

Working Title
A Changing Climate and Changing Politics
A Case for International Relations, Diplomatic Climate Policy and Action
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Universidade Católica Portuguesa | FCT-Lisbon Consortium | International Doctoral Program in Culture Studies

On 30 January, 2015, a video entitled *Wolves of Yellowstone*¹ was featured on the United States based PBS television website that documented the 1995 scientific experimental reintroduction of 41 gray wolves into Yellowstone National Park², and their short and long term effects on the various ecosystems in the park over the next two decades. It quickly went viral and continues to circulate today. According to the National Geographic Society webpage:

“Gray wolves were reintroduced into Yellowstone National Park in 1995, resulting in a trophic cascade through the entire ecosystem. After the wolves were driven extinct in the region nearly 100 years ago, scientists began to fully understand their role in the food web as a keystone species.”(National Geographic: 2018)

The 5 minute 19 second documentary illustrates a series of changes to flora, fauna, and river migrations from this single action. During the wolves nearly one hundred year absence from the lands, elk and deer populations flourished to the detriment of most trees, shrubs, other vegetation, and the delicate landscape including the river and stream banks which eroded under hoof. As a result, small animals and rodents had little cover and were decimated by their natural predators including birds of prey, foxes, and coyotes. In turn, these animals became a nuisance to nearby farmers and residents. Pollinators like bees and hummingbirds struggled to find food sources and failed to pollinate flowers and trees, leading to the decline of the pollinator populations and trees, flowers, grasses, and natural crops of berries, fruit, and vegetables. Therefore, bears and other animals were unable to find vegetation food sources, resulting in unsuccessful hibernations and starvation. The rivers, with their eroded banks, became polluted, straining the aquatic life.¹ (Passion: 2015)

Within six years of reintroducing of the gray wolf, the elk and deer populations reduced from an unsustainable 17,000 to a manageable 4000. Just this one deviation resulted in a series of

¹ Passion Planet Pictures in partnership with National Geographic Studios, The Nature Conservatory, and PBS (Public Broadcasting Service) produced and distributed the video: *Wolves of Yellowstone* in 2015.

² Established on 1 March, 1872, by President Ulysses E. Grant. Yellowstone National Park was the first US national park and the first multi-state (Wyoming, Idaho, Montana) park of its kind in the world.

“trickle-down” changes that restored balance to the environment. Trees, shrubs, flowers, and other vegetation recovered providing food sources and homes for bees, hummingbirds, song birds, rodents, and other small animals and birds. Their natural predators had less reason to travel outside of the park to attack farm animals. Beavers and otters once again established their clans and dams, creating breeding pools for amphibians, fish, and other aquatic life, which resulted in cleaner water supplies for the park and for the human residents of the nearby towns. After twenty years, ecosystem symbiosis had been restored, all due to one small action: the reintroduction of gray wolves.ⁱⁱ (Passion: 2015).

Why is this twenty-year exploration of macro and micro ecosystems important to the topic of climate change and international relations? The scientific study illustrates how one seemingly insignificant action can and will impact societies, borders, and generations. One hundred years ago, when wolves were hunted to extinction, nobody considered the future implications. Twenty years after their reintroduction, even scientists are amazed at the rapid positive effects on the environment and on the \$30 million boost in tourism dollars for the park. (National: 2015).ⁱⁱⁱ

Scientists have been warning about the threats of greenhouse gas emissions and related climate change issues for at least sixty years. Leading climate scientist and director of Harvard University’s Center for the Environment, Dr. Daniel Schrag claims that climate issues are broader and more damning than previously forecasted.³(Arruza: 2018) According to Dr. Schrag, the planet is in much worse shape than reports reveal. Dr. Schrag is touring major cities to lecture on the science behind climate change and the urgency for preventative and restorative measures.

“In his talks, Schrag often refers to the Keeling Curve, a graph created by American scientist Charles David Keeling in 1958. Keeling was the first to record ongoing CO₂ levels in Earth’s atmosphere. In the late 1950s the CO₂ readings were 315 parts per million. In 2018, that reading has exceeded 400 ppm. In analyzing Earth’s geologic record, Schrag says, “Never in the last 800,000 years has CO₂ been above 300 ppm.” Schrag says the last time atmospheric CO₂ levels spiked sharply was around 36 million years ago when non-human factors were at play. Even then the spike occurred over thousands of years....We’re likely to see 4 maybe even 6 degrees (Celsius) of (global) warming over the next 100 years,” says Schrag, “and it’s happening more than 100 times faster than climate change we’ve experienced in the past.” Adding to his grim forecast, Schrag says reversing the trend will be neither easy nor quick. For one thing, more than half of the CO₂ currently affecting climate change will remain in our atmosphere 1,000 years from now. “A silver-bullet solution is not

³ Dr. Daniel Schrag: His lengthy career includes serving eight years with President Barack Obama’s administration as a member of the President’s Council of Advisors on Science and Technology, because of his expertise in solar geoengineering and climate issues.³

around the corner. It will require innovative investments sustained for at least the next century,” he says.^{iv} (Arruza: 2018)

While most of the controversy and debate focuses on causation: anthropogenic or natural, and on the validity of scientific forecasting, people overlook the socioeconomic macro-issues of climate change. Governments focus on the human causal /fossil fuel aspects of the climate change controversy whereas the focus should be on the forecasted migration patterns of flora, fauna, disease, and human populations and the tax that will force on resources. “The United Nations secretary general, António Guterres recently called climate change “the most systemic threat to humankind” and urged world leaders to curb their countries’ greenhouse gas emissions.”^v (Sengupta: 2018) Now, nations must come together, to mitigate the impact of the damage that has already been done to the planet and to stave off further damage. Climate change is first and foremost a human and animal rights issue. It strikes indiscriminately, not considering social class or national borders. It is irreverent to the “concept of sovereignty, its fundamental elements, and its application, and it demands new forms of governance, and forces a discussion about the (in)ability of the current dynamics of international relations to respond effectively to global environmental problems, particularly global climate change.”^{vi} (Cunha et al: 2011)

International Relations & Climate Change

“National sovereignty is dangerous for global issues and the current trend toward populism and the exclusatory tendencies by the USA, Austria, and other governments and right-winged parties leave the whole world more vulnerable. These so-called nationalist protection measures will be more devastating than inaction.”^{vii} (Barossa: 2018)

Governments have an obligation to serve and protect common public goods (peace, security, economy, and the ability to thrive) of their citizens and to negotiate and foster international alliances to reassure the same for other nations. Much of the world is already buckling under food insecurity, water shortages, drought conditions, desertification, and economic crisis.^{viii} Globally, climate change is having a measurable negative impact on the agriculture and fishing industries along with the insurance industry, which will be devastated by increases in natural and human created disasters, weather issues, fire danger, military and other conflict, all inflating their costs which will be passed onto the public. “The World Meteorological Organization reported that a barrage of extreme weather events had made 2017 the costliest year on record for such disasters, with an estimated \$320 billion in losses and with more than 55 million people displaced, injured, or killed.” (Sengupta: 2018)

The history of humanity is a history of migration which will only increase in the decades to come due to climate related issues. As resources are strained and more migration occurs, national and international security and military measures will increase due to conflicts over border controls and resources. Eventually, entire global industries “will be displaced, altered, or lost, including: fossil fuel, mining, auto, electricity production, hydro-energy, insurance, food production, textile production, most consumer goods (plastics), tourism and hospitality industries will be adversely affected.” (NCSE: 2016)^{ix} According to Jeff Turrentine’s 11 May 2018 report for the (USA based) National Resources Defense Council:

“The EPA (Environmental Protection Agency) may have determined that 2017 was the year global warming should go underground, but the atmosphere didn’t listen. According to NASA, 2017 was incontrovertibly the second-hottest year on earth since 1880, when such record-keeping first began.”⁴ As it happens, the period from May 2017 to May 2018, from a climate change perspective, has been one of the most devastating and costly 12-month spans ever recorded. The U.S. Forest Service spent more than \$2 billion fighting these fires last year...Hurricanes Harvey, Irma, and Maria were laying waste to giant swaths of the United States and the Caribbean. They killed more than a thousand people, damaged or destroyed hundreds of thousands of homes, and cost our country more than \$282 billion.”^x

Solutions & Call to Action

In a recent interview with *The Guardian*, Dr. Mayer Hillman, a senior fellow emeritus at University of Westminster’s Policy Studies Institute, lamented that “Political parties’ focus is on jobs and GDP, depending on the burning of fossil fuels,” he said. “Even if the world went zero-carbon today, that would not save us because we’ve gone past the point of no return. Action to alter the disastrous change in climate must overcome the obstacle of capitalism.”^{5 xi} (Winer: 2018)

⁴ “Europeans understandably bestowed the name Lucifer on a summer heat wave that reached as high as 117 degrees in some parts of Spain and brought lengthy stretches of triple-digit temperatures to many other countries. India continued its miserable, years-long streak of deathly hot summers, with the mercury rising as high as 120 degrees in some areas; hundreds of deaths all over the subcontinent were attributed to the heat. Here in the United States, we experienced our third-hottest year on record, with five states—Arizona, Georgia, New Mexico, North Carolina, and South Carolina—reaching new all-time highs.... The Costliest Wildfire Season in U.S. History as the EPA was reconsidering its “priorities” regarding how to address climate change, nearly 50,000 separate wildfires were consuming millions of acres, destroying tens of thousands of structures, and killing dozens throughout the American West.” (Turrentine: 2018).

⁵ “A prominent British social scientist, Mayer Hillman, a senior fellow emeritus at University of Westminster’s Policy Studies Institute, has warned that climate change will decimate life on earth, and although the trend could theoretically be reversed, it will not be, because society is too dependent on the fossil fuels it would need to eliminate. The answer, he said, is to cut all emission across the economy from travel to agriculture and heating alongside a reduction in the human population. But, he doubted such a development is realistically possible. “We’re doomed,” Hillman said of carbon emissions pushing up global temperatures. “The outcome is death, and it’s the end of most life on the planet because we’re so dependent on the burning of fossil fuels. There are no means of reversing the process which is melting the polar ice caps. And very few appear to be prepared to say so....We’ve got to stop burning fossil fuels,” Hillman said in an interview published Thursday. “So many aspects of life depend on fossil fuels, except for music and love and education and happiness. These things, which hardly use fossil fuels, are what we must focus on.”

The European Union has been an influential climate and environment issues negotiator between first world and third world nation states as an early adopter of responsibility, both within its organization and outside of it. Since the 1972 UNCHE conference to the 2016 Paris Agreement, the EU and UN have been developing and promoting environmental protection programs and policy. Scientists and governments recognize the current and future environmental crisis that rising CO2 emissions is extolling on the health, safety, and well-being of the globe and its citizens. In efforts for increasing international climate diplomacy, the United Nations founded the UNFCCC (United Nations Framework Convention on Climate Change), whose aim is to negotiate logical and workable “burden-sharing” solutions to the complex emissions reduction problem.^{xii} The world (196 state-parties) came together in 2016 to negotiate, ratify, and implement greenhouse gas emissions mitigation protocols under the Paris Agreement, which was signed on 22 April 2016 and took effect on 4 November 2016.^{xiii} Tragically, the United States exited the agreement in 2017 due to misguided scientific claims and political reasons.⁶ Many United States citizens and state governments strongly disagree with the withdrawal and continue to contribute and adhere to the Paris Agreement policies, including former New York City Mayor Michael Bloomberg^{7xiv} and California Governor Jerry Brown⁸: Brown is staging the

As temperatures rise, “the world’s population will head to regions of the planet such as northern Europe which will be temporarily spared the extreme effects of climate change,” he said. “How are these regions going to respond? We see it now. Migrants will be prevented from arriving. We will let them drown.” (Winer:2018)

⁶ Executive Order. 12 Dec 2015. UNFCCC Conference of the Parties. ADOPTION OF THE PARIS AGREEMENT. No. Twenty First Session: Agenda item 4(b), 30AD, p. 1-32.

“The aim of the convention is described in Article 2, “enhancing the implementation” of the UNFCCC through:

“(a) Holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and to pursue 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;

(b) Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production;

(c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.” Countries furthermore aim to reach “global peaking of greenhouse gas emissions as soon as possible”. The agreement has been described as an incentive for and driver of fossil fuel divestment.

The Paris deal is the world's first comprehensive climate agreement.”⁶

⁷ According to BBC and BCS news outlets, “former NYC Mayor Michael Bloomberg has committed \$4.5 million of his own money to cover the USA contribution to the Paris Agreement for 2018. Former New York City Mayor Michael Bloomberg says he will pay \$4.5m (£3.2m) to cover some of the lapsed US commitment to the Paris climate accord. As part of the agreement, the US had pledged \$3bn to the Green Climate Fund, set up by the UN to help countries deal with the effects of global warming. The money promised by Mr Bloomberg does not aim to cover this, but the US contribution to the UN's climate change secretariat. “America made a commitment and, as an American, if the government's not going to do it then we all have a responsibility,” Mr Bloomberg said on CBS. “I'm able to do it. So, yes, I'm going to send them a cheque for the monies that America had promised to the organization as though they got it from the federal government.” His charity, Bloomberg Philanthropies, offered \$15m to cover a separate climate change shortfall last year. It said the money would go to the United Nations Framework Convention on Climate Change (UNFCCC).”

Global Climate Action Summit 2018,^{xv} “The summit, which will be held ahead of the 24th United Nations Framework Convention on Climate Change (COP 24), will mark the first time a U.S. state has hosted an international climate change conference with the direct goal of individually supporting the Paris Agreement.” (Brown: 2018)^{xvi} It is Brown’s intention to step in for the United States as a call to action because it no longer matters who or what caused climate change. We must unite as a collective global force to mitigate the damaging effects of increased CO2 emissions for our present and for the future of humanity on our planet earth.

⁸ “Hello, Hamburg. I’m Governor Jerry Brown: Greetings from California. Look, it’s up to you and it’s up to me and tens of millions of other people to get it together to roll back the forces of carbonization and join together to combat the existential threat of climate change. That’s why we’re having the Climate Action Summit in San Francisco, September 2018. Come join us – entrepreneurs, singers, musicians, mathematicians, professors, students – we need people that represent the whole world because this is about the whole world and the people who live here. We have to do something and we can do it. That’s why we want to join together in this Climate Action Summit in 2018 in San Francisco. Yes, I know President Trump is trying to get out of the Paris Agreement, but he doesn’t speak for the rest of America. We in California and in states all across America believe it’s time to act, it’s time to join together and that’s why at this Climate Action Summit we’re going to get it done. So, see you there. Thanks. Gov. Gerry Brown.” (State of California Office of the Governor: 2018).

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