informative. A key resource is the United Nations Sustainable Development webpage.¹³ Another is the World Resources Institute,¹⁴ an international scientific organization that provides current updates on the progress countries are making to reduce emissions, climate finance, and climate strategies. Others are: Yale Climate Connections¹⁵; Climate Watch¹⁶; Climate Central¹⁷; and 350.org.¹⁸ For clear, comprehensive, and well-organized information, see: National Aeronautics Space Administration (NASA)¹⁹, Federal Emergency Management Agency (FEMA)²⁰, Environmental Protection Agency (EPA)²¹; ClimateChange.Gov²²; EU Climate Change;²³ African Climate Policy Centre²⁴; and the Organization for American States.²⁵ Climate Analytics provides summaries of scientific findings regarding climate change.²⁶ There are many others; most of which are listed on the web pages of ClimateChange.Gov.²⁷ It is indeed impressive to discover that understanding climate change and devising means to combat it are based on a broad consensus among many, many scientists from several countries and an equally broad consensus among them on how to slow the pace of climate change. Yet, it turns out that since scientists have been so clear about explaining the causes of climate change and the means to slow it, a growing percentage of the entire world's population are on board with the scientists. (The causes of climate change and appropriate responses to curb it are much clearer and comprehensible than, say, the causes of racism or sexism.)

Besides, activists, concerned citizens, and scientists can and do communicate, thanks to a shared vision, a deep sense of urgency, and scientists' eagerness to be clear, accurate, and relevant. There are many new books that clearly explain the science of climate change. Of the many, I particularly recommend the following:

- Joseph F. C. DiMento and Pamela Doughman (eds), *Climate Change: What It Means for Us, Our Children, and Our Grandchildren*. Cambridge: MIT Press, 2014.
- Tim Flannery, *Atmosphere of Hope: Searching for Solutions to the Climate Crisis*. New York: Atlantic Monthly Press, 2016.
- Naomi Klein, *This Changes Everything: Capitalism vs. The Climate*. New York: Simon & Schuster, 2014.
- Mark Lynas, *Six Degrees: Our Future on a Hotter Planet*. Washington, DC: National Geographic, 2008.
- Pope Francis, *Encyclical on Climate Change & Inequality: On Care for Our Common Home*. Introduction, Naomi Oreskes. Brooklyn: Melville House, 2015.
- George M. Woodwell, *A World to Live In: An Ecologist's Vision for a Plundered Planet*. Cambridge, MA: MIT Press, 2016.

There are some YouTube presentations on human rights and climate change. Especially clear are presentations by Reverend Desmond Tutu²⁸ and Mary Robinson.²⁹

THE THESIS

Because climate is collectively and globally shared, the only way to slow the rate of planetary heating is through cooperation and collaboration, that is, through acting in solidarity. Of course, solidarity is always premised on the recognition of human rights, that is, the recognition of equality and dignity. Americans are imprisoned by their eighteenth-century constitution that only recognizes that humans are legal abstractions with civil and political rights. In truth, we Americans, no less than other people, recognize that we are humans – children, immigrants, disabled persons, black people, white people, tall and short people. No less than other people we can empathize, feel joy, and feel sorrow. We are human beings and implicitly, quietly, we recognize human rights, which is to say, that we recognize that we all are entitled to food, housing, education, healthcare, work with fair pay, social security, and recognition. Yes, of course, we are all entitled to a fair trial, the right to free speech, the right to vote, and other civil and political rights. That goes without saying.

Yet, the exclusive American emphasis on civil and political rights accompanies a singular emphasis on individual rights rather than shared rights, which has accompanied or fueled competition, obscuring the truism that

we are all humans and, therefore, equally deserving of our fundamental rights as human beings. If I am critical of the United States and American values, especially American individualism, that is because the values that best served Americans during the period of industrialization and the advance of the frontier will be ruinous – not only to the United States, but also to the entire world – if we continue to cling to them.

NEW CHALLENGES

I am also proposing that there are immense opportunities for innovation posed by the global transition from fossil fuels to renewable energy. We can only consider other huge transitions: the agricultural revolution 200,000 years ago, when humans invented farming; the urban revolution, when humans invented cities about 6,000 BCE; the invention of the printing press unleashed a torrent of other innovations and led to an increase in literacy. It goes on and on, and the point is when people get “stuck” (overpopulation, scarce resources, rural overpopulation; or inadequate food supply), there has been a flurry of innovation. It appears that climate change will likewise trigger new innovations and creative solutions. Here I mention a few:

Engineer Naveen Rabelli designed and built a tuk-tuk (a 3-wheel vehicle common in Asia and parts of Africa) that is solar powered. He drove it from India to England, for a total of 6,200 miles.³⁰

There is a soccer field in Rio de Janeiro that is lit by kinetic energy – the kids’ running feet.³¹

A solar-powered machine has been invented by a team of MIT scientists that can turn brackish water into pure drinking water, designed specifically for people without access to drinkable water.³²

On July 26, 2016, Solar Impulse 2 completed the first round-the-world flight by a solar-powered airplane after touching down in Abu Dhabi early on Tuesday. It crossed both the Pacific and Atlantic Oceans using no fossil fuel and has spent more than 23 days in the air.³³

Not to be outdone, a ship nicknamed the “Solar Impulse of the Seas” will soon circumnavigate the globe using only clean power – solar, wind and self-generated hydrogen. It will sail for 6 years around the world as a floating exhibition and clean-energy laboratory, with stops in 50 countries and 101 ports of call.³⁴

Way above the ground winds are much, much stronger than they are close to the ground, offering a more efficient source of wind power. Companies are developing what are essentially huge wind turbines to capture wind high above the earth's surface and convert it to electricity to send back to earth.³⁵

Sonoma County (California), Puget Sound (Washington), and Porto Alegre (Brazil) are participating in an online project to share data, stories, and tips on local solutions to climate change, important because they share similar environmental challenges. This is a pilot project funded by the US and will be expanded to include more cities.³⁶

CONCLUSIONS

It is obviously the case that climate change and what it brings – extreme heat, sea-level rise, typhoons, and violent storms – means that vulnerable people will need special protection. This is a truism of human rights. But in the context of climate change, human rights take on a deeper meaning. Very specifically, there must be radical equality – a widespread understanding that all people are equal and equally deserving of living secure lives. Therefore, vulnerable populations – children, the disabled, the elderly, and the homeless – need special protections. Yet, radical equality is only one of two global prerequisites that needs to be met. If we recognize all the others as truly the same and equal, there are no incentives to contribute or collaborate. Besides, our experiences and understanding tell us that none are the same and that we are all different. It is because of our differences – race, gender, language, nationality, residence, education, etc. – that we can pool our knowledge and know-how. Only collaboration – forged through bonds of solidarity – can get us out of this mess.

NOTES

1. United Nations Framework Convention on Climate Change. Paris Agreement: http://unfccc.int/paris_agreement/items/9485.php
2. Reuters, “U.N. Sets Limits on Global Airline Emissions Amid Dissent.” October 6, 2016: <http://www.reuters.com/article/us-climatechange-aviation-idUSKCN1261QR>
3. United Nations Environment Programme, “Countries Agree to Curb Powerful Greenhouse Gases in Largest Climate Breakthrough Since Paris,” October 15, 2016: <http://unep.org/newscentre/Default.aspx?DocumentID=27086&ArticleID=36283&l=en>

4. Emile Durkheim, *The Division of Labor in Society*. New York: Free Press, 2014.
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The Warming of the Planet

Abstract In this chapter, I list the many ways that climate change will impact the planet, organizing the discussion in terms of the following: warming, effects on prevailing weather, precipitation, effects on ice sheets and glaciers, effects on oceans, land effects, health, vulnerable populations and developing countries, agriculture, and animals and birds.

Keywords Warming · Weather · Precipitation · Ice · Glaciers · Oceans · Animals · Land · Health · Vulnerable people

On September 3, 2016, Barack Obama and Xi Jinping shook hands, committing their respective countries to adhere to the Paris Agreement on Climate Change. This was a truly important moment since the United States and China are the world's leading sources of greenhouse gases, and therefore, are most responsible for contemporary emissions that cause global warming. The rate of warming is unprecedented, and warming is accompanied by sea rise, acidification of the oceans, shrinking ice caps, glacial retreat, declining sea ice, extreme events including intense rain storms, and global temperature rise. The facts are inescapable.

Already people from some of the 39 Small Island States are abandoning their homes, schools, towns, and even their countries.¹ They are climate refugees. More will follow. One estimate is that there will be 2.2 million climate refugees by the end of the century,² while another estimate is much greater.³ The leading cause is that glaciers are melting, which leads

to sea-level rise, overtaking small islands. Each year there are more severe floods, droughts, typhoons, and wildfires.

As I will later elaborate, Americans are less concerned about climate change than people in the rest of the world. That is, they are less concerned than Europeans, people from Central and Latin America, Eastern Europeans, Asians, and Africans. A significant percentage of Americans believe that rising temperatures are simply a fluke, and that there are always fluctuations. Even taking into account that opinion polls are not very precise, the consistency with which the American public is a world outlier is deeply troubling. Around the globe, people, communities, and governments are taking bold steps to slow, even curb, climate warming, while, by contrast, the United States dithers with rudimentary and inconsistent policies. This is largely because the Congress has prevented President Obama from implementing programs that would reduce emissions, such as imposing a carbon tax.

The main culprit of warming is CO₂ (carbon dioxide), which is produced through the combustion of fossil fuels – coal, natural gas, and oil – and remains in the atmosphere for a very, very long time. The United States has stalled behind other industrialized countries in adopting a “carbon” or CO₂ tax and has not enacted federal legislation to curb emissions and deal with climate change as a majority of countries have.⁴ Nor has the United States greatly increased funding for public transportation, such as fast trains and subway lines, to reduce the use of fuel. Many other countries have.

It is useful to distinguish climate warming from climate change. Warming is the increase of the average surface temperature of the earth, whereas climate change more comprehensively refers to any significant and long-term change in the earth’s temperature, precipitation, or wind patterns. What primarily causes both global climate change and warming are emissions from the burning of fossil fuels – coal, oil, and gas – and the worldwide objective is to rely entirely on renewable energy, that is, sunlight, wind, rain, tides, geothermal heat, and biomass (organic matter such as garbage). The burning of fossil fuel produces greenhouse gas (GHG), which includes: (1) carbon dioxide, or CO₂, which accounts for 81% of all emissions; (2) methane (in large part produced by livestock), which accounts for 11%, (3) nitrous oxide (produced, for example, as a by-product of synthetic fertilizer), which accounts for 6%; and (4) fluorinated gases (produced in industrial activities), which accounts for 3%, and that, importantly, include hydrofluorocarbons, which will be phased out, as part of the October 15, 2016 Kigali agreement (as mentioned in [Chapter 1](#)).

CO₂ is the main culprit and to live up to the terms of the Paris Agreement – and to stabilize the world’s climate and weather – each country must decrease CO₂ emissions to zero by 2070 to avoid global disaster and to reduce all greenhouse gases to zero by 2100 to avoid global catastrophe.⁵ The objective according to global consensus, specifically in the Paris Agreement of December 12, 2015, “is to limit the temperature increase to 1.5 above pre-industrial levels.”⁶ Only a few countries have achieved this, or are very close to achieving it: Costa Rica, Denmark, Norway, Iceland, Tokelau, and the Orkney Islands.⁷

In this context, it is important to mention that the United States is not exempt from the extremes of climate change. Some Americans have already become climate refugees. Specifically, in 2016, the Biloxi-Chitimacha-Choctaw Indians had to flee their homes on the Isle de Jean Charles off the coast of Louisiana as the rising sea claimed their island. They are climate refugees.⁸ Superstorm Sandy, forest fires, and scorching summers in the United States are all the effects of the heating of the planet.

It is important to clarify the many ways that climate change and global warming impacts the planet, humans, the food supply, health, animals, fish, precipitation, and habitats. Further, I provide some indications of this impact (Box 2.1).

Box 2.1 Impacts and Indicators of Climate Change Warming

- The planet is accumulating heat at an accelerating rate.
- Global temperatures are increasing. The rate of warming is unprecedented in at least 11,000 years.
- The Arctic poles warm up about twice as fast as the rest of the earth. This is the source of sea rise.
- Tree ring and ice ring data show that the concentration of carbon dioxide and the earth’s average temperature are nearing levels that have not been reached for thousands of years.
- Weather extremes are the predicted consequence of a changing climate, and the evidence is growing that recent examples of those extremes are not isolated, but rather harbingers of a new normal.
- Worldwide, 2015 was the warmest year on record and 2005–2014 was the warmest decade on record since thermometer-based observations began.

- The earth has warmed since 1880. Most of this warming has occurred since the 1970s, with the 20 warmest years having occurred since 1981 and with all 10 of the warmest years occurring in the past 12 years.
- The number of record high-temperature events in the United States has been increasing, while the number of record low-temperature events has been decreasing since 1950.
- Above-average temperatures were observed across the western two-thirds of the contiguous United States in 2015 with record and near-record warmth along the West Coast and in the Northwest.
- Concentrations of CO₂ in the atmosphere have reached levels unprecedented in at least the last 800,000 years – or before modern humans evolved.
- It is unlikely that Olympics can be held anywhere after 2080. No city will be cold enough for snow and ice, and it will be too hot for the summer Olympics.

Effects on Prevailing Weather

- The warming of the surface of the ocean intensifies *El Niño* and *La Niña*.
- In 2015, there were 10 weather and climate disaster events with losses exceeding \$1 billion each across the United States. These events included a drought event, two flooding events, five severe storm events, a wildfire event, and a winter storm event. Overall, these events resulted in the deaths of 155 people and had significant economic effects on the areas impacted.
- Most of North America has been experiencing more unusually hot days and nights, fewer unusually cold days and nights, and fewer frost days. Heavy downpours have become more frequent and intense.
- The challenges posed by climate change include more intense storms, heat waves, drought, extreme flooding, and higher sea levels.

Precipitation

- Since 1901, global precipitation has increased at an average rate of 0.09 inches per decade, while precipitation in the contiguous 48 states has increased at a rate of 0.15 inches per decade.

- Total snowfall has decreased in many parts of the United States since widespread observations became available in 1930, with 57% of stations showing a decline.
- Since 1950, the United States has witnessed increasing numbers of intense rainfall events.

Effects on Ice Sheets and Glaciers

- Greenland – the second-largest ice sheet in the world after Antarctica – is losing mass at an accelerating rate.
- The Antarctic is losing ice at an accelerating rate.
- The Arctic sea ice has declined rapidly over the past several decades. It is declining 13.4% per decade.
- Greenland and Antarctic ice sheets have decreased in mass. Greenland lost 150–250 cubic kilometers (36–60 cubic miles) of ice per year between 2002 and 2006, while Antarctica lost about 152 cubic kilometers (36 cubic miles) of ice between 2002 and 2005.
- Glaciers are retreating almost everywhere around the world – including in the Alps, Himalayas, Andes, Rockies, Alaska, and Africa.
- About 90% of the glaciers and land-based ice sheets worldwide are melting as the Earth warms.

Effects on Oceans

- The ocean is warming, and this warming is not just affecting the surface of the sea; 30% of ocean warming has been taking place in waters deeper than 700 meters, and some has even occurred in the deepest waters.
- Acidification of oceans is caused by the absorption of carbon dioxide. Ocean acidity has a dramatic effect on some calcifying species, including oysters, clams, sea urchins, shallow water corals, deep sea corals, and calcareous plankton. When shelled organisms are at risk, the entire food web is also at risk.
- Changes in the plankton ecosystem linked to warmer surface temperatures have already harmed other species that rely on plankton for food, such as cod.
- Ocean carbon dioxide levels have risen in response to increased carbon dioxide in the atmosphere, leading to an increase in acidity.

- Since the beginning of the Industrial Revolution, the acidity of surface ocean waters has increased by about 30%.
- Algae blooms increase in the ocean or any body of water with climate warming.
- Ocean acidification, caused by increasing levels of carbon dioxide, negatively impacts many marine organisms such as shellfish, crabs, lobsters, and corals by making it more difficult for them to build calcium carbonate shells. This diminishes their stock and – in the case of corals – destroys the habitat many species need to thrive.
- After approximately 2,000 years of little change, global average sea level rose throughout the twentieth century, and the rate of change has accelerated in recent years.
- Global warming is prolonging the longest global coral die-off on record.
- Sea levels are creeping up at the fastest rate in 2,000 years.
- Coral bleaching in one year alone was reported in 60 countries and island nations at sites in the Pacific Ocean, Indian Ocean, Red Sea, Persian Gulf, Mediterranean, and Caribbean.
- The warming of the oceans due to climate change is now unstoppable, bringing additional sea-level rise, and raising the risks of severe storms.

Land Effects

- Desertification is not new, but today the pace of arable land degradation is estimated at 30–35 times the historical rate.
- Some 2 billion people depend on ecosystems in dry land areas, 90% of whom live in developing countries.
- About 2.6 billion people depend directly on agriculture, but 52% of the land used for agriculture is moderately or severely affected by soil degradation.

Health Effects

- Sunlight, warm air, and pollution from power plants and cars burning coal and gasoline – combine to produce ground-level ozone (smog), which hit people with heart and respiratory diseases particularly hard.

- Outdoor air pollution has grown 8% globally in the past five years, with billions of people around the world now exposed to dangerous air.
- The incidence of Lyme disease in the United States has approximately doubled since 1991.
- Climate change will affect infectious disease occurrence and magnify epidemics.
- Deadly anthrax was released when permafrost melted in Siberia in July 2016. One youngster was killed, many people became ill, and over a thousand reindeer died.

Vulnerable Populations/Developing Countries

- More than half a billion children in the world live in areas with extremely high flood occurrence and 160 million in high drought-severity zones, leaving them highly exposed to the impacts of climate change.
- The vast majority of the world's hungry people live in fragile environments prone to climate hazards with which they cannot cope.
- Developing countries do not have a history of large emissions of greenhouse gases and thus have not contributed significantly to the causes of climate change. So it is the responsibility of the industrialized countries, which have caused the problem, to support the people in these countries to mitigate climate risks and help them to adapt to the changes.
- Small Island States are home to over 62 million people. Together, they emit less than 1% of global greenhouse gases, yet they suffer disproportionately from the climate change that global emissions cause. Those currently most at risk are Kiribati, the Marshall Islands, Tuvalu, Maldives, Papua New Guinea, Samoa, and Tonga.
- The World Food Programme estimates that the risk of hunger and malnutrition could increase by up to 20% by 2050.
- Climate change threatens to undermine decades of development gains and put at risk efforts to eradicate poverty.
- Children and the elderly in poor countries are especially at risk.

- Adverse effects of climate change are greater among poor people in developing countries who are highly dependent on climate-sensitive natural resources, yet have the least adaptive capacity to cope with climate impacts.
- More than half a billion children live in areas with high flood occurrence and 160 million in high drought-severity zones, leaving them highly exposed to the impacts of climate change.

Agriculture

- Climate change will adversely affect crops, notably, wheat and maize.
- In the United States, climate change will have detrimental effects on crops and livestock.
- Climate change will make it more difficult to grow crops, raise animals, and catch fish in the same ways and same places as done in the past.
- Climate change is a fundamental threat to global food security, sustainable development, and poverty eradication.
- About 2.6 billion people depend directly on agriculture, but 52% of the land used for agriculture is moderately or severely affected by soil degradation.
- Without considerable efforts made to improve people's climate resilience and increase the food supply, it has been estimated that the risk of hunger and malnutrition could increase by up to 20% by 2050.

Animals and Birds

- Mass extinction of mammals is likely: polar bears, sea turtles, the Right Whale, the giant panda, orangutan, elephant, some frog species, and tigers.
- Climate change results in shifting and shrinking ranges of birds, which could impact half the birds of the United States in this century.
- Many reptiles are highly sensitive to the altered temperatures that may result from climate change due to the fact that they rely on ambient environmental temperatures to maintain critical physiological processes.

Sources: U.S. Environmental Protection Agency; U.S. Department of Agriculture; U.S. National Aeronautics and Space Administration; United Nations Children’s Fund; World Health Organization; Climate Central, National Oceanic and Atmospheric Administration; U.S.-China Climate Change Working Group; Intergovernmental Panel on Climate Change; Union of Concerned Scientists; U.S. National Science Academy; UN World Food Programme; UN Development Programme; UN Educational, Scientific, and Cultural Organization; Audubon Society; National Oceanic and Atmospheric Administration; New England Aquarium; UN Development Programme; American Medical Association; World Resources Institute; Woods Hole Research Center. (A search on the web for each of these statements – even in abbreviated forms – will take the reader to the verifiable source or sources and evidence.)

MORE PRECISELY, IN AMERICA

Clearly as we face these horrific prospects, Americans need assurance that there will be protections and security. The United States does not recognize human rights, as I further explain in [Chapters 5 and 6](#). The Bill of Rights only includes civil and political rights, not social, economic, and cultural rights, and the United States has not ratified any human rights treaty. That is, we do not have laws that ensure that we are all entitled to equal rights to security, to social and economic rights, food, shelter, and protection from environmental disasters. When there are climatic catastrophes, most Americans are likely to expect that their wealthy compatriots will come out OK while the rest will struggle. Indeed, the Paris Agreement highlights in the Preamble the fundamental importance of human rights, and in particular, protections for the vulnerable:

Acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity.⁹

Americans, like everyone else, instinctively and intuitively know what human rights are, and in our day-to-day lives, we uphold egalitarian principles, but human rights, and even equality, are not enshrined in the constitution and laws.

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The Long, Long Road to Paris

Abstract The Paris Agreement was unanimously acclaimed by all countries on December 12, 2015, and came into force less than a year later on November 4, 2016, an unprecedentedly short time for an international treaty. As noted, a main aim is to keep the temperature increase at no more than 1.5 degree Celsius above preindustrial levels, and that also depends on countries living up to the principle of “differentiated responsibilities,” namely, for developed countries to assist developing countries to acquire renewable energy technologies, such as wind turbines. (In my terms, “to act in solidarity.”) This chapter traces scientists’ concerns with climate change and international conferences from 1979 to the present.

Keywords Paris Agreement · 1.5 degree Celsius · Differentiated responsibilities · Climate conferences

The 2015 Paris Agreement was heralded by *The Guardian* as “the world’s greatest diplomatic success” and by the *New York Times* as a “landmark agreement.” Francois Hollande called it “a major leap for mankind,” and Barack Obama, “a turning point for the world.” Indeed, it was the first climate agreement ever that all countries in the world agreed to, with the promise that they would sign and ratify it. To most everyone’s great surprise and delight, the parties (at least, in principle) agreed to limit the global temperature increase to 1.5 degree Celsius. It was widely viewed as

a huge victory, especially for Small Island States, leaders of which had vigorously lobbied for it. The Paris Agreement states in the first section:

Emphasizing with serious concern the urgent need to address the significant gap between the aggregate effect of Parties' mitigation pledges in terms of global annual emissions of greenhouse gases by 2020 and aggregate emission pathways consistent with holding the increase in the *global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels...* [emphasis added].¹

Often referred to as COP-21 or the United Nations Framework Convention on Climate Change (FCCC), the Agreement was by no means a hop, skip, and a jump. A long series of international meetings preceded the all-important Paris meetings. Never was the United States especially helpful, as we will see.

Beginning in the late nineteenth century, scientists contended that emissions of greenhouse gases (water vapor, carbon dioxide, methane, nitrous oxide, and ozone) could change the climate. Computer modeling and observational techniques improved over the next decades, and in 1979 scientists participated in the First World Climate Conference. Convened by the UN World Meteorological Organization (UNWMO), it was held on February 12 to 23, in Geneva, and was attended by scientists from a wide range of disciplines. In addition to the main plenary sessions, the conference organized four working groups to look into climate data, the identification of climate topics, integrated impact studies, and research on climate variability and change. It called on the world's governments "to foresee and prevent potential manmade changes in the climate that might be adverse to humanity." The Conference led to the establishment of the World Climate Programme and to the creation of the Intergovernmental Panel on Climate Change (IPCC) by UNWMO and the UN Environmental Programme (UNEP) in 1988.

A number of intergovernmental conferences were held in the late 1980s, helping to raise international concern about the issue. These included the Villah Conference in October 1985, the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer (which, as already noted, was amended in Kigali in October 2016), the Toronto Conference in June 1988, the Ottawa Conference and the Tata Conference in February 1989, the Hague Conference and Declaration in March 1989,

the Noordwijk Ministerial Conference in November 1989, the Cairo Compact in December 1989, and the Bergen Conference in 1990.

The Second Climate Conference was held on October 29 to November 7, 1990, again in Geneva. It was an important step toward a global climate treaty. The main task of the conference was to review the Intergovernmental Panel on Climate Change (IPCC), the first assessment report on climate change. The scientists and technology experts at the conference issued a strong statement highlighting the risks of climate change. The conference issued a Ministerial Declaration only after hard bargaining over a number of difficult issues. Yet, the Declaration disappointed many of the participating scientists as well as some observers because they felt that it did not offer a high enough level of commitment. Eventually, however, developments at the conference led to the establishment of the United Nations Framework Convention on Climate Change (UNFCCC), of which the Kyoto Protocol is a part, and to the establishment of the Global Climate Observing System (GCOS), a global observing system for climate and climate-related observations.

In December 1990, following the Second Climate Conference, the UN General Assembly approved the start of treaty negotiations. In 1992, the treaty, “part of the UN Framework Convention on Climate Change (UNFCCC),” was signed by 154 states (plus the EU) at Rio de Janeiro and now by 197.² The United States ratified the treaty.³ The Convention, the Rio Declaration, –entered into force on March 21, 1994; and in September, Parties started submitting reports detailing strategies to deal with climate change. One guiding principle of the Convention was that the richest countries commit to returning gas emissions to 1990 levels by 2000 and they take the lead in reducing emissions.

As I will explain later, the Obama administration contends that the president’s ratification of the 2015 Paris Agreement is an affirmation of the US ratification of the 1992 Rio Declaration. Indeed, the 1992 treaty provides a clear link with the 2015 treaty with its insistence on: (1) sustainability as a worldwide objective; (2) “differentiated responsibilities,” which is to say rich, developed countries have responsibilities to help developing ones (that are largely not responsible for climate warming); and (3) protecting human rights, especially the rights and well-being of vulnerable people.⁴ Besides, the Paris Agreement, like the Rio Declaration, is part of the UN Framework Convention on Climate

Change (UNFCCC), giving further support to the Administration's argument that Obama's signature on the Paris Agreement is consistent with the earlier ratification of the Rio Declaration.

CONFERENCE OF THE PARTIES (COP)

Any Conference of the Parties ("COP") is a governing body of an international convention, and includes all parties to the convention. Most well known is the UN Framework Convention on Climate Change (UNFCCC).⁵ Because it is important to see the progression in the scope and themes of the annual (sometimes biannual) UNFCCC-COP meetings, as well as the diversity of meeting sites, I give the date and city of each meeting. It is important to mention that the Paris Agreement was reached at COP-21.

COP-1 was held in Berlin in 1995, in response to the growing concern among the world's scientists about climate change. It grappled with resolving equity for developing nations.⁶ (As already noted, COP-1 followed a series of international climate meetings, including the 1979 First World Climate Conference.) COP-2 was held in Paris in December 1995, and led to the Second Assessment Report, written and reviewed by nearly 2,000 scientists worldwide. The report concluded that there was evidence that there is "a discernible human influence on climate change."

The Kyoto Protocol, setting standards for emissions, was adopted at COP-3 in Kyoto, where about 10,000 delegates attended. COP-4 was held in Buenos Aires in 1998 (to develop implementation of the Kyoto Protocol) and COP-5 was a technical meeting, held in Bonn in 1999. COP-6, held in The Hague in 2000, ultimately collapsed because of disagreements between the United States and some European countries over satisfying a major portion of US emissions by allowing credits for "agricultural sinks." Yet, the United States had withdrawn from the Kyoto Protocol and therefore was not a member of COP, but, consistent with the rules, took the role of mediator at the meetings. And, likewise, the United States was not a party at the COP-7 meetings held in Marrakech in 2001. At COP-8 (held in Delhi), emission standards were reviewed and updated. At COP-9, held in Milan in 2003, an Adaption Fund was approved that would assist poor countries better adapt to climate change. In Buenos Aires, at the COP-10 meetings, a main focus was emerging economies and developing countries.

COP-11 led to the Montreal Action Plan, "to negotiate deeper cuts in greenhouse emissions." COP-12 took place in 2006 in Nairobi, and

established advanced procedures and a timetable for the Adaption Fund. COP-13 (2007; Bali) and COP-14 (2008; Poznan, Poland) continued efforts to strengthen the financing of poor countries as well as to carry out negotiations for a successor to Kyoto.

The World Climate Conference-3 (WCC-3) was held in Geneva, Switzerland, from August 31 to September 4, 2009. Its focus was on climate predictions and creating formats for information for decision making at the seasonal to multidecadal time scales. The goal was to create a global framework that would link scientific advances in their climate predictions and the needs of their users for decision making to better cope with changing conditions. Key users of climate predictions include food producers, water managers, energy developers and managers, public health workers, national planners, tourism managers and others, as well as society at large. Participants in WCC-3 included these users, as well as high-level policy makers. The Conference also aimed to increase commitment to, and advancements in, climate observations and monitoring to better provide climate information and services worldwide to improve public safety and well-being. COP-15 was held in Copenhagen in December 2009 and included negotiations on a framework for a longer time commitment. It included ministers and officials from 192 countries, although the United States still refused to go along with Kyoto.

At COP-16, held in Cancún in 2010, the parties agreed that “climate change represents an urgent and potentially irreversible threat to human societies and the planet and thus requires to be urgently addressed by all Parties.” Participants agreed that the goal would be a maximum of 2 degree Celsius. In Durban (2011), at COP-17, the parties agreed to begin work on a legally binding treaty and to advance the Green Climate Fund that would assist poor countries to battle climate change. COP-18 met in Doha (2012) and reached decisions about compensation to poor countries that experienced grave harms from climatic events. COP-19 was held in Warsaw in 2013 and was devoted to planning for COP-21 to be held in 2015. At COP-20 in Lima (2014), pledges were made for the Green Climate Fund and there was further preparation for COP-21.

COP-21 in Paris (2015) led to the extraordinary Paris Agreement. It requires all Parties to report regularly on their emissions and on their implementation efforts and to pursue efforts to limit temperature increase by 1.5 degree Celsius, and stresses the obligations of developed countries to support the efforts of developing countries and the obligations of all to

protect vulnerable people who are at special risk under the conditions of climate heating and turbulence.

A tension that pervaded these talks was that poor countries justifiability contended that they were the victims of CO₂ emissions for nearly two centuries as rich countries industrialized and extracted and burned fossil fuels, but now were told that they needed to make expensive investments in wind, solar, tidal, and nuclear power. For this reason, it was affirmed in the Agreement that rich countries had responsibilities under the treaty to assist poor and developing nations. Another tension that pervaded the Paris COP talks was that Small Island States were on the frontlines of climate change – as rising seas threatened their very lives – and it was in their interest to accelerate the timetable to get to zero emissions. In fact, the credit for the statement in the final version of the Agreement that the objective be 1.5 degrees (rather than 2) goes to the representatives of Small Island States, and they were recognized for that at the conclusion of the meetings.

THE CELEBRATION

When the gavel fell at 7:16 pm local time on Saturday, December 12, 2015, at the Paris-Le Bourget, there were shouts of joy, dancing and crying, and people were hugging and kissing each other throughout the big hall. Keeping with international law for treaties, it was later opened for signature on April 22, 2016, met the criteria for ratification on October 5, and went into force on November 4, 2016.⁷ It is not a perfect agreement. The United States may not ultimately go along with it (depending on the Senate's interpretation of the White House's decision that the Paris Agreement is an extension of the Rio Declaration); there is no guarantee that rich countries will pay what they promised; indigenous peoples had hoped for more; there are no provisions for climate refugees; and 1.5 degrees was set as an objective and not as an enforceable limit.

Yet, COP-21 was an amazing accomplishment. The main thing is that if it is upheld, we could say, it will have saved the planet! There are 194 signatories to the treaty and there was consensus in Paris as to the cause of climate change and the horrific consequences of not acting. On the final evening, delegates spoke about “the world's environmental revolution.” Or, so it seemed like a revolution watching and listening from America. In fact, many countries had been on board for quite a while. Many – most – have ratified environmental treaties, and by 2015 a few countries (such as

Costa Rica) could boast they depended almost entirely on renewable energy sources, and place priority on a sustainable environment for the welfare of the inhabitants.

The United States has not been on board for most of this long process and it has ratified only a few environmental and climate treaties. It has not ratified the Law of the Sea Treaty (161 countries have), the Kyoto Protocol (191 countries have), or the Convention on Biological Diversity (195 parties), but it has ratified the 1992 Rio Declaration on Environment and Development (along with 196 other parties). As noted, some countries are well on their way to meeting the goal of zero emissions, with the European Union adopting binding legislation setting targets for 2020 for all member states, as well as to reduce emissions by 80 to 95% below 1990 levels by 2050.⁸ Comparatively, Americans, as individuals, have not been on board, but it would be wrong to conclude that all American states and cities have not been proactive. California now has a state-wide plan to reduce emissions to 40% below 1990 levels by 2030, which was signed into law (SB 32) by Governor Brown on September 8, 2016.⁹ New York and Massachusetts aim to reduce emissions by 80% below the levels emitted in 1990 by the year 2050.¹⁰ A problem is that emissions are airborne, and do not recognize state borders, which is to say slowing climate change requires teamwork and cooperation.

Dare I say. . . . it requires Solidarity.

THE BREAKTHROUGH (AND OPPOSITION)

An amazing and perhaps unexpected event took place on September 3, 2016, in Hangzhou, China (on the eve of the G-20 Summit, and just a few months before COP-21). President Obama, in the presence of Ban Ki-moon, secretary-general of the United Nations), signed the Paris Agreement.¹¹ Xi Jinping, president of China, had signed it just the day before. Did Obama ratify it, as many media reported? As the Republicans were quick to point out the president only has the power to make treaties “with the advice and consent of the Senate” (U.S. Constitution, Article 2, Section 2). The White House contends that the US earlier ratification of the 1992 Rio Declaration on Environment and Development subsumes ratification of the Paris Agreement.¹² Opposition has now become partisan. Clearly, science (and the future well-being of Americans) is on the side of the White House, but there is entrenched opposition by some in the Republican Party.¹³

Yet the global momentum was astonishing. States continued to ratify the Paris Agreement, even after October 5 when the requisite 55 were on board, exceeding the required number of ratifiers.¹⁴ On October 6, 191 state parties voted to approve new tough standards for airplane emissions. Then on October 14, 197 state parties agreed to amend the Montreal Protocol to reduce the emissions of hydrofluorocarbons (HFCs), preventing up to 0.5 degree Celsius of global warming by the end of this century. The sources of HFCs are large air-conditioner units and refrigerators. At the news conference it was announced that alternatives to HFCs currently being explored include substances that do not deplete the ozone layer and have a smaller impact on the climate. Super-efficient, cost-effective cooling technologies are also being developed, which can help reduce HFC emissions and use less energy.¹⁵

There is, of course, apprehension around the world about what Donald Trump's presidency will mean for US policies and practices regarding climate change, reliance on fossil fuel, and development of technologies that enhance renewable energy. We can say, optimistically, that Trump himself as well as his choices for Secretary of Energy and Secretary of State are not consistently opposed to the United States investing in renewable energy and, if they see that forms of renewable energy are profitable, they may be supportive. Trump's choice for director of the Environmental Protection Agency, Scott Pruitt, is more worrisome. But we can confidently say that the entire world – country leaders as well as people themselves – will turn against the United States if America backtracks. It would be horrific if the world – entire countries, charities, individuals, and companies – were taking ambitious steps to slow the heating of the planet and the United States stood in the way.

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The Puzzle

Abstract I summarize the scientific conclusions about the composition of greenhouses gases, and then describe the sources of atmospheric emissions and international surveys of citizens' concerns about climate change. There is no question that the planet is getting hotter at an accelerating rate due to the accumulation of greenhouse gases caused primarily by carbon dioxide, some of which lingers in the atmosphere for up to a thousand years. Because the United States was the world leader in industrialization, it is the leading source of emissions in the atmosphere today. Yet, international surveys show that Americans are among the least concerned. I suggest that capitalism promotes the objectification of the environment in a way that lends itself to exploitation rather than sustainability and privileges competition over cooperation.

Keywords Capitalism · Carbon dioxide · Greenhouse gases · American attitudes

As already discussed, the temperature of the skies, earth, polar ice, seas, and all habitable environments is increasing at an alarming rate, and accompanying this are fierce and unpredictable storms and the loss of entire species. It will worsen because carbon emissions, which are largely responsible for this warming, remain trapped in the atmosphere. The science is clear and unambiguous. Unless the rate at which the atmosphere heats up is decisively and dramatically slowed, the effects will be

catastrophic for humans, the food supply, human health, and indeed, all life on the planet. The big puzzle is why Americans, compared with most of the world's peoples, are relatively unconcerned. That is, Americans are slower than others to acknowledge climate warming, to recognize and acknowledge the reasons for it, and to proactively consider how to slow or stop it. It is not as if experts and leading authorities have not alerted the American public. In congressional hearings held in 1988, senior scientist James E. Hansen at the National Aeronautics and Space Administration (NASA) said, "Global warming has reached a level such that we can ascribe with a high degree of confidence a cause and effect relationship between the greenhouse effect and observed warming."¹

To underscore the scientific consensus about global warming, here is a sample of statements:

It is clear from extensive scientific evidence that the dominant cause of the rapid change in climate of the past half century is human-induced increases in the amount of atmospheric greenhouse gases. – American Meteorological Association²

Temperature determines where we can live in larger numbers, what food we get, and how we protect ourselves. – Konrad Soyez and Hartmut Grassel (climate scientists).³

We are at risk of pushing our climate system toward abrupt, unpredictable, and potentially irreversible changes with highly damaging impacts. Earth's climate is on a path to warm beyond the range of what has been experienced over the past millions of years. – American Association for the Advancement of Science.⁴

The many adverse health outcomes of climate warming include heat – and extreme weather – related conditions, infections, respiratory conditions and allergies, and mental health conditions. Heat waves promote dehydration, heat exhaustion, and heat stroke while exacerbating heart, lung, and kidney disease. – American Medical Association.⁵

Rigorous analysis of all data and lines of evidence shows that most of the observed global warming over the past 50 years or so cannot be explained by natural causes and instead requires a significant role for the influence of human activities. – National Academy of Sciences.⁶

Human-induced climate change requires urgent action. Humanity is the major influence on the global climate change observed over the past 50 years. Rapid societal responses can significantly lessen negative outcomes. – American Geophysical Union⁷

The science is clear: climate change is a serious threat to human health. – American Public Health Association.⁸

The effects of climate change on our ecosystems are already severe and widespread, and ensuring food security in the face of climate change is among the most daunting challenges facing humankind. – UN Food and Agriculture Organization.⁹

Paleoclimatologists have discovered – through tree ring data, ice cores, and other corroborating records – that the concentration of carbon dioxide, and the Earth’s average temperature, are nearing levels that haven’t been reached for hundreds of thousands of years. – National Science Foundation¹⁰

GREENHOUSE GASES

There are four elementary and inescapable facts about climate change and what is causing it:¹¹

- (1) Climate change is indifferent to national borders.
- (2) Greenhouse gases (GHGs) absorb energy, slowing or preventing the loss of heat to space. In this way, GHGs act like a blanket, making earth warmer than it would otherwise be. This process is commonly known as the “greenhouse effect.”

GHGs include (a) carbon dioxide (CO₂) produced from the burning of fossil fuel (coal, oil, and natural gas) and also wood; (b) methane (CH₄) produced from the burning of fossil fuel (coal, oil, and natural gas) and livestock digestion; (c) nitrous oxide produced from synthetic fertilizer and transportation activities; (d) fluorinated gases produced in industrial processes and refrigerants. (These include hydrofluorocarbons, or HFCs, which will be regulated under the Kigali agreement.)¹²

- (3) The impact of these GHG depends on how much they heat up the earth’s atmosphere, or their global warming potential (**GWP**), length of time in years in the atmosphere (**LYA**), and total concentration, in parts per billion (**TC**).

	<i>GWP</i>	<i>LTYA</i>	<i>TC</i>
(a) CO ₂	1	1,000	368,400
(b) Methane	28–36	10	1,745
(c) Nitrous oxide	265–298	100	312
(d) Fluorinated gases	1,000+	2,650	27

(4) The main culprit is CO₂, owing to *LTYA*, and **TC**.

That is, CO₂ is the most dangerous and destructive. Moreover, it dissolves in water, causing acidification of the oceans, having dramatic, negative effects on some calcifying species, including oysters, clams, sea urchins, shallow water corals, deep sea corals, and calcareous plankton. It bears restating that although its *GWP* is low (1), CO₂ can remain in the atmosphere for as long as 1,000 years, and has the highest concentration of the four GHG.

NASA demonstrates that ancient air bubbles trapped in ice enable us to see what the Earth's atmosphere and climate were like in the distant past. This reveals that levels of CO₂ in the atmosphere are higher than they have been at any time in the past 400,000 years. During the ice age, CO₂ levels were around 200 parts per million (ppm), and during the warmer interglacial period they hovered around 280 ppm. In 2013, CO₂ levels surpassed 400 ppm for the first time in recorded history. According to NASA, this dramatic rise in CO₂ shows a remarkably constant relationship with fossil-fuel burning, and can be accounted for based on the fact that about 60% of fossil-fuel emissions stay in the air.¹³

WHO PUT IT THERE?

It is important to consider these changes in the environment in their social, historical, and geopolitical context. Since GHG – notably CO₂ – stay in the atmosphere for a very long time, the countries that produced them a hundred or more years ago bear the most responsibility for climate change and climate warming. That is, Western countries bear the most responsibility and young countries – mostly, former colonies – bear little responsibility; but, of course, they are now affected and are enlisted to help solve the problem. **Box 4.1** summarizes the

contributions, by country, to cumulative emissions currently in the atmosphere. This provides the background for why it is imperative for richer countries to assist poorer ones in the development of sources for renewable energy.

Box 4.1 Leading Sources of Cumulative Emissions Currently in the Atmosphere (by percentage)

<i>United States</i>	27%
EU – all EU countries combined	25
China	11
Russia	8
Japan	4
India	3
Canada	2
Mexico	1
Brazil	1
Indonesia	1
All other countries combined	17

Source: World Resources Institute: Cumulative emissions: <http://www.wri.org/blog/2014/11/6-graphs-explain-world%E2%80%99s-top-10-emitters>

See also: Carbon Dioxide Information Analysis Center: Global, Regional and National Fossil Fuel CO₂ Emissions: http://cdiac.ornl.gov/trends/emis/overview_2011.html;

Carbon Brief. Historical Emissions: <http://www.carbonbrief.org/interactive-map-historical-emissions-around-the-world>

People in developing nations are aware that developed nations are responsible for the emissions trapped in the atmosphere and the rapid heating of the planet. For example, an article in the *Jamaica Observer* leads with this sentence, “With the future we’re looking at, Jamaica is not a country that contributed significantly to the problem, but it is going to be one of those that’s going to be adversely affected.”¹⁴ In preparing for COP-15, the African Union issued a report on climate change. It includes this statement:

... climate models anticipate that Africa will experience a median temperature rise of up to 4 degrees Celsius in the 21st century. ... Africa’s

adaptive capacity is extremely low. The *region is bearing the brunt of climate excesses precipitated by forces of production outside our shores*. In this respect, the interests of justice would best be served if the industrialized countries provide new and additional resources to Africa for the victimized status it is being forced to endure. The dedicated funds should help countries reduce their vulnerability to climate change impacts through measures that enhance their adaptive capacities. (emphasis added)¹⁵

In sum, the long epoch of industrialization during which manufacturing largely replaced agriculture was led by the United States and European countries, resulting in the steady – and continuing – warming of the atmosphere; and yet, among all countries, the United States produced the most CO₂ and other GHGs that now linger in the atmosphere. One would think that Americans would be contrite and feel responsible for the grave danger they have caused the world. The tragic irony is that they do not, as I will show, drawing from recent opinion polls. Not only are Americans not contrite, but many are in a state of denial as well.

SURVEYS OF AMERICANS

There is no question whatsoever that the planet is heating up faster than predicted, and the United States bears the most responsibility for this. It is important to understand that, surprisingly, Americans are slow to catch on to the reasons behind climate change, which, in turn, has impaired the United States from meeting its responsibilities in international agreements to reduce emissions. I do not believe there is a single, simple answer for why many Americans are in a state of denial about climate change, but I think it has to do with deeply engrained values related to capitalism and material progress. Regardless, the rest of the world will quite rightly judge us harshly if our professed values lead to irrational international, public policies and a failure to cooperate with other countries to take radical steps to reduce emissions.

Box 4.2 presents the results of an international survey carried out by Pew Research, an American research organization, about attitudes regarding climate change.

Box 4.2 Pew Research Center. International Survey of Attitudes about Climate Change, 2015

“Global Climate Change Is Harming People: Now or In the Next Few Years?”

	<i>Percent agree</i>
Latin America	95
Europe	86
Africa	85
Asia/Pacific/China	79
Middle East	70
United States	69

Source: Pew Research Center Spring 2015 Global Attitudes Survey

<http://www.pewglobal.org/2015/11/05/1-concern-about-climate-change-and-its-consequences/>

This conclusion is corroborated by the findings of an international survey carried out by a UK research group, YouGov, as shown in [Box 4.3](#).

Box 4.3 YouGov 2016 Global Survey: Percent Rating Climate Change Greatest Concern

	<i>Percent agree that climate change is a greatest concern</i>
Hong Kong	20.4
Denmark	16.2
Sweden	16.0
Singapore	14.8
China	14.7
Thailand	12.8

(continued)

(continued)

	<i>Percent agree that climate change is a greatest concern</i>
Australia	12.6
Norway	12.5
France	12.3
Finland	12.3
Germany	12.2
UAE	11.7
UK	10.8
USA	9.2
Saudi Arabia	5.7

Source: YouGov: Global Survey, 2016: <https://yougov.co.uk/news/2016/01/29/global-issues/>

These results are replicated in other surveys. According to a poll carried out by Monmouth University in December 2015, 70% of Americans agree that the climate is changing, but only 27% of respondents agree with the scientific consensus that human activity is the main cause of climate change.¹⁶ It is also surprising that Americans' ideas about climate change have remained about the same since the late 1980s in spite of greater attention paid to warming and the fact that the scientific consensus is now nearly 100%. (It is about 98%, which is remarkable given the principle that scientists profess that they must always be skeptical.)

In another international poll of 20 countries carried out in 2014 by GlobalTrends,¹⁷ Americans were *least likely* to agree with the following statement: "We are heading for environmental disaster unless we change our habits quickly." Americans also were least likely to agree with the statement that "the climate change we see now is largely the result of human activity." On another question the United States and India tied for first place: "The climate change that we are seeing is just a natural phenomenon that we see from time to time."

Moreover, Gallup has polled Americans on the topic of climate change every few years, and reports that after experiencing a winter of extreme cold in 2015 Americans were less concerned about climate change than

they had been in 2000. Specifically, 56% of Americans polled in 2015 said they were worried about climate change compared with 72% who said they were worried in response to the identical question in 2000.¹⁸ To be sure, attitudes about climate warming, and whether it is caused by humans or not, vary widely by party affiliation – with Republicans less likely to be concerned – but the main thing to note is the apparent decline in interest and concern between 2000 and 2015.¹⁹

According to one 2015 Gallup poll, conservative Republicans are the only group in which a clear majority (70%) attribute increasing terrestrial temperatures to natural changes in the environment.²⁰ Besides, a Republican majority in the US Senate blocked Obama's plans to cut heat-trapping carbon emissions from existing coal-fired power plants, and the Republican-dominated Senate earlier attempted to block the United States from taking action on the Paris Agreement.²¹ So far, attention has mainly focused on the political implications of the Republican position, but deeper issues are at stake. Namely, the United States risks recognition by the rest of the world as being the country that undermines the Paris Agreement and destabilizes the earth's climate. (We do not know, as of mid-December 2016.)

Capitalism and capitalist practices have played major roles in climate warming, and capitalism and its accompanying practices need to fundamentally change if there is any chance of slowing climate warming. Intensive extraction and burning of fossil fuels are what have caused global warming, but the Green Revolution has also played a role because it has increased farmers' reliance on pesticides and herbicides, which produce nitrous oxide.²² So has trade – which is key to global capitalism – contributed to global warming since it involves intensive shipment of goods and the movement of giant ships transporting goods from one continent to another. It is estimated that just 15 of the world's biggest ships now emit as much pollution as all the world's 760 million cars.²³

CONCLUSIONS

It is worrying that Americans seem to be unaware that we have been clobbering other people as well as ourselves with our CO₂ – namely, the CO₂ we have thrown up into the atmosphere over the past decades – and that the United States is more responsible for global emissions than any other country. No doubt, the reasons for Americans' failure to recognize

the great significance of climate change is that we are wedded to an economic model and practices that privilege competition over cooperation, selfish pursuits over promoting the common good, and greed over generosity. Ingrained in American society and practices are emphases on “big,” “fast,” “efficient,” “competitive,” and “profitable.” We Americans have not especially privileged “sustainable” in our communities, society, and economy. And yet, until we fully embrace the importance of sustainability, we will be on the margins of global efforts to slow climate warming.

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The Paradox of American Exceptionalism

Abstract American exceptionalism is based on the belief that America is a uniquely exceptional country with its enduring values of competitiveness, individualism, freedom, and liberty. The paradox is that what binds Americans together (as exceptionalists) are the very values that pull us apart (individualism). Yet, the United States, compared with most developed countries, ranks poorly on many indicators, including poverty, firearms per capita, obesity rates, infant mortality, inequality, incarceration rate, military spending, and so forth. I conjecture that our exceptionalism creates such an obsession with individualism that we lose sight of the overall collectivity. The Bill of Rights (including amendments) is presented to highlight how individualism has historical roots. Finally, I show how the current political polarization in the United States affects Americans' understanding of climate change.

Keywords Individualism · US ranking on indicators · American values

Ambition must be made to counteract ambition.

So wrote James Madison for the February 6, 1788, issue of the *Independent Journal*, which subsequently became *Federalist* # 51. Then he added:

Whilst all authority in [the federal republic of the United States] will be derived from and dependent on the society, the society itself will be broken

into so many parts, interests, and classes of citizens, that the rights of individuals, or of the minority, will be in little danger from interested combinations of the majority.¹

This is the essence of what Madison described in positive terms as the “balance of power.” It might also be understood to be advocacy for endless competition and contest. And if we take “balance of power” out of its original political context we can see that it has become a gloss that disguises as benign what, in truth, are fierce competitive, capitalistic practices. It’s tit for tat rather than turn taking. It’s contentiousness rather than compromise, and individualism and competition rather than cooperation.

THE CORRELATES OF INDIVIDUALISM

Congress, obviously, has become highly contentious, a venue for the display of grotesque displays of egoistic individualism and the subordination of the public good to personal showmanship. Perhaps in line with this, there has been a rise in litigation. Compared with Europeans, Americans far more frequently resort to litigation.² Nor it surprising that American culture is more individualistic than other cultures. Recently, Pew Research carried out a survey comparing Americans with western Europeans with respect to the salience of individualism. People were asked, “Which is more important to you? Freedom to pursue life’s goals without state interference? *OR* the State guarantees nobody is in need?” The majority of American respondents (58%) answered that “freedom to pursue life’s goals without state interference” was more important. In contrast, 62% of western European respondents (when averaged over countries) answered that “the State guarantees nobody is in need” was more important.³ It appears that Americans are more likely than others to embrace individualistic and competitive values, and besides the Pew Research survey, *USA Today* provides evidence that this is the case, concluding that Americans are “me-me” oriented.⁴

Accompanying these values related to freedom and individualism is the idea that America is “exceptional.” In a Gallup poll, Americans were asked, “Because of the United States’ history and its Constitution, do you think the U.S. has a unique character that makes it the greatest country in the world? Or don’t you think so?” Eighty percent of Americans said, “yes.”⁵ In other words, most Americans are robustly loyal and patriotic. A more

recent poll, carried out in 2015, 49% of Americans, 32% of the British, and only 9% Germans describe themselves as being patriotic.⁶

INDIVIDUALISM IN PRACTICE

Objectively, given the prevailing domestic economic conditions and global interdependence, it is likely that cultural values will shift away from individualism, competition, and exceptionalism, and given the global threat that climate warming poses, it is quite possible that American cultural values will shift in the direction of cooperation and solidarity. Yet, on the other hand, core American values are responsible for why Americans fail to grasp the implications of global warming. If Americans are not ready to cooperate on a global scale, we imperil the entire world. Climate change knows no geographical or geopolitical borders.

As people, we are individualists; yet, as a nation of individualists, we consider ourselves collectively exceptional. That is the paradox of American exceptionalism; namely, what binds us as individuals together is our exceptionalism. That is as if to say, “We are rich. We are powerful. We will prevail over the rest of the world. Yes, thanks to me. Yes, thanks to me.” These ideas no doubt play a role in American attitudes about climate change. “It can’t happen to us. Like Super Man and Super Woman, we are invincible.” Of course, this sounds raw and irrational, but deep-seated convictions are not rational.

What do Americans mean when they say that America is “exceptional?” The idea originated with Frenchman Alexis de Tocqueville, who described Americans in similar terms based on his visit to the United States in 1831. He does not use the term, “exceptional,” but writes in the very first line of his introduction to *Democracy in America*, that America is noteworthy in the following respect: “Among the novel objects that attracted my attention during my stay in the United States, nothing struck me more forcibly than the general equality of condition among the people.”⁷

None can say now that that “the general equality of condition” is characteristic of America today, because, in fact, inequality in the United States is higher than it is in any developed country and many developing ones.⁸ Some argue that America is exceptional because it is the land of immigrants,⁹ but with the current backlash against Latinos and Muslims, it would be hard to defend that claim.¹⁰ Some argue that individualism sets Americans apart. Yet, an ardent commitment to individualism – and to individual gain – promotes other objectionable outcomes. First, it fuels

and justifies economic inequalities.¹¹ Second, it accompanies indifference to cooperation and collectivist strategies, which surely is required when dealing in any constructive way with, in general, climate change and in particular, flooding, food shortages, hurricanes, and disease epidemics. The deeper significance of terms such as “my house,” “my job,” “my family,” and “my career” need to be interrogated and challenged. What about “our community,” “our economy,” “our forests,” and “our world?” Third, the American economy is deeply and profoundly monopolistic and far from being competitive, as is often claimed.

INDICATIONS OF AMERICAN EXCEPTIONALISM

Exceptionalism can verge on isolationism. In an international Pew Poll, Americans are less likely to say that the United States should help other countries in need, in comparison with Spaniards, French, and the British.¹² Pew Research asked other questions in the same poll. Americans were also most likely to say, “Our people are not perfect but our culture is superior to others.” Moreover, Americans were more likely to agree with the statement, “It is more important that one has the freedom to pursue life’s goals than ensuring nobody is in need.” In total, 49% of Americans agreed with this statement; 47%, Germans; 44%, Spaniards; 32%, British; and 27%, French. Another question asked was, “Should have UN approval before using military force.” The number of Americans that agreed was 45%, compared with 67% British; 66%, French; 74% Spanish; and 76% Germans. In other words, Americans are more likely to be patriotic, individualistic, and isolationists compared with western Europeans.

Both Republicans and Democrats continue to draw from the rhetoric of exceptionalism when talking about the United States. This is from the 2016 party platform of the Republican Party:

We believe in American exceptionalism. We believe the United States of America is unlike any other nation on earth. We believe America is exceptional because of our historic role – first as refuge, then as defender, and now as exemplar of liberty for the world to see.¹³

In Barack Obama’s commencement speech at the West Point Military Academy on May 28, 2014, he said:

I believe in American exceptionalism with every fiber of my being. But what makes us exceptional is not our ability to flout international norms and the rule of law; it's our willingness to affirm them through our actions.¹⁴

Yet, this is not what other people think of Americans. In one international survey, the majority of respondents described Americans as “narcissistic,”¹⁵ and favorable opinion of Americans has declined from 1999 to 2006: 83–56% (UK); 78–37% (Germany); 77–49% (Morocco); 75–30% (Indonesia); 62–39% (France); 62–12% (Turkey); and 50–23% (Spain).¹⁶ Actually, the objective facts are not flattering. Americans compared with others:

- Have lower life expectancy (than people in other OECD countries)¹⁷;
- Pay more for health care (than people in other OECD countries)¹⁸;
- Have the highest military spending in the world¹⁹;
- After residents of Seychelles, have the highest incarceration rate in the world²⁰;
- Has the highest number of firearms per capita in the world²¹;
- Ranks 34th on child poverty (of the 35 richest countries)²²;
- Has the highest obesity rates of all OECD countries²³;
- Ranks third highest among all OECD countries, on poverty rate. Only Mexico and Israel have higher poverty rates²⁴;
- Has the highest economic inequality (Gini coefficient) of all OECD countries except Turkey, Mexico, and Chile²⁵;
- Has the highest infant mortality rate of all rich countries.²⁶

THE U.S. BILL OF RIGHTS

While many are now beginning to scoff at the term, “American Exceptionalism,” the majority of Americans, as I have already noted, still embrace the idea that the United States is, indeed, exceptional. This idea is linked to an unwavering belief among Americans that their constitution is the best in the world.²⁷ True, it is the oldest in the world; the constitution is 1788 and the Bill of Rights is 1791. As will become clearer, the focus must be on the Bill of Rights since the constitution itself is concerned with institutions, whereas the Bill of Rights spells out what rights citizens have. To be sure, the Bill of Rights was amended and some, not all, of the amendments are substantive. Amendments that have substantive significance are: XIII (abolition of slavery), XIV (definition of citizenship), XV (citizens’ right to vote), XIX (women’s suffrage), XXIV (citizens’ right to

vote – poll tax is no obstacle). The same logic applies to the amendments that applies to the 10 Bill of Rights, namely, that people are characterized as citizens vis-à-vis the state with legal entitlements, not as sentient, thoughtful human beings, with human feelings and human needs.

It is important to first note that the 1791 U.S. Bill of Rights, along with the 1789 French *Déclaration des droits de l'homme et du citoyen*, sought to protect individuals' civil and political rights and now every constitution in the world embraces – at least in principle – these rights.²⁸ So important are these rights that they were elaborated and extended from rights circumscribed within a nation to universal and globally recognized rights. Political and civil rights are laid out in detail in Articles 1–21 in the 1948 Universal Declaration of Human Rights (UDHR) as well as the International Covenant on Civil and Political Rights (ICCPR). The debt of the international agreements to the 1789 *Déclaration* and the 1791 Bill of Rights is clear enough, but there is one notable difference. Individuals – as individuals – have rights protected by the *Déclaration* and by the Bill of Rights, while, in contrast, as we will see in [Chapter 6](#), the Declaration of Human Rights stresses that *everybody* has rights and shares rights – in solidarity with everybody else. Although substantively the rights spelled out in the UDHR are the same as those in nearly all constitutions but not the Bill of Rights. I want to stress that the U.S. Bill of Rights has only individual rights, whereas the UDHR stresses collective rights. [Chapter 6](#) ([Box 6.1](#)) includes the Universal Declaration of Human Rights and [Box 5.1](#) the Bill of Rights.

**Box 5.1 Bill of Rights and Subsequent Amendments (Abbreviated)
Amendments I through X (ratified in 1791)**

I Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances.

II A well-regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed.

III No Soldier shall, in time of peace be quartered in any house, without the consent of the Owner. . . .

IV The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures . . .

V No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a Grand Jury . . .

VI In all criminal prosecutions, the accused shall enjoy the right to a speedy and public trial . . .

VII In suits at common law, where the value in controversy shall exceed 20 dollars, the right of trial by jury shall be preserved . . .

VIII Excessive bail shall not be required, nor excessive fines imposed, nor cruel and unusual punishments inflicted.

IX The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.

X The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.

Amendments

XI (1795) The Judicial power of the United States shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States by Citizens of another State, or by Citizens or Subjects of any Foreign State.

XII (1804) The Electors shall meet in their respective states and vote by ballot for President and Vice-President . . .

XIII (1865) Neither slavery nor involuntary servitude, except as a punishment for crime . . . shall exist within the United States, or any place subject to their jurisdiction.

XIV (1868) I. All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside . . .

XV (1870) 1. The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of race, color, or previous condition of servitude.

XVI (1913) The Congress shall have power to lay and collect taxes on incomes.

XVII (1913) The Senate of the United States shall be composed of two Senators from each State, elected by the people thereof, for 6 years; and each Senator shall have one vote . . .

XVIII (1919) 1...the manufacture, sale, or transportation of intoxicating liquors...is hereby prohibited.

XIX (1920) The right of citizens...to vote shall not be denied or abridged...on account of sex.

XX (1933). 1. The terms of the President and the Vice President shall end at noon on the 20th day of January, and the terms of Senators and Representatives at noon on the third day of January.

XXI (1933) 1. The 18th article of amendment to the Constitution...is hereby repealed.

XXII (1951) 1. No person shall be elected to the office of the President more than twice...

XXIII (1961) (Suffrage in the District of Columbia)

XXIV (1964) 1. The right of citizens...to vote...shall not be denied or abridged by the United States or any State by reason of failure to pay poll tax or other tax.

XXV (1967) 1. In case of the removal of the President from office or of his death or resignation, the Vice President shall become President.

XXVI (1971) 1. The right of citizens of the United States, who are 18 years of age or older, to vote shall not be denied or abridged...

XXVII (1992) No law, varying the compensation for the services of the Senators and Representatives, shall take effect, until an election of representatives shall have intervened.

Source: National Constitution Center: <http://constitutioncenter.org/constitution/the-amendments>

It is probably not surprising given the importance Americans attach to individual rights and individual freedoms that in comparison with Europeans (Germans, Spaniards, English, and French), Americans are far more likely to say it is “important to have freedom to pursue life’s goals,” that “other countries should deal with their own problems,” and that is important to “have the freedom to pursue life’s goals without state interference.” Besides, as already noted, Americans couple this with exceptionalism; they are most likely to say, “our people are not perfect but our culture is superior.”²⁹

In other words, individualism and exceptionalism thrive. True, individualism was probably an important – and positive – value widely shared by

Americans in earlier times (during westward expansion and the period of industrialization), but it no longer is particularly important or, even, helpful, given the imperative of international cooperation. We now live in an interconnected and interdependent world – made even more so with the challenges of a heating planet. Individualism now verges on selfishness, which not only reduces Americans’ capacity to cooperate, but it also endangers the entire planet.

THE DANGERS OF POLARIZATION

A new study carried out by sociologists Riley E. Dunlap, Aaron M. McCright, and Jerrod H. Yarosh has troubling implications.³⁰ Using Gallup poll data, they compare Republicans and Democrats, at different levels of education for 2001–2008 with 2009–2016. The results are summarized in [Box 5.2](#).

Box 5.2 Republicans’ and Democrats’ Understanding of Climate Change, 2009–2016, by Education Level

Question: “Effects of global warming have already begun”

<i>Less than college</i>		<i>College or more</i>	
Republicans	Democrats	Republicans	Democrats
35	64	36	81

“Global warming due to human activities”

<i>Less than college</i>		<i>College or more</i>	
Republicans	Democrats	Republicans	Democrats
38	70	32	83

“Most scientists believe global warming is occurring”

<i>Less than college</i>		<i>College or more</i>	
Republicans	Democrats	Republicans	Democrats
43	71	43	86

In other words, the expected positive effect of education only applies to Democrats, and not to Republicans. Although this study does not help to answer the question as to why, it does show that attitudes about climate change among Republicans – but not Democrats – are independent of education (and, therefore, likely exposure to science education).

CONCLUSIONS: WHY BE SO HARD ON AMERICANS?

To be sure, Federalist James Madison and even the Bill of Rights itself are not entirely to blame for the intensity with which competitive individualism is embraced by Americans. Early capitalism and the competitive rush to conquer the frontier also played a role in reinforcing individualism and confounding it with freedom, liberty, and competition. Few would contest the notion that these all contributed to making the United States a dominant world power in the twentieth century, yet I argue that these must be reassessed and tempered in the decades to come since they will undermine international cooperative efforts to slow climate change.

Yes, it is true that in times of grave danger – say, during a tornado or severe storm – Americans show fearless courage, saving the lives of others, and making grave sacrifices. And, as I shall later point out, Americans' sense of fairness occasionally becomes an extremely effective and powerful force when it becomes contagious, as a social or political movement. Yet, the problem is that, as already discussed, Americans are extremely slow to acknowledge the signs of imminent climate change and the implications for international, or even national, cooperation. The Bill of Rights rests on philosophical and political premises that are inadequate for contemporary times. Nor can we continue to think of ourselves as “exceptional.”

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Human Rights

Abstract The Universal Declaration of Human Rights (UDHR) affirms human equality and equal rights. That is, everyone is entitled to political and civil rights (including those outlined in the U.S. Constitution), as well as the right to social security, the right to work, rest and leisure, an adequate standard of living, education, food, housing, and medical care. Those who are vulnerable (including children, the elderly, and disabled) are ensured protection. Many, if not most, contemporary constitutions include these rights. The United Nations has adopted resolutions that clarify how human rights must be protected under the conditions of climate change.

Keywords Universal Declaration of Human Rights · Vulnerability · Constitutions · Human rights

Human rights are ancient. They are also ordinary and casual, embedded in activities in our everyday lives and in simple taken-for-granted rules about the ways we should and do treat kin, friends, and tribesmen. We say “please” and we say “thank you” and we ask, “How are you today?” and “Can I bring anything from the store for you?;” “Do you have enough to eat?;” “Could I babysit your kids while you go out for dinner?” We treat people we know with respect while honoring their autonomy and dignity. We ask about their welfare and we diplomatically ask if they need assistance. These are taken-for-granted (and implicit) rules about the way we

treat kin and friends who are members of the same tribe. Of course, kin, friends, and tribesmen are entitled to food, housing, jobs, and security. We do not say “human rights” because these are simply rights that are taken for granted. They are commonplace.

Human rights come into their own when we have dealings with people outside of our tribe, when empathy doesn’t come so easily; that is, with people of different ages, who live in different neighborhoods, or are different races, different ethnicities, different nationalities, different religions, or who speak different languages. The imperative is “we are all equal” and “do not discriminate.” And, yes, we celebrate that we are all different. Yet, across tribal lines, it is easy to forget that. Across these lines, we need to clarify entitlements, duties, and responsibilities because we sometimes forget that rights are universal.

It took an unspeakable, wicked, and deeply horrific catastrophe – indeed, a series of catastrophes – for people to remember and to acknowledge that rights are universal, and, indeed, that we are all equals and all are equally deserving. Germany, though steeped in the traditions of the Enlightenment, which is to say, reason, rationality, and humanism, embarked on a ghastly barbaric enterprise. Germany slaughtered humans. They were simply perceived to be other than Aryan, as Jews, gypsies, homosexuals. On April 30, 1945, Hitler committed suicide, just days after 850 delegates from 50 countries convened in San Francisco to establish the United Nations (UN). The UN Charter was signed by 50 countries on June 26, 1945. The Preamble begins with these words.

We The Peoples of the United Nations Determined

- to save succeeding generations from the scourge of war, which twice in our lifetime has brought untold sorrow to mankind, and
- to reaffirm faith in fundamental human rights, in the dignity and worth of the human person, in the equal rights of men and women and of nations large and small, and
- to establish conditions under which justice and respect for the obligations arising from treaties and other sources of international law can be maintained, and
- to promote social progress and better standards of life in larger freedom.¹

The UN Charter established, among other bodies, the Economic and Social Council (ECOSOC), which was charged with laying the groundwork

for drafting a declaration of human rights. Eleanor Roosevelt chaired the committee and they immediately got to work. The objective was to advance a formal normative instrument – that is, an international treaty – that would embrace the highest standards for human dignity and well-being, and to ensure that something like the Holocaust would never, ever, happen again. Besides Eleanor Roosevelt, other members of the drafting committee were René Cassin (France), who composed the first draft of the Declaration, Charles Malik (Lebanon), Alexandre Bogomolov (USSR), Charles Dukes (United Kingdom), Peng Chun Chang (China), John Humphrey (Canada), William Hodgson (Australia), and Hernan Cruz (Chile). The Universal Declaration of Human Rights (UDHR) was drafted in less than two years, and submitted to the General Assembly in September 1948, giving all member states an opportunity to have input. The General Assembly adopted the UDHR on December 10, 1948.²

Box 6.1 provides extracts from the UDHR. Note the emphasis on equality in the Preamble and Articles 1 and 2. Note, too, the frequent use of the term “everyone,” or “all,” or, occasionally, “no one” (as in Article 5). This drives home the point that equality is unconditional, which is to say, “all of us” or “none of us.” It is important to note that Articles 1 through 20 lay out civil and political rights that were initially advanced in the eighteenth-century *Déclaration des droits de l’homme et du citoyen* and the Bill of Rights, as already discussed in [Chapter 5](#). However, there are additions in Articles 1 through 20 that were not anticipated in the eighteenth century, such as the universal right to own property (Article 17) and the right to life, namely, the right not to be executed (Article 3). What is uniquely *human* begins in Article 21, with the clear exhortation of the right to equal participation (“everyone has the right to take part in their government”). Article 22 through Article 26 clarify the full implications of equality, including the right to “social security” (Article 22), “the right to work” (Article 23), “the right to rest and leisure” (Article 24), the right to “food, clothing, housing, medical care, and necessary social services, and the right to security in the event of unemployment, sickness . . . or other lack of livelihood . . .” (Article 25). The UDHR continues through Article 26, “Everyone has the right to education;” Article 27, “the right to participate in the cultural life of the community”; and then though Article 28, “Everyone is entitled to a social and international order in which the rights and freedoms set forth in this Declaration can be fully realized,” and Article 29 (“everyone has duties to the community” . . .). Note, too, a main contemporary concern, anticipating extreme weather, is ensuring that the most vulnerable are protected,

and the UDHR already in 1948 highlighted that the unemployed, women, children, the elderly, and disabled receive special protections.

Clearly, human rights, although they certainly do encompass civil and political rights, rest on entirely different assumptions than those laid out in the late eighteenth century in the Bill of Rights, and subsequent amendments. Human rights refer to whole, integral persons, as corporal and sentient persons, with bodies, emotions, responsibilities, vulnerabilities, weaknesses, aspirations, and strengths. In short, the UDHR refers to the all-encompassing rights of human beings and not solely to an individual's legal rights vis-à-vis the State. These are the rights of all of us, as equals, united by our shared humanity.

Box 6.1 Universal Declaration of Human Rights: Adopted and proclaimed by General Assembly resolution 217 A (III) of December 10, 1948 (Extracts)

PREAMBLE

Whereas recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world,

Whereas disregard and contempt for human rights have resulted in barbarous acts which have outraged the conscience of mankind, and the advent of a world in which human beings shall enjoy freedom of speech and belief and freedom from fear and want has been proclaimed as the highest aspiration of the common people,

Whereas it is essential, if man is not to be compelled to have recourse, as a last resort, to rebellion against tyranny and oppression, that human rights should be protected by the rule of law,

Whereas it is essential to promote the development of friendly relations between nations,

THE GENERAL ASSEMBLY proclaims THIS UNIVERSAL DECLARATION OF HUMAN RIGHTS as a common standard of achievement for all peoples and all nations.

Article 1. All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood.

Article 2. Everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, colour, sex,

language, religion, political or other opinion, national or social origin, property, birth or other status.

Article 3. Everyone has the right to life, liberty and security of person.

Article 4. No one shall be held in slavery or servitude; slavery and the slave trade shall be prohibited in all their forms.

Article 5 No one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment.

Article 6. Everyone has the right to recognition everywhere as a person before the law.

Article 7. All are equal before the law and are entitled without any discrimination to equal protection of the law.

Article 8. Everyone has the right to an effective remedy by the competent national tribunals for acts violating the fundamental rights granted him by the constitution or by law.

Article 9. No one shall be subjected to arbitrary arrest, detention or exile.

Article 10 Everyone is entitled in full equality to a fair and public hearing by an independent and impartial tribunal, in the determination of his rights and obligations and of any criminal charge against him.

Article 11. (1) Everyone charged with a penal offence has the right to be presumed innocent until proved guilty; (2) No one shall be held guilty of any penal offence on account of any act or omission which did not constitute a penal offence, under national or international law, at the time when it was committed.

Article 12. No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation.

Article 13. (1) Everyone has the right to freedom of movement and residence within the borders of each state. (2) Everyone has the right to leave any country, including his own, and to return to his country.

Article 14. Everyone has the right to seek and to enjoy in other countries asylum from persecution.

Article 15. Everyone has the right to a nationality.

Article 16. (1) Men and women of full age, without any limitation due to race, nationality or religion, have the right to marry and to found a family. They are entitled to equal rights as to marriage, during marriage and at its dissolution. (2) Marriage shall be entered into only with the free and full consent of the intending

spouses; (3) The family is the natural and fundamental group unit of society and is entitled to protection by society and the State.

Article 17. Everyone has the right to own property alone as well as in association with others.

Article 18. Everyone has the right to freedom of thought, conscience and religion; this right includes freedom to change his religion or belief, and freedom, either alone or in community with others and in public or private, to manifest his religion or belief in teaching, practice, worship and observance.

Article 19. Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.

Article 20. Everyone has the right to freedom of peaceful assembly and association

Article 21. (1) Everyone has the right to take part in the government of his country, directly or through freely chosen representatives; (2) Everyone has the right of equal access to public service in his country; (3) The will of the people shall be the basis of the authority of government; this will shall be expressed in periodic and genuine elections which shall be by universal and equal suffrage.

Article 22. Everyone, as a member of society, has the right to social security and is entitled to realization, through national effort and international co-operation and in accordance with the organization and resources of each State.

Article 23. (1) Everyone has the right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment; (2) Everyone, without any discrimination, has the right to equal pay for equal work; (3) Everyone who works has the right to just and favourable remuneration ensuring for himself and his family an existence worthy of human dignity, and supplemented, if necessary, by other means of social protection; (4) Everyone has the right to form and to join trade unions for the protection of his interests.

Article 24. Everyone has the right to rest and leisure, including reasonable limitation of working hours and periodic holidays with pay.

Article 25. (1) Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control. (2) Motherhood and

childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection.

Article 26. (1) Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit. (2) Education shall be directed to the full development of the human personality.

Article 27. (1) Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits;

Article 28. Everyone is entitled to a social and international order in which the rights and freedoms set forth in this Declaration can be fully realized.

Article 29 (1) Everyone has duties to the community in which alone the free and full development of his personality is possible. (2) In the exercise of his rights and freedoms, everyone shall be subject only to such limitations as are determined by law solely for the purpose of securing due recognition and respect for the rights and freedoms of others and of meeting the just requirements of morality, public order and the general welfare in a democratic society.

Article 30 ...[No] State, group, or person [has] any right to engage in any activity or to perform any act aimed at the destruction of any of the rights and freedoms set forth herein.

Source: United Nations: <http://www.unhchr.ch/udhr/lang/eng.htm>

Let us explore more to clarify the distinctions involving civil, political, social, economic, and cultural rights. As we saw in [Chapter 5](#), we enjoy civil and political rights as individuals. You have a right to your free speech and I have a right to my free speech, but aside from the legal umbrella, your rights to enjoy free speech are independent of my rights to enjoy free speech. These constitutionally protected rights restrict the power of one's own government from trampling on the enjoyment of these individual rights. These are rights that are enjoyed individually and not collectively. Of course, the principle of free speech applies to all of us in a nation-state, but each case stands on its own individual merits.

It is somewhat different in the case of social, economic, and cultural rights. These are not held by individuals vis-à-vis the State, but held inclusively or collectively, say, like the weather or peace is shared. These rights belong to all of us; that is, everyone has the right to enjoy health-care, housing, and food; workers are entitled to a decent wage; and children to education. That is, social, economic, and cultural rights rest on quite different legal grounds from political and civil rights. They are also experientially different from civil and political rights in that they rest on ethical, empathetic principles rather than legal rights granted by the state. They are collectively enjoyed.³ If our society does not ensure these rights, you and I will demonstrate, petition, march, hold up signs and banners, and vote the scoundrels out of office. All of us are entitled to equal rights. That is what society is all about.

The basic idea was that since the UDHR was the expression of universal values it should be the basis of international law, which is to say, a treaty. The official record is somewhat vague as to why it did not become a treaty, but recent scholarship by Carol Anderson sheds light on why. She presents evidence that the United States was opposed to the UDHR becoming a treaty and that W. E. B. Du Bois, on behalf of the NAACP, campaigned vigorously for it being a treaty and that the United States be a party to it. Secretary of State John Foster Dulles responded by formally inserting an amendment into America's formal response: "Nothing in the charter shall authorize . . . intervention in matters which are essentially within the domestic jurisdiction of the State concerned."⁴ Anderson documents Du Bois's fury, declaring that "in this case, there would be nothing to prevent another Holocaust."⁵

Contemporary constitutions fully recognize these rights. For example, out of 194 constitutions, 84 have the right to a decent standard of living; 55 include the right to food; 136 include the right to work; 135 have the right to health care; and 72 constitutions have the right to shelter.⁶

And, like the UDHR, many constitutions emphasize inclusive rights. Most include the pronoun, "everybody," or "everyone," or "every person." For example, the constitution of Germany contains the following provision, "The right to form associations to safeguard and improve working and economic conditions shall be guaranteed to *every* individual and to *every* occupation or profession . . ." And, Angola's constitution includes this phrase, "*Every* worker shall have the right to vocational training, fair pay, rest days, holidays, protection, and workplace health and safety. . . ."⁷

We might understand that in the eighteenth-century individual rights would be celebrated as a radical departure from prevailing practices. On the basis of what we know about early America, collective loyalties and shared identities in cohesive communities were strong. Living in tiny communities, often with powerful religious authorities imposing strict control, individual rights, along with the idea of rebellion from the British, would have been very heady stuff. There would have been no reason to affirm community, since colonists were awash with community.⁸

Communities and societies on both sides of the Atlantic were traditional, with strong religious identities and cohesiveness. Women had no voice and, in America, black people were counted as property. Article I Section 1 of the US Constitution was:

Representatives and direct Taxes shall be apportioned among the several States which may be included within this Union, according to their respective Numbers, which shall be determined by adding **to the whole Number of free Persons**, including those bound to Service for a Term of Years, and excluding Indians not taxed, **three fifths of all other Persons** (emphasis added).⁹

A corollary of Americans' stark repudiation of collective rights has not only been a repudiation of the legal standing of the UDHR, but also of all international human rights treaties crafted after 1948.

Box 6.2 is a list of human rights treaties,¹⁰ and for each the year of General Assembly approval, the number of parties (that is, ratifying states), and whether or not the United States is a party or not. The United States is not a party to any human rights treaty. Accompanying individual treaties are review committees to implement each particular treaty and hear cases that violate the particular treaty. Technically, the United States is exempt from compliance and review regarding compliance with every treaty. Kenneth Roth, director of Human Rights Watch, writes:

It is sadly academic to ask whether international human rights law should trump US domestic law. That is because, on the few occasions when the US government has ratified a human rights treaty, it has done so in a way designed to preclude the treaty from having any domestic effect. Washington pretends to join the international human rights system, but it refuses to permit this system to improve the rights of US citizens.¹¹

While it is the case that the United States evades compliance with international human rights treaties, as a member of the United Nations it is subject to the Universal Periodic Review, which is a process started in 2005 and under the auspices of the Human Rights Council.¹²

Box 6.2 lists the treaties and the optional protocols, which lay out review procedures used by treaty-specific committees to hear complaints and violations.

Box 6.2 Human Rights Treaties and Optional Protocols. Acronym: Year of General Assembly Approval. Number of Ratifying States (out of 194 + 2); U.S. Status

- International Covenant on Economic, Social and Cultural Rights (ICESCR), 1966; 164 parties. United States is not a party.
- International Covenant on Civil and Political Rights (ICCPR), 1966; 168 parties; United States is not a party; “provisions are not self-executing.”
- International Convention on the Elimination of All Forms of Racial Discrimination (ICERD), 1965; 177 parties. United States is not a party; “provisions are not self-executing.”
- Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), 1979; 189 parties; United States is not a party.
- Convention Against Torture and Other Cruel, Inhuman, or Degrading Treatment or Punishment (CAT), 1984; 159 parties. United States is not a party; “provisions are not self-executing.”
- Convention on the Rights of the Child (CRC), 1989; 196 parties; United States is not a party.
- International Convention on the Rights of All Migrant Workers and Their Families (ICMW), 1990; 48 parties; United States is not a party.
- Convention on the Rights of Persons with Disabilities (CRPD), 2006, 164 parties; United States is not a party.
- International Convention for the Protection of All Persons from Enforced Disappearance (CPED), 2006, 52 parties. The United States is not a party.

- Optional Protocol to the International Covenant on Economic, Social and Cultural Rights. Implements covenant (ICESCR-OP), 2008, 21 parties, United States is not a party.
- Optional Protocol to the Covenant on Civil and Political Rights. Implements covenant. (ICCPR-OP1), 1966, 115 parties; the United States is not a party.
- Second Optional Protocol to the International Covenant on Civil and Political Rights, Aiming at the Abolition of the Death Penalty (ICCPR-OP2), 1966; 81 parties; United States is not a party.
- Optional Protocol to the Convention on the Elimination of Discrimination Against Women. Implements convention. (OP-CEDAW), 1999; 107 parties; United States is not a party.
- Optional Protocol to the Convention on Rights of the Child on the Rights of the Child on the Involvement of Children in Armed Conflict. Implements convention (OP-CRC-AC), 2000; 165 parties; United States is not a party; “United States under no obligation.”
- Optional Protocol to the Rights of the Child on the Sale of Children Child Prostitution, and Child Pornography (OP-CRC-SC), 2000; 173 parties; United States is not a party; “Federal government jurisdiction.”
- Optional Protocol to the Convention Against Torture and Other Cruel, Inhuman, or Degrading Treatment or Punishment (OP-CAT), Implements convention (OP-CAT), 2002; 81 parties; United States is not a party.
- Optional Protocol to the Convention on the Rights of Persons with Disabilities. Implements treaty (OP-CRPD), 2006; 89 parties; United States is not a party.

Sources: United Nations Office of the High Commissioner. Core International Instruments: <http://www.ohchr.org/EN/ProfessionalInterest/Pages/CoreInstruments.aspx>; United Nations. Treaty Collection. Chapter IV. Human Rights: <https://treaties.un.org/pages/Treaties.aspx?id=4&subid=A&clang=en>

Note: The Vatican and the State of Palestine, as observer states, can ratify treaties, which accounts for why 196 ratifications are possible.

VULNERABLE PERSONS AND CLIMATE CHANGE

Note how many of the human rights treaties protect the rights of vulnerable people: racial minorities, women, children, migrant workers and their families, and persons with disabilities. It is so evident that human rights – as philosophy, practice, jurisprudence – is based on the principle of equality, which is to say that there can be no discrimination, and that when people are handicapped in some respect, society steps in with safeguards to reduce and help overcome these handicaps.

The United Nations has consistently insisted that people have environmental rights – protections from adverse environmental conditions, such as desertification. In [Chapter 7](#), I provide an overview of environmental rights, but here is the appropriate context to examine how the global community seeks to protect human rights in the context of climate change, and most especially focuses on the rights of vulnerable persons. It should first be noted that the UN General Assembly, the Office of the High Commissioner of Human Rights, the Human Rights Council, and the UN Environment Programme have long stressed the commitment that environmental rights are universal and that vulnerable people must have special environmental protections.¹³ As early as 2008, the Human Rights Council adopted resolutions highlighting the importance of protecting vulnerable people from adverse climatic events.¹⁴ On June 28, 2016, the United Nations Human Rights Council unanimously adopted a resolution on climate change that clarified and affirmed the rights of vulnerable persons to assistance and resources.¹⁵ This is further clarified on the webpage of the High Commissioner for Human Rights.¹⁶

It is important to highlight some of the provisions of this resolution since it not only affirms all of the rights included in the UDHR (civil, political, economic, social, and cultural rights), but it also clarifies that development is a right, that environmental rights are universal, and that the rights of vulnerable people need special protection under the conditions of climate change. Moreover, it highlights that we strengthen and fortify human rights under the conditions of warming. [Box 6.3](#) provides extracts of the UN General Assembly's adoption of the Human Rights Council's resolution on climate change and human rights.

Box 6.3 Resolution on Human Rights and Climate Change (extracts)
 UN General Assembly. Human Rights Council. A/HRC/32/L.34.
 June 28, 2016 (Extracts)

Reaffirming that all human rights are universal, indivisible, interdependent and interrelated

Reaffirming also the commitment to enable the full, effective and sustained implementation of the United Nations Framework Convention on Climate Change, including in the context of sustainable development and efforts to eradicate poverty through long-term cooperative action. . . .

Emphasizing that the adverse effects of climate change have a range of implications . . . for the effective enjoyment of human rights, including inter alia, the right to life, the right to adequate food, the right to the enjoyment of highest attainable standard of physical and mental health, the right to adequate housing, the right to self-determination, the right to safe drinking water and sanitation and the right to development, and recalling that in no case may a people be deprived of its own means of subsistence.

Recognizing that climate change poses an existential threat that has already had a negative effect on the fulfillment of the Universal Declaration of Human Rights.

Expressing concern that . . . the adverse effects of climate change are felt most acutely by those segments of the population that are already in vulnerable situations owing to factors such as geography, poverty, gender, age, indigenous or minority status, national or social origin, birth or other status and disability

Recognizing that children are among the most vulnerable to climate change, which may have serious impact on their enjoyment of the highest attainable standard of physical and mental health, access to education. . . .

Expressing concern that countries lacking the resources for implementing their adaptation plans and programmes of action . . . may suffer from higher exposure to extreme weather events . . .

Recognizing the particular vulnerabilities of migrants and other non-nationals who may face challenges associated with implementing appropriate responses in extreme weather conditions owing to their status and who may have limited access to information and services, resulting in barriers to their full enjoyment of their human rights.

Welcoming the Paris Agreement . . . which acknowledges that climate change is a common concern of humankind and that parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations, and the right to development, as well as gender equality, empowerment of women and intergenerational equality.

Encouraging States . . . to integrate policies on health and human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment focusing on climate change and human rights.

Taking note of the report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment focusing on climate change and human rights.

Encourages relevant special mandate holders to continue to consider the issue of climate change and human rights, including the adverse impact of climate change on the enjoyment of children's rights, within their respective mandates.

Calls upon States to consider, among other aspects, human rights within the framework of the United Nations Framework Convention on Climate Change.

Calls upon States to integrate a gender perspective in pursuing mitigation and adaptation responses to the adverse impact of climate change in the full and effective enjoyment of the rights of every boy and girl.

Decides to remain seized of the matter.

Source: United Nations: A/HRC/32/L34: <https://documents-dds-ny.un.org/doc/UNDOC/LTD/G16/135/11/pdf/G1613511.pdf?OpenElement>

First to note is the last phrase “to remain seized of the matter.” Seized comes from the French verb *saisir* and means to grasp, seize, or grip. In the legal context, it means that an entity – a court or government – has decided that it will consider a legal matter or issue falling within its jurisdiction. Its use at the end of a UN resolution underscores and signals that the UN entity is and will remain in possession of, or in control of, or is still really interested in, that particular matter. That is, it is urgent. Originally, only the Security

Council had the right to declare “it was seized of a matter,” but now other UN bodies use the term to flag and highlight an issue as being of the greatest importance.¹⁷ Of interest, too, is the way that the Human Rights Council creates coalitions; addressing climate change requires cooperation.

Also important to note is the tone of the Council’s statement. It is inclusive in that it recognizes the deep interdependencies of all peoples, while underscoring that because of these interdependencies, everyone has responsibilities to the others while especially recognizing our responsibilities to vulnerable people – children, disabled persons, women, the ill, elderly, migrants, minorities, and indigenous peoples. Societies are thereby organic, and foster empathy and compassion.

DO PEOPLE COOPERATE OR COMPETE?

The American legal system and the economic system (capitalism) are both based on the same premise, namely, a libertarian view of the primacy of the individual and individual liberty, accompanied by a profound distrust of group rights and collective rights. According to this conception, collectivities are especially susceptible to free-riding, which has also been dubbed, “Tragedy of the Commons,” when individuals (naturally and inevitably) exploit a common and shared resource.¹⁸ This conception is not without its critics.

Notable critics in economics include Elinor Ostrom, who received the Noble Prize for her 1990 book, *Governing the Commons*,¹⁹ in which she contended that the environment and its components constitute a “collective commons,” and that natural resources require protection and should not be exploited. She pointed out that people who benefit from a commons collectively care for it, by protecting it from overuse or replenishing it. It has only been in the past decade that Americans have become aware that many natural resources are imperiled because we have plundered them – timber, petroleum, gas, coal, and oil. Their supply is not only diminishing – they are, after all, nonrenewable – and, most significantly, their exploitation has contributed to a dangerous increase in the warming of the planet.

From time to time I will cite Elinor Ostrom’s contribution regarding the Commons – that is, as a collective resource as well as a collective responsibility – since it is relevant for understanding our collective response to climate change. Contrary to the individualistic and self-serving assumptions of capitalism, it is imperative that there is full international

cooperation to slow climate warming. This requires the end of fossil fuel extraction and reliance on clean energy sources – especially solar, wind, waves, and tides. It also requires cooperation at the global, national, and local levels, as well as the understanding that everyone’s survival depends on such cooperation. To illustrate, scientists from Myanmar could teach Western horticulturalists how to strategically plant mangrove seedlings to prevent coastal flooding; Kenyan farmers could share with Western farmers what they have learned about drought-resistant crops; and Brazilian dendrologists could show Americans ways to plant trees to more effectively fight deforestation, while Americans assist people in other countries to acquire technologies that produce renewable energy.

CONCLUSIONS

To be clear, the perspective that highlights human rights rests on the principle of equality, and therefore, vulnerable persons and groups must have extra protections. We could say, “they deserve a leg up.” On the other hand, the perspective that highlights collective responsibilities to preserve the commons rests on the principle of equal responsibilities. We could say, “let’s all chip in.” Neither perspective takes into account that all people are different. If we are to save the commons – by which I mean the planet – we need to recognize that (1) people have equal rights and that (2) some “deserve a leg up,” (3) we all “need to chip in,” and (4) we all need to recognize that the extraordinary task ahead requires as diverse input and contributions as possible.

NOTES

1. United Nations Charter: <http://www.un.org/en/charter-united-nations/>
2. See John Allphin Moore Jr. and Jerry Pubantz, *The New United Nations: International Organization in the Twenty-First Century*. Upper Saddle, NJ: Pearson, 2006, pp. 53–63.
3. A. Reis Monteiro, *Ethics of Human Rights*. New York: Springer, 2014; Richard Falk, *Achieving Human Rights*. New York: Routledge, 2009.
4. Carol Anderson, *Eyes Off the Prize: The United Nations and the African American Struggle for Human Rights, 1944–1955*. Cambridge: Cambridge University Press, 2003, p. 48.
5. *Ibid*, p. 49.
6. Constituteproject: <https://www.constituteproject.org/>

7. *Ibid.*
8. Samuel Eliot Morison, Henry Steele Commager, and William E. Leuchtenburg, *Concise History of the American Republic*. New York: Oxford University Press, 1983, pp 18–31.
9. US National Archives and Records Administration. The U.S. Constitution: http://www.archives.gov/exhibits/charters/print_friendly.html?page=constitution_transcript_content.html&title=The%20Constitution%20of%20the%20United%20States%3A%20A%20Transcription. Article 1 Section 2 was later modified by Amendment XIV.
10. There are many human rights instruments, most of which do not have the status of treaty; see: <http://www.ohchr.org/EN/ProfessionalInterest/Pages/UniversalHumanRightsInstruments.aspx>
11. Kenneth Roth, “The Charade of US Ratification”: <https://www.globalpolicy.org/component/content/article/157/26883.html>
12. Office of the High Commissioner for Human Rights. Universal Periodic Review: <http://www.ohchr.org/EN/HRBodies/UPR/Pages/UPRMain.aspx>
13. Office of the High Commissioner for Human Rights, Human Rights and the Environment: <http://www.ohchr.org/EN/Issues/Environment/HREnvironment/Pages/HRandEnvironmentIndex.aspx>
14. Office of the High Commissioner of Human Rights: *Resolutions on Human Rights and Climate Change*: <http://www.ohchr.org/EN/Issues/HRAndClimateChange/Pages/HRCAction.aspx>
15. UN Human Rights Council Unanimously Adopts Resolution on Climate Change: <http://www.thecvf.org/un-human-rights-council-speaks-with-one-voice-on-climate-change/>
16. Human Rights and Climate Change: <http://www.ohchr.org/EN/Issues/HRAndClimateChange/Pages/HRClimateChangeIndex.aspx>
17. See William Safire, “The Way We Live Now: 11-24-02: On Language; Seized Of,” *The New York Times*, November 24, 2002: <http://www.nytimes.com/2002/11/24/magazine/the-way-we-live-now-11-24-02-on-language-seized-of.html>; Technology and IP Law Glossary: <http://www.ipglossary.com/glossary/seised-seized-of-a-matter/#.V8w6RDW-HZE>
18. Garrett Hardin, “Tragedy of the Commons,” *Science*, December 13, 1968: Vol. 162, Issue 3859, pp. 1243–1248: DOI:10.1126/science.162.3859.1243
19. Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge, UK: Cambridge University Press, 1990.

Environmental Rights

Abstract The majority of country constitutions have provisions that protect the environment and/or protect peoples' environmental rights. Yes, it is true that the United States has laws crafted along these lines, including the Clean Air Act and the Clean Water Act, but laws that are not incorporated into the U.S. Constitution can be repealed by Congress or declared unconstitutional by the Supreme Court.

Keywords Constitutions · Environment · Laws

As a capitalist society, Americans view the environment as a resource – to mine, exploit, buy, and sell. Although oil, coal, and natural gas are available out of the ground, they cannot be renewed or replaced, and as they are burned, the planet heats up. Americans have been exceedingly slow to recognize this – maybe for two reasons. First, more than others we are quick to monetize everything. Everything is for sale and everything has a price. “Just buy it,” the American says. “The environment,” the American says, “oh, it is for sale.” Second, some Americans say, “Don’t trust science. If God wanted us to have calculators and science books we would be born with them.” Do Americans distrust wind, wave, and sun power because they are cheap and cost little or nothing?¹ Possibly. Are oil, coal, and gas (fracking) corporations fighting new efforts to advance renewable energy projects with everything they have got? Most definitely.²

Nevertheless, it is important to see how the environment has been protected in treaties and constitutions and how peoples' environmental rights are protected since this provides the background for understanding how to halt the pace of climate change.

THE ENVIRONMENT: TREATIES AND CONSTITUTIONS

There are over 2,500 international binational or multinational agreements and treaties relating to the environment,³ 272 of which are fully recognized, multinational UN treaties.⁴ These treaties are diverse, dealing with topics that range from toxic chemicals, forests, fish populations, noise pollution, and conservation. These are framed in a language with which Westerners are familiar and together aim to provide guidelines for a clean and healthy environment, and to protect all living things, including animals, birds, fish, coral reefs, and trees.

It is fair to say that Americans consider the environment to be “out there” and “not us.” For example, the expression is “to conquer the frontier.” Yet, it is also important to point out that there are alternative ways of considering the environment. Countries with large indigenous populations have included environmental protections in their constitutions, and these are framed or conceived to protect nature as if it were the equal of humanity, and to protect humans as if they were part of nature. To be sure, indigenous peoples have different relationships with the environment than do Westerners who unquestionably and unreservedly accept the exploitation of natural resources as a normal feature of economic life. For that reason, indigenous peoples have played a leading international role in promoting the conservation of natural resources.⁵ This finds official expression in the Bolivian and Ecuadorian constitutions, which is consistent with the beliefs of their respective indigenous populations:

Bolivia Constitution:

In ancient times mountains arose, rivers moved, and lakes were formed. Our Amazonia, our swamps, our highlands, and our plains and valleys were covered with greenery and flowers. We populated this sacred **Mother Earth** with different faces, and since that time we have understood the plurality that exists in all things and in our diversity as human beings and cultures. Thus, our peoples were formed, and we never knew racism until we were subjected to it during the terrible times of colonialism.⁶

Ecuadorian Constitution:

CELEBRATING nature, the Pacha Mama (**Mother Earth**), of which we are a part and which is vital to our existence, Nature, or Pacha Mama, where life is reproduced and occurs, has the right to integral respect for its existence and for the maintenance and regeneration of its life cycles, structure, functions and evolutionary processes. . . .⁷

In other words, according to the Bolivian Constitution, humans are the guests of Mother Nature, who has moral integrity, and even agency, advancing diversity while being undermined by colonial oppressors. Consistent with this view and incorporated into the Ecuadorian Constitution is the idea that humankind and the environment are one. No other constitution animates nature as do the Bolivian and Ecuadorian constitutions. Yet, by 2016, as summarized further, the majority of countries had revised their constitutions to include provisions for environmental preservation or protection.⁸ Remarkably, countries have not only revised their constitutions to protect nature, but they have also enacted legislation that is consistent with that by restricting the exploitation of nature. For example, Mongolia's 2005 Environmental Protection Law includes the following provision that nationalizes natural resources:

The land, its underground resources, forests, water, animals, plants and other natural resources shall be protected by the State and the authority of the people and the land, its underground resources, their wealth, forests, water and animals, unless owned by citizens of Mongolia, shall be the property of the State.⁹

The countries with constitutions that provide for environmental preservation or environmental protections are simply listed in [Box 7.1](#), but to give the reader a flavor for the language, here are a few examples:

Burkina Faso:

We, the Sovereign People of Burkina Faso: CONSCIOUS of the absolute necessity to protect the **environment**; . . . The right to a healthy **environment** is recognized; the protection, the defense and the promotion of the **environment** are a duty for all.

Tunisia:

The state guarantees the right to a healthy and balanced environment and the right to participate in the protection of the **climate**.

Vietnam:

The State has a policy to protect the environment; manages, and effectively and stably use natural resources; protects the nature and biodiversity; takes initiative in prevention and resistance against natural calamities and response to **climate** change.

Belgium:

These rights include among others... the right to the protection of a healthy **environment**;

Costa Rica:

All persons have the right to a healthy and ecologically balanced **environment**.

With these examples in mind, it is useful to list the countries in [Box 7.1](#) that include environmental provisions in their constitutions.

Box 7.1 Countries with Constitutions with Provisions to Protect the Environment and/or Have Provisions for the Right to a Healthy Environment (out of 194 constitutions)

Afghanistan... Albania... Andorra... Angola... Argentina... Armenia... Austria... Azerbaijan... Bahrain... Bangladesh... Belarus... Belgium... Belize... Benin... Bhutan... Bolivia... Bosnia and Herzegovina... Brazil... Bulgaria... Burkina Faso... Burundi... Cambodia... Cameroon... Cape Verde... Central African Republic... Chad... Chile... China... Colombia... Comoros... Democratic Republic of Congo... Congo... Costa Rica... Côte d'Ivoire... Croatia... Cuba... Czech Republic... Dominican Republic... Ecuador... Egypt... El Salvador... Eritrea... Estonia... Ethiopia... Fiji... Finland... France...

Gabon... Gambia... Georgia... Ghana... Greece... Guatemala... Guinea... Guyana... Haiti... Honduras... Hungary... India... Indonesia... Iran... Iraq... Jamaica... Kazakhstan... Kenya... Korea... Democratic Peoples Republic... Korea, Republic of Kosovo... Kyrgyzstan... Lao... People's Democratic Republic... Latvia... Lesotho... Lithuania... Luxembourg... Macedonia... Madagascar... Malawi... Maldives... Mali... Mauritania... Mexico... Moldova... Mongolia... Montenegro... Morocco... Mozambique... Myanmar... Nepal... Netherlands... Nicaragua... Niger... Nigeria... Norway... Oman... Palau... Panama... Papua New Guinea... Paraguay... Peru... Philippines... Poland... Portugal... Qatar... Romania... Russian Federation... Rwanda... Sao Tome and Principe... Saudi Arabia... Senegal... Serbia... Seychelles... Slovakia... Slovenia... Somalia... South Africa... Spain... Sri Lanka... Sudan... Surinam... Swaziland... Sweden... Switzerland... Syrian Arab Republic... Tajikistan... Thailand... Timor-Leste... Togo... Tunisia... Turkey... Turkmenistan... Tuvalu... Uganda... Ukraine... United Kingdom... Uruguay... Uzbekistan... Vanuatu... Venezuela... Vietnam... Yemen... Zambia... Zimbabwe...

Source: Constitute Project: <https://www.constituteproject.org/search?lang=en&q=environment>

At the very least, constitutions are national agreements to hold elected officials to account and to focus their attention on agreed-upon goals, but, even more important, to express the will of the people and to articulate common objectives. It is probably not the case that every single Tunisian has a perfectly healthy environment and enjoys, for example, pure drinking water. But, we can be sure that Tunisia's peoples know that a healthy and clean environment is in their own interest and that of their children and grandchildren.

To be sure, not all constitutions include environmental rights. A total of 48 do not, but that is an underestimation of how many countries are legally bound to protect the environment. For example, all European countries are party to 87 environmental treaties.¹⁰ Similarly the 10 member

states of the Association of Southeast Asian Nations (ASEAN) have their own environmental treaties.¹¹ The same is true for the African Union (AU),¹² the Organization of American States (OAS),¹³ and the Organization of Islamic Cooperation (OIC).¹⁴ Thus, if a country's constitution does not include provisions to protect the environment, chances are good that it is a member of a regional authority, such as the EU, that requires member states to ratify environmental treaties. Here again, the United States has slipped through the cracks. It has failed to ratify the San Salvador Protocol, the OAS treaty that spells out important connections between human rights and the environment,¹⁵ and, as earlier noted, has failed to ratify international environmental treaties. Yet, it is important to stress that the United States has ratified the immensely important Paris Agreement.

Probably of even greater concern is that the U.S. Constitution has never been revised to include basic human rights and environmental rights. Americans may not be familiar with the San Salvador Protocol, or for that matter, the OAS American Convention on Human Rights.¹⁶ That may be because the United States has ratified neither.¹⁷ To be sure, "human rights" evokes puzzled looks in the United States and therefore "environmental rights" are, likewise, not well understood in America. To be sure, the United States has environmental laws that protect people. For example, the 1973 Clean Air Act and the Clean Water Act are clear examples of progressive environmental statutes. Yet, because they have no constitutional basis, they can be repealed by the Congress or declared unconstitutional by the Supreme Court.

The United States is also an outlier when it comes to formal incentives or requirements for renewable energy. The EU mandates that member countries must follow practices that will lead to 100% reliance on renewable energy, with the specific aim of 20% by 2020.¹⁸ However, in the virtual absence of a coordinated federal program or coherent incentives, local communities in America are setting incentives for adopting solar or wind as an alternative to nonrenewable sources. This is described as a "bottom-up approach" to deal with climate change.¹⁹ It also can lead to incoherence and confusion. While it is true there is a campaign for divestment from fossil fuels among Canadian and American universities ("the Toronto Principle"²⁰) and some towns,²¹ it has been an exceedingly slow process. Amazingly, California approved legislation (SB 32) that requires the state to slash greenhouse gas emissions to 40% below 1990 levels by 2030.²² Boston and New York City will soon have similar plans.

ECONOMIC MODELS OF THE ENVIRONMENT

Some economists take the neoliberal view that everything is owned and that all things should be owned privately. This view pushes capitalist assumptions to their extreme, with selfish motivations completely dominating decisions. When applied to the environment, these assumptions led to the phrase “Tragedy of the Commons.”²³ The idea is that the commons – such as the common grazing pasture, the pond, or lake – will be depleted unless it is privatized and maintained for profit. Instead, economist Elinor Ostrom, as already noted, contended that the environment in part or in whole constitutes a “collective commons” or natural resource that itself requires protection for all to benefit and that those who benefit from using it protect and care for it. By collective cooperation, people who benefit from a commons collectively care for it, by protecting it from overuse or replenishing it.²⁴ Surely, Ostrom’s conceptions acquire a new significance when we understand that natural resources – wind, sun, waves or tides, and geothermal – are collective resources, owned by none and shared by all. The “commons” is the earth, and unless we cooperate, we are all doomed.

CONCLUSIONS

We enjoy civil and political rights as individuals. You have a right to your free speech and I have a right to my free speech, but your rights to enjoy free speech are quite independent of my rights to enjoy free speech. They are enjoyed individually.

Social, economic, and cultural rights – as human rights – rest on quite different assumptions. They are experientially different from civil and political rights, in that they are collectively shared and rest on ethical, empathetic grounds.²⁵ (I not only have a right to a home, but also all of us have a right to a home. You, me, and all the people will enjoy clean, healthy air to breathe.) As repeatedly noted in the Universal Declaration of Human Rights, “*everyone* has the right . . .”

True, some may feel they do not need to take advantage of a particular right (at least at the moment), while others may feel that they are in need of it. For example, the healthy 25-year-old may not feel that healthcare is personally important, at least not “today,” while an elderly 78-year-old enjoys that right. Yet, both acknowledge the other’s needs and their shared rights, and both recognize that the 25-year-old does

and should benefit from the right to education. Never mind these differences. All are entitled to healthcare and education, and we all benefit from each at one time or another, knowing that others are benefiting now. In other words, social, economic, and cultural rights rest firmly on the principle of equality as well as on the principles of reciprocity and turn-taking.

But when it comes to ensuring that a shared environment or climate is hospitable, we face greater challenges than that. There can be no turn-taking. We cannot say, “OK you can heat with coal and I will burn oil next year.” Or, “Dig up the trees. Sell them. What do I care?” In other words, we must all chip in: Cambodians, Germans, South Africans, Mexicans, Jordanians, Scots, Israelis, Palestinians, Ukrainians, Russians. Yes, and Americans, and everybody else. What is not well understood, perhaps, is that not only countries and governments are responsible for halting the rate at which the climate warms up, each and every person on the planet is. In [Chapters 8](#) and [9](#) we further explore this.

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The Context of Paris: The MDGs and the SDGs

Abstract In 2000, the eight international Millennium Development Goals (MDGs) were adopted and considerable progress was made to advance them until 2015, the year they expired, or more correctly put, were reshaped when more ambitious targets – the 17 Sustainable Development Goals (SDGs) – were adopted. Like the MDGs, the SDGs address human rights concerns, such as ending hunger and improving nutrition, as well as highlighting the necessity of promoting development of poor countries. The SDG Summit was held in September 2016 and the Paris conference on climate change in December 2016. This provided the opportunity to include climate goals in the SDGs and to highlight sustainability in the Paris Agreement.

Keywords Sustainability · Paris Agreement

Building on a decade of major United Nations conferences and summits, world leaders came together in September 2000 at the United Nations Headquarters in New York to adopt the United Nations Millennium Declaration, which committed all nations to a new global partnership to reduce extreme poverty everywhere, and it set out a series of eight goals, specifically the Millennium Development Goals (MDGs). Each had very specific targets that were to be met by 2015.¹ The following are the targets, as broadly defined:

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. To combat HIV/AIDS, malaria, and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development

Success in making progress was uneven across goals and across countries; but, by and large, there was a sense of accomplishment in 2015, when they expired, or more correctly, when they evolved into a new set of goals that were formalized at a three-day international summit, September 25–27, 2015.² These goals comprise the Sustainable Development Goals (SDGs), and they were arrived at after two years of discussions involving every UN agency, every country, and many hundreds of NGOs.

Two things are important to point out. First, the SDGs, like the MDGs, rest on human rights assumptions, which is to say that the aim has consistently been to advance human rights as development goals are pursued. Second, the MDGs do not deal with climate change, although there was growing concern and international climate meetings had been held quite regularly since 1979. When the SDGs were formalized in 2015, there was virtual consensus that climate change posed a grave threat to the world and climate provisions became incorporated into the SDGs. The SDG conference was held in September 2015, when the MDGs expired and just before the Paris Climate Conference (COP 21), November 15 to December 12.³ The SDGs helped to lay the groundwork for COP21, and the SDG Summit helped to promote trust that would carry forward to the Paris conference. All of the 17 SDGs are listed in [Box 8.1](#), with Goal 13 specifically calling for urgent action to address climate change and others referring to conditions that accompany such action.

Box 8.1 Targets for the Sustainable Development Goals (Extracts)⁴

Goal 1. End poverty

- Ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, access to services, and ownership rights
- Support accelerated investment in poverty eradication actions

Goal 2. End hunger, achieve food security and improve nutrition

- Increase investment, agricultural research and extension services, technology development in order to enhance agricultural productive capacity in developing countries
- Correct and prevent trade restrictions and distortions in world agricultural markets.

Goal 3. Ensure healthy lives and promote well-being for all at all ages

- Increase health financing and the recruitment, development, training and retention of the health workforce in developing countries.

Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

- All girls and boys complete free, equitable and quality primary and secondary education.
- Build and upgrade education facilities.
- Increase the supply of qualified teachers in developing countries.

Goal 5. Achieve gender equality and empower all women and girls

- Give women equal rights to economic resources.
- Enhance information and communications technology, to promote the empowerment of women.

Goal 6. Ensure availability and sustainable management of water and sanitation for all

- Universal and equitable access to safe and affordable drinking water.
- Adequate and equitable sanitation and hygiene for all.
- Water-use efficiency and supply of freshwater.
- Implement integrated water resources management, including transboundary cooperation.

Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all

- Expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries.

Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

- Sustain per capita economic growth of at least 7% GDP in the least developed countries
- Achieve full and productive employment and decent work for all and equal pay for work of equal value
- Eradicate forced labor, end modern slavery and human trafficking and eliminate the worst forms of child labor
- Protect labor rights and promote safe and secure working environments for all workers, including migrant workers.
- Strengthen financial institutions to encourage and expand access to banking, insurance and financial services for all

Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

- Develop quality, reliable, sustainable and resilient infrastructure, with focus on affordable and equitable access
- Upgrade infrastructure and retrofit industries to make them sustainable
- Enhance scientific research in all countries, in particular developing countries
- Facilitate sustainable and resilient infrastructure development in developing countries
- Provide universal and affordable access to the Internet in least developed countries

Goal 10. Reduce inequality within and among countries

- Achieve and sustain income growth of the bottom 40% of the population
- Promote the social, economic and political inclusion of all
- Eliminate discriminatory laws, policies and practices
- Adopt fiscal, wage and social protection policies to achieve greater equality
- Ensure voice for developing countries in global economic and financial institutions
- Promote official development assistance and financial flows to States with greatest need

Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable

- Ensure access for to adequate, safe and affordable housing and basic services and upgrade slums
- Provide safe, affordable, accessible and sustainable transport systems for all
- Enhance inclusive and sustainable urbanization and capacity with citizen participation.
- Provide universal access to safe, inclusive and accessible, green and public spaces
- Create positive economic, social and environmental links between urban, suburban and rural areas

Goal 12. Ensure sustainable consumption and production patterns

- Implement sustainable consumption and production
- Achieve sustainable management and efficient use of natural resources
- Halve per capita global food waste at the retail and consumer levels and along production and supply chains
- Achieve environmentally sound management of chemicals and all wastes, in accordance with international frameworks.
- Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, by restructuring taxation and phasing out harmful subsidies

Goal 13. Take urgent action to combat climate change and its impacts

- Strengthen resilience and adaptive capacity to climate-related hazards
- Integrate climate change measures into national policies, strategies and planning
- Expand education and institutional capacity on climate change
- Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually sources to address the needs of developing countries

Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development

- Reduce marine pollution of all kinds
- Manage and protect marine and coastal ecosystems to avoid significant adverse impacts
- Minimize and address the impacts of ocean acidification
- End overfishing, illegal, unreported and unregulated fishing and destructive fishing practices

Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

- Ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems in line with obligations under international agreements
- Promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase forestation
- End desertification, restore degraded land and soil
- Ensure the conservation of mountain ecosystems, including their biodiversity
- Take urgent and significant action to reduce the degradation of natural habitats
- Integrate ecosystem and biodiversity values into planning and development

Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

- Significantly reduce all forms of violence and related death rates everywhere
- End abuse, exploitation, trafficking and all forms of violence against children
- Promote the rule of law at all levels and ensure equal access to justice for all
- Reduce illicit financial and arms flows and combat all forms of organized crime

- Develop effective, accountable and transparent institutions at all levels
- Ensure responsive, inclusive, participatory and representative decision-making
- Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements

Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

- Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection
- Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring
- Enhance North-South, South-South, regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing
- Promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system
- Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships

Source: UN Sustainable Development Goals: <https://sustainabledevelopment.un.org/sdgs>

THE RELATIONSHIPS BETWEEN THE SDGS AND THE PARIS AGREEMENT

To highlight the links between the SDGs and the Paris Agreement, next I reproduce excerpts from the Preamble and Article 2 of the Paris Agreement. Number 1 (a) of Article 2 is clear: the aim is to limit the increase to 1.5 degrees above preindustrial levels. In number 2, the term “differentiated responsibilities” highlights that rich countries have the responsibility to ensure that developing countries can meet

their obligations to reduce emissions and develop clean energy technologies. This implicitly recognizes the historical legacies of colonialism and exploitation, and at the same time resonates with the SDGs. For example, SDG 17 highlights that richer countries assist developing countries.

Note, too, the overlap between the SDGs and the Paris Agreement. Goal 13 of the SDGs refers to climate change directly and 14 and 15 do so as well (respectively, ocean acidification and desertification). The Paris Agreement refers to “sustainable lifestyles,” “sustainable development,” “sustainable management of forests,” “sustainable environment,” and links sustainability with reduction of poverty, nonmarket approaches to the economy, mitigation of greenhouse gas emissions, management of natural resources, and economic growth. Therefore, the goal of achieving zero emissions is inseparable from advancing and achieving the Sustainable Development Goals. The Paris Agreement has been mentioned earlier, and again, subsequently, extracts are presented in [Box 8.2](#). It is an exceedingly important international treaty, setting standards and building international consensus on slowing planetary warming.

Box 8.2 Paris Agreement (Excerpts). Emphasis added⁵

Preamble

Acknowledging that climate change is a common concern of humankind, parties should, when taking action to address climate change, respect, promote and consider their respective **obligations on human rights**, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity.

Article 2

1. This Agreement, in enhancing the implementation of the Convention, including its objective, aims to strengthen the global response to the threat of climate change, in the context of **sustainable development** and efforts to **eradicate poverty**, including by:

(a) Holding the increase in the global **average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels**, recognizing that this would significantly reduce the risks and impacts of climate change;

2. This Agreement will be implemented to reflect equity and the **principle of common but differentiated responsibilities** and respective capabilities, in the light of different national circumstances.

Article 7

(2) Parties recognize that adaption is a global challenge faced by **all local, sub-national, national, regional and international dimensions** . . . to protect people, livelihoods, and ecosystems. . . .

Source: United Nations. Paris Agreement. 2015: http://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf

WHAT IS THE CONCLUSION?

There are, in fact, five conclusions. The first (as the Preamble indicates) is that everyone on the planet is equal to all the others and all are equally deserving of living on a hospitable planet and with sustainable environments. (That is, human rights are universal, and special protections are accorded to vulnerable people.) The second (again, the Preamble and Article 2.1) is that great efforts need to be made to eradicate poverty. The third (Article 2.2) is that developed countries must assist developing countries (since they – developing countries – are largely not responsible for climate change and need assistance as they convert to renewable energy sources.) The fourth (Article 2 (a)) was the result of tough negotiations, namely, to limit the temperature increase to 1.5 degree Celsius above preindustrial levels. (This will require a very rapid reduction of fossil fuels.) The fifth (Article 7 (2)) highlights that the challenge is global with wide and deep participation. In other words, global solidarity is required. Nothing less. We have everything to lose if we are not successful.

NOTES

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2. UN General Assembly adoption of the post-2015 Development Agenda: http://www.un.org/ga/search/view_doc.asp?symbol=A/70/L.1&Lang=E; United Nations. Sustainable Development: <https://sustainabledevelopment.un.org/>

3. United Nations Framework Convention on Climate Change: http://unfccc.int/meetings/paris_nov_2015/meeting/8926.php
4. United Nations Transforming Our World: The 2030 Agenda for Sustainable Development: <https://sustainabledevelopment.un.org/post2015/transformingourworld>
5. United Nations. Paris Agreement 2015: http://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf

The Global and Local Movements to Slow Global Warming

Abstract Leaders of the 36 countries that make up the Alliance of Small Island States spoke clearly and forcefully at the Paris Summit on climate change. They risk losing their entire countries as the seas overtake them, and their entire populations become climate refugees. For that reason, the peoples who live in these countries are probably the most thoughtful and articulate members of a growing international social movement to slow climate change and global warming. In this chapter, I explain the importance of the provision “common but differentiated responsibilities” and describe some of the many social movements that aim to slow warming, including those organized around the goal of divesting from fossil fuels.

Keywords Small Island States · Differentiated responsibilities · Divestment · Climate refugees

Never have we seen social movements move as fast as those to slow global warming! This contrasts with the conclusions of social scientists that social movements typically evolve slowly. Just to illustrate, in the United States, the suffragette movement started in the 1840s, and it wasn't until 1920 that the Nineteen Amendment became US law. The anti-Apartheid boycott and divestment movement aimed to wrench power from the hands of white South Africans began in 1959, and ended in 1994 when general inclusive elections were held for the first time.

What is unique about the movements to slow global warming is that they are inclusive, multilayered, and often launched globally as well as nationally and locally. Sometimes, these movements bring together people from around world – who speak different languages, have different religious identities, live in different parts of the world. For example, the Climate Alliance is a network of 1,700 member municipalities and districts, including communities in the Amazon basin as well as western and eastern Europe.¹ The 350.org – about which I will elaborate further – has grown a network that now encompasses more than 4,000 groups in more than 180 countries.² The 2014 Peoples Climate March took place in September 2014 and involved 2,646 events in 162 countries. There were over 310,000 people in New York City’s march.³ But let’s look more closely at various ways the climate crisis is being addressed, starting at the very top – the United Nations – and then consider various social movements around the world, with a focus on the United States.

INTERNATIONAL RESPONSE TO CLIMATE CHANGE

Unprecedented Agreement

As we have already seen, since 1979, the UN has convened scientists to share their observations and empirical data regarding climate change. By around 1995, there was virtual consensus that warming was accelerating at a dangerously high rate, and then as the scientific community continued to pursue the full implications of this, states approved successive agreements, including the 1997 Kyoto Protocol, which set limits on emissions, and the 2012 Doha Amendment, which clarified the list of greenhouse gases. In this context, the 2015 Paris Agreement is an amazing achievement. It took only 36 years after the first scientific conference in 1979 to reach international consensus among states that emissions should reduce to zero by 2050. It’s worthwhile to mention again how quickly events unfolded.

The Paris Agreement was adopted by consensus on December 12, 2015, and opened for signature on April 22, 2016, at a ceremony on Earth Day in New York. At that ceremony, 174 states and the European Union signed the agreement and 15 states also deposited their instruments of ratification. Efforts to join the agreement accelerated since China and the United States officially joined the Agreement on September 3, 2016. By September 14, 2016, 27 countries had officially ratified the Paris Agreement and by September 22, 60

countries had. On October 5, 2016, the threshold for entry into force of the Paris Agreement was achieved. The Paris Agreement entered into force on November 4, 2016.⁴ It is important to keep in mind that the Paris Agreement states, “. . . pursuing efforts to limit the temperature aims increase to 1.5° Celsius above pre-industrial levels” would “significantly reduce the risks and impacts of climate change.”⁵ Note that the temperature of 1.5 degree Celsius is not mandated and the verb is “reduce” not “eliminate,” since we still will be vulnerable even if the temperature is kept to 1.5 degree Celsius by the end of the century. Heat strokes, dehydration, disease outbreaks, and even hunger will not be uncommon in most of the world. It is likely that in some places, notably Yemen and Saudi Arabia, no one will be able to live without continuous air conditioning.⁶ It is imperative that every society has safeguards in place to protect the vulnerable – the disabled, children, the elderly.

GOALS, PLANS, AND ACTIONS RICOCHET AROUND THE WORLD

When the United Nations began organizing high-level scientific meetings devoted to climate change in 1997, it was not a topic of great general interest. Climate activist-scholar Naomi Klein reports that 2009 was the year that people in large numbers were becoming aware that planetary warming was posing a grave threat to the world.⁷ After the early scientific warnings and conferences at the international level, starting with the 1979 World Climate Conference, it took countries and their regional alliances a while to respond. The European Union’s Climate Change Programme was launched in 2000, and a little later, the African Union (AU), the Organization for American States (OAS), and the Association of Southeast Asian Nations (ASEAN) adopted plans to halt or slow planetary warming. A main focus of all these efforts has been to ensure that responsibilities are equitable and inherently fair. That is, first, peoples most at risk deserve priority, and second, that developed countries provide assistance to poorer countries.

Countries Most at Risk

The citizens of states that make up the Alliance of Small Island States (AOSIS) are probably most eager for all countries to adopt measures that will slow warming, and do so soon. AOSIS is an alliance of 36 countries, all at great risk of disappearing with the rising sea. Already, one of these countries – the Solomon Archipelago – has lost islands and people have had to abandon their

homes and land.⁸ Alarm, understandably, is difficult to keep under control in these 36 countries, and such alarm is evident in this 2009 Declaration.

Box 9.1 Declaration on Climate Change, Alliance of Small Island States (AOSIS), 2009

Gravely concerned that climate change poses the most serious threat to our survival and viability, and, that it undermines our efforts to achieve sustainable development goals and threatens our very existence;

Alarmed that emerging scientific evidence shows that the effects of human-induced climate change are worse than previously projected and that the impacts of climate change which we are already experiencing including sea level rise, more frequent and extreme weather events, ocean acidification, coral bleaching, coastal erosion, and changing precipitation patterns, will further intensify;

Greatly disturbed that despite the mitigation commitments made by Parties to the United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol, especially those of the developed countries, global emissions continue to increase, leading to rapidly accelerating impacts, accompanied by costs and burdens that are beyond the ability of many, but, especially the small island developing states (SIDS) and other particularly vulnerable countries, to control;

Profoundly disappointed by the lack of apparent ambition within the international climate change negotiations to protect SIDS and other particularly vulnerable countries, their peoples, culture, land and ecosystems from the impacts of climate change and our further concern at the slow pace of these negotiations;

1. Now therefore, we, call upon the international community, with the developed countries taking the lead, to undertake urgent, ambitious and decisive action to significantly reduce emissions of all greenhouse gases, including fast action strategies, and to support SIDS, and other particularly vulnerable countries, in their efforts to adapt to the adverse impacts of climate change, including through the provision of increased levels of financial and technological resources.

Source: Alliance of Small States. <https://sustainabledevelopment.un.org/content/documents/1566AOSISummitDeclarationSept21FINAL.pdf>

A few islands have disappeared, and others are on the verge of being overtaken by the seas: Kiribati, the Maldives, Seychelles, Torres Strait

Island, Tegua, Solomon Islands, Micronesia, Palau, Carteret Islands, and Tuvalu.⁹ Bangladesh, though not an island, experiences floods each year during the rainy season that cover about one-third of the country. When people flee – as some already have – they are refugees in search of safety, and other states need to develop plans to welcome and accommodate them.

Common, but Differentiated Responsibilities

Clearly, it is essential that developed nations assist developing nations to adopt new and expensive carbon-neutral technologies, such as solar and wind turbines. Already rich countries have pledged to assist poorer countries through the UN Green Climate Fund,¹⁰ which is consistent with the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC) that is enshrined in the Paris Agreement and earlier in the 1992 Climate Treaty.¹¹

POPULAR MOVEMENTS

It is through social networks that movements transmit their messages and recruit new members. These days the Internet is a crucial tool for fine-tuning the objectives, for growing and for breaking down geographical and other barriers. As is the case with twenty-first-century U.S. social movements, such as Occupy Wall Street and Black Lives Matter, there has been clarity of purpose accompanied by the extensive use of social networks and a great reliance on the media as well as on the Internet. The movements dedicated to slowing climate warming are similar to these other movements.

350.org is an international movement, which takes its name from the research of James E. Hansen who posited in a 2007 paper that 350 parts-per-million (ppm) of CO₂ in the atmosphere is a safe *upper limit* to avoid a climate tipping point.¹² (Scientists now record 400 ppm.¹³) 350.org was founded by Bill McKibben and a group of students from Middlebury College in 2007. 350.org has mobilized in various ways – lobbying governments, organizing international marches and protests, planting trees that helps to capture and store CO₂, dives at the Great Barrier reefs, solar-cooked bake outs, and many others. 350.org claims alliance with 300 organizations around the world.

Breakfree2016 is also an international movement, but unlike 350.org, it is not a formal nonprofit entity. Nor is it clear whether it will continue into 2017.¹⁴ Nevertheless, Breakfree2016 had a very successful year, with over 30,000 participating in the actions it sponsored in various countries: Australia, Brazil, Canada, Indonesia, Nigeria, New Zealand, Philippines, Turkey, and the United States. Actions across these countries were varied. They included, just to illustrate, shutting down banks that were heavily invested in fossil fuels, demonstrations against off-shore drilling rigs, and blocking the entrance to coal mines. In other words, Breakfree2016 is more of an activist, interventionist movement, coining the term, kayak-tivists, at one of their disruptive interventions.

Green Peace has been at the forefront of the environmental movement for decades. It was founded in 1971 and now has offices in over 40 countries. Its prime objectives are to: (1) protect biodiversity in all its forms; (2) prevent pollution and abuse of the earth's ocean, land, air, and fresh water; (3) end all nuclear threats; (4) promote peace, global disarmament, and nonviolence.¹⁵ To be sure, Green Peace was engaged in activities to promote renewable energy very early and there was no need to change course when they joined the international campaign to slow climate change, but it did intensify and focus activities aimed to slow global warming.

Mothers Out Front is a grassroots organization active in about two dozen communities whose members are impatient that fossil fuels are still being extracted from the ground, imperiling the well-being of generations to come: "We have the solutions, but elected officials and the fossil fuel industry are not acting effectively and quickly enough to move our economy and our infrastructure away from fossil fuels and to clean, renewable energy. . . . We will do anything to protect our children. . . . We support their healthy lives today and build a strong foundation for their future."¹⁶

Union of Concerned Scientists (UCS) was founded in 1969 by scientists and students at the Massachusetts Institute of Technology, the year that Cleveland's heavily polluted Cuyahoga River caught fire. Appalled at how the US government was misusing science, the UCS founders drafted a statement calling for scientific research to be directed away from military technologies and toward solving pressing environmental and social problems. Today, UCS has offices in Cambridge, Massachusetts, Washington, D.C., and Oakland California. Its main objectives focus on the following: clean energy and clean vehicles, global

warming, healthy food and farms, the safety of nuclear power, and ending nuclear weapons.¹⁷

Catholic Global Climate Change Movement¹⁸ is a worldwide movement that was inspired by Pope Francis's encyclical, *Laudato, Si*, of May 24, 2015. In it, he stressed that capitalist markets and the pursuit of profits were instrumental in causing climate change with reversible harm to the earth and the environment.¹⁹

There are others: **Idle No More**,²⁰ **International Rivers**,²¹ **World Wildlife Fund**,²² **Audubon**,²³ **Natural Resources Defense Council**,²⁴ and the **Environmental Defense Fund**.²⁵ Note the extraordinary diversity of supporters and advocates – from groups that have traditionally been supporters of the environment (including animals, forests, clean water) to new groups and movements that focus solely on climate change.

DIVESTMENT CAMPAIGNS

It is clear that many of these popular movements devoted to slowing climate change do include divestment programmatically because the only way to slow the warming of the earth is to divest from companies that extract fossil fuels from the earth, notably coal and oil. The slogan is often “keep it in the ground.” Many movements, as we have seen, encompass a variety of issues related to slowing climate change but do not focus specifically on fossil fuels. However, there are campaigns that focus exclusively on divestment from fossil fuels and investment in renewable energy, drawing perhaps from earlier divestment campaigns.²⁶

KEEP IT IN THE GROUND CAMPAIGNS

Sierra Club is an American organization, founded by John Muir in 1892, with the original goal of preserving Yosemite Valley, and now it has several divestment objectives: Beyond Coal, Beyond Oil, Beyond Natural Gas, and Our Wild America.²⁷ The first three objectives are at the heart of international efforts to divest of fossil fuels. **Environmental Studies, University of Wisconsin Oshkosh** maintains a web page with updates on divestment activities.²⁸ **Fossilfree.org** is a spinoff project of 350.org and is an international network of campaigns and campaigners that asks institutions to: (1) Immediately freeze any new investment in fossil fuel companies; (2) Divest from direct ownership and any commingled funds that include fossil fuel public equities and corporate bonds within 5 years; and (3) End their fossil

fuels sponsorship.²⁹ **Divestinvest** provides guidance and support to investors – especially institutional investors – to divest from fossil fuel and invest in renewable energy.³⁰ A global, comprehensive campaign, “Keep It in the Ground” is waged by the British newspaper, *The Guardian*, in partnership with **350.org**.³¹ Now in its second phase, the **Guardian’s** campaign is stressing solar as a renewable energy source.

Also of interest are congressional efforts: a 2016 House Bill (4535)³² and a 2015 Senate Bill (2238): “Keep It in the Ground Act.” The two bills have both been referred to committee. The key paragraph in the two bills is identical:

It is U.S. policy that: (1) federal land and waters should be managed for the benefit of the people of the United States to avoid the most dangerous impacts of climate change and to promote a rapid transition to a clean energy economy; and (2) the government should pursue management of federal land and waters for the benefit of the people of the United States by not issuing any new lease or renewing any nonproducing lease for coal, oil, or natural gas in any such land or waters.³³

It should also be noted that there has been a dramatic increase in “green investments,” providing opportunities for individuals, towns, and organizations to buy stocks and bonds in green-energy companies or are “environmentally friendly.”

CONCLUSION

The science is unequivocal: divestment must be pursued relentlessly to ensure that fossil fuels are kept in the ground, that emissions are reduced, and that warming does not exceed at 1.5 degree Celsius. Curbing warming to 1.5 degree Celsius *may* be sufficient to ensure there is Arctic ice in the summer, to save the Amazon rainforest, and save the Siberian tundra from melting and releasing methane from its frozen depths. It *could* also save many coastal regions and islands from permanent inundation by rising sea levels. That is, scientists cannot predict exactly what will happen if the cap of 1.5 degrees is achieved and maintained. The earth, the climate system, and human interventions are too complicated, either taken alone or in combination, to make precise such predictions possible. (For example, the collapse of the fragile West Antarctic ice is virtually certain and it will definitely create sea rise, but none can predict when this will happen.)

However, to be sure, the lesser the fossil fuels are extracted from the ground the slower and less intense will warming be. However, it is safe to say that approaching 100% dependence on renewable energy, we can expect fewer droughts, fewer violent storms, fewer El Niño and La Niña events, fewer extinctions, and a slowing of acidification. To be sure, awareness of the harms caused by the fossil fuels has already yielded quite spectacular accomplishments:

Costa Rica is generating power exclusively from renewable sources.

Denmark has set 2050 as the goal to be 100% renewable.

Scotland uses wind power for 100% of the country's household needs.

Sweden produces more energy from biomass than fossil fuels.

Finland covers over a third of its energy needs with renewable energy.³⁴

It is certain that 2017 will be a remarkable year, marking the first full year under the Paris Agreement along with unrelenting pressure exerted by people in popular movements who will lobby for and demand the slowing of planetary warming. To be sure, people around the world are likely to become anxious for themselves and for their children about what the next decades will bring, but we can hope that this anxiety is channeled to further spur peoples' movements to badger states, to share ideas, to organize, to express solidarity. Without this, states – like corporations – will drag their heels.

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Solidarity Matters

Abstract The Paris Agreement is an extraordinary international treaty. It is an agreement among all nations to collaborate to slow global warming, something that cannot be achieved without the cooperation of peoples everywhere. The fate of humanity depends on international solidarity, and solidarity itself depends (paradoxically) on the universal recognition of both equality and difference. Human rights principles rest on the basic conception that all people are equal in spite of their infinite differences. Yet, embracing the conception that all people are equal *and* different people have both the incentive and the capacity to collaborate for a common cause, to avert planetary disasters.

Keywords Equal · Different · Paris Agreement · Human rights

In sum, nothing could be more important to us humans than ensuring that the earth remains habitable, but unless we act cooperatively, the entire planet is doomed, and so are we. Unless the world achieves its goal of limiting the global temperature to 1.5 degree Celsius by 2100, the consequences will be horrific. If we reach the 2-degree mark, we can expect that a third of the world's species will be extinct; the North Sea cod will have disappeared; there will be crop failure and starvation in African nations; coastal American cities will be inundated; heat waves in California will quadruple in frequency; half of Peru's population who

now live in dry, hot places will have to move; and only tiny patches of glaciers will be found on the highest of peaks.¹

There is really only one thing that we can do to ensure that the earth remains habitable, and that is for everyone to jump on board by recognizing bonds of cooperation through deep and universal respect for our equality and for our infinite differences. In fact, every single country in the world declared its intention to slow warming in order to protect all living things and the planet. That is, all 194 countries² agreed by consensus to adopt the Paris Agreement on December 12, 2015, and it went into force on November 4, 2016. By December 19, 2016, 118 countries had formally ratified it. Such a degree of international agreement is unprecedented, highlighting consensus among heads of state, government officials, and scientists.

But responsibility for slowing the warming of the planet also rests in the hands of ordinary people, which is to say cooperation and collaboration are necessary to achieve the shared goal of keeping the earth habitable, and while doing so, to not only bridge international differences but also to embrace them while recognizing unique interests, talents, and skills. Yes, everyone is equal and everyone is equally entitled to security and to a habitable world, while the most vulnerable deserve special protections, including those who are unemployed, ill, elderly, children, disabled, unhoused, and vulnerable minorities.

The thesis advanced here, to repeat, is that we all are equal human beings entitled to basic human rights and dignity, and that we all have different skills, opinions, interests, hobbies, ages, foibles, tastes, languages, values, customs, religions, traditions, racial and ethnic identities, and so forth. Some of us are farmers, others are shopkeepers, engineers, bus drivers, school teachers, and on and on. Because each of us has different experiences and backgrounds, each of us has something to contribute to this collaborative project of keeping the planet habitable. Because we are equal, our collective interest is to save the planet. Because we are different, we can each contribute in various ways.

I have already described a few unusual and imaginative projects – say, kids lighting up the soccer field by running on the Astroturf – but there are more mundane ways that people can contribute to maintaining the health and habitability of the planet. They include biking to work, composting, buying local, collecting rainwater, using cold water to wash clothes, installing energy-efficient light bulbs, starting a vegetable garden, taking shorter showers, driving a Prius, installing a reflective roof, installing solar panels, eating less meat (or none at all), using a clothes line instead of a dryer, not

idling the car unnecessarily, and turning off the lights when not in the room. One might say that engaging in such practices as these is an expression of solidarity since they promote the public good, and such practices are also economical, saving money for the people who invest in them.

INTERNATIONAL SOLIDARITY

People will chip in and collaborate and so must states. There are four things to consider when we evaluate states' roles in reducing global warming: (1) they commit to reducing emissions and follow through with it; (2) they pass laws to ensure compliance of companies and enterprises; (3) they invest in renewables and provide incentives for companies and households to do so; (4) and, rich countries respect the principle of differentiated responsibilities (as highlighted in the Paris Agreement and other treaties) and contribute to the Green Climate Fund.³

Accompanying ratification of the Paris Agreement, each country sets reasonable goals for compliance. To give a few examples, Brunei pledged in 2015 to reduce total energy consumption by 63% by 2035, and to increase the share of power generated by renewables to 10% by 2035; Ecuador committed to an unconditional 20.4% to 25% reduction in energy sector emissions by 2025; Japan to a 26% reduction in emissions on 2013 levels by 2030; and the United States to a 26% to 28% domestic reduction in greenhouse gases by 2025.⁴ (Although North Korea has not made commitments, it did ratify the Paris Agreement in August 2016 and has actively participated in some phases of the COP process.⁵)

A major hurdle the United States currently faces is that the Senate is opposed to passing legislation that would implement measures to reduce emissions, in particular, the American Clean Energy and Security Act (the ACES Act).⁶ Nor has the United States imposed a carbon tax, which has been implemented in some other countries.⁷ However, as already discussed, a major hurdle for the United States is our deep-seated values: individualism and exceptionalism. They are not schools of thought or even clearly thought-through ideologies; instead, they are reflexive and barely conscious. Besides, capitalism – largely fashioned by Americans – has become ruthless, not only exploiting people but the earth as well. We are justifiably proud to be Americans and that is compatible with being good global citizens – just as long as we recognize that capitalism and values that accompany capitalism need to comply with good global citizenship and global cooperation.

LANGUAGE

Solidarity may not be a popular word in the United States, but it is often mentioned, along with “cooperation” and “democracy” in many human rights charters and other official documents and treaties. Just to illustrate, the Preamble of the Charter of Fundamental Rights of the European Union starts with this sentence:

Conscious of its spiritual and moral heritage, the Union is founded on the indivisible, universal values of human dignity, freedom, equality and **solidarity**; it is based on the principles of democracy and the rule of law.⁸

The Constitutive Act of the African Union includes this phrase:

INSPIRED by the noble ideals which guided the founding fathers of our Continental Organization and generations of Pan Africanists in their determination to promote unity, **solidarity**, cohesion and cooperation among the peoples of Africa and African States.⁹

Moreover, a search of state constitutions yielded a total of 81 that mention “solidarity.” For example, the Constitution of Bahrain includes this phrase:

Freedom, equality, security, trust, knowledge, social **solidarity** and equality of opportunity for citizens are pillars of society guaranteed by the State.¹⁰

And the constitution of France includes this phrase:

The Nation proclaims the **solidarity** and equality of all French people in bearing the burden resulting from national calamities.¹¹

Besides the 81 constitutions that mention “solidarity,” 100 mention “cooperation,” 123, “responsibilities,” 173, “obligations,” and 194, “duties.”¹²

ECONOMIC INEQUALITY AND RACIAL DISPARITIES

Economic inequality and racial disparity are deep impediments to cooperation and solidarity in the United States. The top 1% of American families makes over 25 times as much as the bottom 99%, and the richest 1% of households owns 36% of the wealth.¹³ Racial inequalities are

similarly depressing. The wealth of white households is 13 times the median wealth of black households, and more than 10 times the wealth of Hispanic households. Likewise, with income: in 2014, black men earned 70 cents for every dollar earned by white men, and Hispanic men earned 60 cents for every dollar earned by white men.

Such levels of inequality mean that most Americans struggle to feed their families – and disproportionately more black and brown Americans do. Yet, some Americans can afford to buy extraordinarily expensive yachts and airplanes, take vacations that the rest of us cannot possibly imagine, and live in mansion with many servants. How can we possibly forge ties of solidarity across such huge divides? How can we possibly understand, converse with, empathize with, or mobilize and organize across these divides? Indeed, it is hard to imagine.

It also must be said that independent of racial disparities in income and wealth is the persistence of acts of racism. That is, white adults suspiciously watch black and Hispanic kids in stores; police are more likely to suspect, arrest, and kill people of color; towns are more likely to place town dumps with accompanying smells and toxicity in black neighborhoods than in white ones; and so forth.

SOLIDARITY AND HUMAN RIGHTS

Solidarity depends on the universal recognition of equality and differences. By the universal recognition of equality, I mean that we recognize the equal worth and dignity of all humans and their equal rights to prosper and thrive. By the universal recognition of differences I mean that we all recognize that we are all different and unique, equally entitled to enjoy our own racial identity, ethnicity, gender identity, hobby, lifestyle, culture, religion, and much else. Enjoying and celebrating both equality and diversity is the key to personal authenticity as well as to a vibrant society. It turns out it is also the key to survival as the planet heats up. The only way to slow this heating process is through cooperation.

As a country of immigrants, the United States has enjoyed an abundance of diversity. True, very often it has been accompanied by bigotry, contempt, and condescension; that is, slavery, the Chinese Exclusion Act, and the ongoing discrimination that indigenous Americans, Latinas/os, blacks, and Muslims experience are stains that disgrace us. But still for all this, a pulse beats strong to celebrate American diversity and, yes, to celebrate equality. (Indeed, we do so by rewriting history.)

HUMAN RIGHTS AND CLIMATE CHANGE

Human rights and climate change intersect in two important ways. First, persons who are vulnerable in some respect need special protections, which is to say that children, the disabled, the elderly, the poor, and the un-housed will require robust protections against the heat, and more generally, against adverse climatic conditions. Providing such protections is consistent with American practices, or, at least consistent with American values.

The second way that human rights intersects with climate change relates to a full recognition of the rights of others, accompanied by an understanding of the obligations we have to the others. This requires trust, open-mindedness, complete fairness, and a great deal of energy. What Elinor Ostrom meant by our obligations to the “collective commons” can be understood to mean the entire earth. If just one country’s industries spew out harmful chemicals or polluting smoke, or if even one county’s industries continue to pump oil, extract coal or methane or natural gas, everyone on the planet will suffer.

We recognize the others’ rights because we are in solidarity with them. We each enjoy eating because we know that everyone has the right to food. We advance the right to education and enjoy it ourselves because everyone has this right. We promote women’s rights because women and men are equal. We fight homelessness because everyone has the right to a home. We protect children because they are defenseless, and we protect the rights of the disabled, refugees, and the elderly because we know they sometimes need our help.

Yes, it is true that human rights are not written into US law, and many American expressions underscore values that reveal selfishness. These include:

Drive a hard bargain
 The end justifies the means
 Every man for himself
 My country right or wrong

In other words, American culture privileges self over others, unquestioning blind patriotism over internationalism, and puts personal ambition over collective interests. But not entirely. Americans have other

expressions, and these must prevail if we – along with the rest of the world – are to collectively survive the twenty-first century.

Give me your tired, your poor, your huddled masses yearning to breathe free
 Together, we will scrape enough together
 Of the people, by the people, for the people.
 We hold these truths to be self-evident that all men are created equal

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