

This Changes Everything Study Guide

This Changes Everything by Naomi Klein

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Summary

Naomi Klein took five years to write *This Changes Everything*. Her book is an exploration of all sides of the climate change debate and of the complexities, misinformation and the unknown that surrounds it. As a journalist, Klein set out to get every viewpoint about the topic. She attended a meeting of the Heartlands Institute which she describes as a right-wing think tank that basically doesn't believe that climate change is happening or that if it is, it is a cyclic process that occurs naturally and that man's activities have nothing to do with it; some right-wingers believe climate change is a hoax designed to take freedom away and turn democracies into Marxist socialistic societies.

Klein moves on to climate scientists, 97% of whom disagree with the conservatives. The scientists have amassed indisputable evidence that the earth is struggling to survive against the onslaught of greenhouse gas emissions that is impacting the entire earth and all its plants and creatures. Scientists have developed computer models that present dire outcomes for the earth should their warnings be ignored. The UN has developed international target emissions reductions for the entire world that, according to scientists, must be met within the next decade. The goal of the emissions reduction is to keep warming under 2 degrees Celsius. Anything above that exacerbates what is already a crisis. There is no punishment or penalty to those who do not meet their goals since the agreement signed in Copenhagen by major polluters including the U.S. and China is non-binding. However, Klein points out, the punishment that will be meted out for violations of the agreement will be the increased stress on a failing planet.

Activists, scientists and some governments are striving to find renewable energy solutions to subvert global reliance on the fossil fuel industry. However, the fossil fuel industry is a shining beacon of capitalism, and, as conservative Margaret Thatcher often said, there is no alternative to "market fundamentalism." In other words, governments need to stay out of the operations of private companies. Sir Francis Bacon was the first climate-change denier. He advocated pounding the earth for all it was worth. Bacon believed the planet was there for man to exploit - that business of man having stewardship over the earth was absurd. Klein states that modern conservatives who back big oil and coal and the billionaires who profit from them were passed the torch from Bacon and believe that the earth will continue to serve man and that resources are basically limitless.

Although climate-change activism died down for a while, it is back in full force. Klein writes how, unexpectedly, it is the Indigenous people of the world who have taken the lead in protesting, blockading and fighting big energy in court with many decisions handed down in their favor. From the Cheyenne and Lakota in Canada and the U.S. to the Amazon Ecuadorians, the Indigenous people are clinging to their pristine land and putting up a fight against those who would destroy it.

Environmentalists understand the brick wall they face in dealing with Big Oil which is just as determined to continue drilling as they are to ban it. Klein states that in order to

adequately address the perils of climate-change an economic revolution is in order. Capitalism which focuses on making profit and the efforts to save the planet are completely at odds. The development of an alternate economy is as vital as the development of climate change solutions.



Chapter 1: The Right Is Right

Summary

Author Naomi Klein writes that there are many voices that rise up against the concept of climate change. They ignore the facts and the opinions of 90% of all climate scientists who agree that climate change is real and is happening. At the Heartland Institute's Sixth International Conference on Climate Change, held in June 2011, many offered their disagreement with the scientists. Klein explains that deniers in the U.S. and in Europe believe that global warming is a hoax and want to expose it. Denying climate change has become part of their dogma that includes low taxes, guns for everyone, anti-abortion and anti-environmentalism. It has been Klein's finding that climate leaders who disagree with them have been harassed and threatened by deniers who fear the ramifications of environmentalism. Right-wing think tanks have a huge impact on the debate.

After a decade of Margaret Thatcher and Ronald Reagan and with the collapse of communism, conservatives declared victory. Thatcher often-repeated phrase was that there was simply no alternative to "market fundamentalism." Klein explains that corporate liberation was solidified with free trade agreements through the World Trade Organization. This liberation spread over into the financial and insurance sectors and resulted in a near worldwide economic collapse in 2008. It is Klein's opinion that climate change advocacy is a threat to right-wing ideology created in the think tanks like the Cato Institute, the Heartlands and the Heritage Foundation. She writes that they believe that the U.S. economy is completely reliant upon the fossil-fuel burning industries and if environmentalists get their way, the U.S. economy will tank.

Klein writes that that there was only one sure way to combat the changes that environmentalists were pushing for and that was to declare that the climate scientists were all lying and that the entire climate change movement was a hoax. Klein writes that the conservative think-tanks, of course, are all wrong about the science; but what the right-wing ideologues were right about is that to adequately address the crisis of climate change, deep and wide-ranging changes are necessary. Klein writes that despite the science and reality of climate change, market fundamentalists who should be on their way out are kept alive by billionaires like brothers Charles and David Koch who don't want to give up their profits and want to protect their world views and political interests. Klein reports that huge dark money donations are made to these think tanks by billionaires who want to maintain the status quo.

Klein explains that as poor countries are unable to cope with the changes and upgrades that are necessary as climates warm, conservative climate-change deniers do not support helping poor nations adjust to higher temperatures; rather, they focus on how they can profit from a nation's meltdown. The potential risk that climate change presents to worldwide economies is breathtaking. The insurance industry recognizes the potential impact on their bottom line. Klein question why instead of working toward solutions for



global warming, insurance companies have donated millions to right-wing think tanks to develop policies and procedures that will keep them profitable despite declining weather conditions. In Klein's opinion, the private sector continues to decline thanks to the ideology coming out of Heartland conferences and right-wing think tanks. Klein warns that disaster preparedness for the masses is inadequate; bridges are not repaired and fire trucks are not replaced. At one time, disaster impacted all classes equally but the trend is to protect the rich with everyone else on their own.

Klein writes that activists favoring climate control measures tried to soften the hearts of deniers by reminding them that the sooner the government steps in to aid in a crisis the less costly it will be. Catastrophic climate change would greatly increase the role that government plays after a disaster has struck. There are fears of "green fascism" arising after a catastrophic crisis. Klein believes that had the deniers not stalled action in cutting emissions when it first emerged as an impending crisis, the economics would have been much more bearable. It is Klein's opinion that the right-wing ideologues worked toward a revolutionary global economy based on free market enterprise. Now the answers to climate change lie in revolutionizing that same market system to avoid climate chaos.

The facts presented by the scientific world forces each individual to make a choice about what they believe and how their community or nation should proceed. She has learned that some people believe in the damaging impact of climate change but feel helpless in the face of greedy and powerful corporations who are responsible for damaging the environment and therefore believe that the problems of climate change are unsolvable. Klein believes that the response to climate change has been too slow. The right-wingers have made progress with their denials. It is up to liberals and progressives around the world to demand that action be taken. Klein believes that the deniers have won the debate – so far. They don't all deny the science but they have won the day as far as establishing the cultural values of the nation. According to Klein, one reason we are failing to adequately respond to climate change is because we fear the destruction of the current economy and culture. The necessary response will spell the end the oil and gas industry.

Analysis

Klein presents the battle that will preclude any climate change action until there is movement on the side of those who refuse to acknowledge that bad things are happening to Planet Earth. The ideology of the right-wing think tanks that is influential in slowing and even stopping progress in climate action is the focus of this first chapter. The conservative members of these organizations either don't believe in climate change or conclude that climate change is cyclic and occurs naturally. This ideology is wrapped up in capitalism which is adamantly opposed to government interference in private business operations. They also believe that the market will provide solutions.

Klein depicts these ideologues as frustrating progress in the much needed steps that will save the planet from the greedy hands of fossil fuel giants. She provides insight in



their thinking, which many who acknowledge the impact of climate change will find appalling – which is exactly why she includes it. Klein is attempting to gain support for the cause of climate control. For example, she learned that many in the denier category believed that there was one sure way for the non-believers to avoid taking any action against the build-up of greenhouse gas emissions and that was to declare that climate change was a hoax. Some conservatives believe that there is a plot by the UN to create a world government. One of the top priorities of the conservative think tanks was to keep the fossil-fuel industry profitable so that donations would keep coming into their foundations and to Republican politicians seeking election. Klein presents these individuals as dishonest, greedy and focused on self-interest.

Klein draws attention to the deniers to contrast their self-serving interests with developing a viable solution for climate control. Any solution must include financial assistance for poor and developing nations that cannot afford to pay their share, a notion that the right-wing ideologues are avidly opposed to.

In this first chapter, Naomi Klein describes the core argument between climate activists and climate change deniers. Both sides feel passionately about their views a scenario which sets up an ultimate clash between climate change activism and capitalism.

Vocabulary

counterculture, doppelganger, contrarian, cudgel, precipitous, vitriol, egalitarian, emancipation, monetizing, existential, ignominious, sanguine, rapacious, draconian, infrastructure, juggernaut, myriad, paradigm, austerity



Chapter 2: Hot Money

Summary

A few years back, Klein noticed that robust green energy programs were facing daunting challenges. She writes that nations were accusing one another of violations and protectionist policies. Free trade and climate action are at odds in many cases around the world. Klein learned that an oil company was using NAFTA to challenge Quebec's fracking moratorium. Progress made by environmentalists is inevitably challenged by corporations that focus on profit. Klein points out that there are some advancements; solar markets in the U.S. and China are growing. However, in Klein's opinion, trade rules have to be rewritten because they actually make some appropriate responses to climate change illegal. Privatization, deregulation and the lowering of income and corporate taxes are all barriers against bringing emissions to safe levels.

Klein writes that the climate movement was launched June 23, 1988 during a congressional hearing in which the director of NASA's Goddard Institute for Space Studies testified that he was confident of a real warming trend that could be linked to human activity. Instead of Time Magazine choosing a "Man of the Year" for 1988, they chose "Planet of the Year: Endangered Earth." She adds that the accompanying article by journalist Thomas Sancton captured the attention of the world and positioned climate change at the center of global discourse. Developing nations rightly accused the West for over-consumption. Right-wing ideologues in Washington attacked the notion that there was an alternative to capitalism and market fundamentalism. Klein writes that the right-wingers initially won the economics debate with the upsurge of the lavish U.S. lifestyle that was adapted by middle and upper-middle class people around the world. India was destined to sustain the most environmental damage by the failure of the world community to address climate change.

The United Nations Framework Convention on Climate Change was signed by participating governments in 1992. It formed the basis for further climate control negotiations. In 1997, the Kyoto Protocol that contained the first binding emission reduction schedule was adopted. Many trade agreements were also agreed to during these years. Unfortunately, the trade agreements and climate change agreements did not address one another. Klein provides the example of products being transported for much longer distances resulting in significant increases in fuel consumption by ships, planes and trucks. Many governments were intimidated from establishing anti-pollution policies because other nations could sue them for violating trade agreements. Klein points out that climate activism was subservient to trade policies and any progress made was often unmade or diminished by new trade deals.

Klein writes that the globalization of agricultural systems over several decades has caused a significant increase in greenhouse gas emissions. The Trans-Pacific Partnership trade deal of 2014 specifically stressed that climate concerns could not trump trade agreements. Klein notes that efforts to establish self-monitoring practices



have been largely unsuccessful. The thousands of containers that ship products great distances are not attributed to any nation, making no one responsible for their pollution. Klein points out that first world countries claim their emissions have diminished but product demands from their populaces have increased pollutions in nations around the world that produce products for them.

Klein writes that global emissions that had been reduced to 1% growth in the 1990s soared to a 3.4% annual growth between 2000 and 2008 and are continuing on an upward trajectory. She notes that the climate crisis is the direct result of globalization and endless economic growth. According to Klein, economics are driven by the constant search for cheap labor. As a result, China has become the number one polluter. Klein indicates that there is a correlation between low wages and high emissions. China provided cheap labor but also had very lax or non-existent environmental practices. Klein adds that as wages in Chinese rise, there is movement of manufacturing to Bangladesh where labor is cheaper. The standards are low for worker safety and for the quality of products made in these countries.

Klein notes that democrats in the U.S. opposed NAFTA because it would drive down wages and standards but eventually NAFTA gained the cooperation of influential environmental organizations that had formerly opposed it. She points out that Greenpeace, Friends of the Earth and the Sierra Club continued to oppose it. The mistakes made by some of the high-profile environmentalists can't be undone but a new climate movement can take up the fight. Klein writes that fewer disposable products, higher quality goods that last longer, the localization of economies and the development of energy-saving transports can all help reduce emissions. Klein stresses that trade agreements must address climate change.

According to Klein, the current growth-based economy is in conflict with climate issues. It is the goal of the Climate Change Research to keep global temperature rising less than two degrees Celsius. However, Klein points out, first world nations need to reduce consumption by an unprecedented 8-10% a year. Some warn that such actions will shut the global economy down. Klein writes that there is a way to avoid devastating warming but the answer does not lie within the constraints of capitalism. To some, the prospect of a damaged environment is preferable to altering the structures of the economy. According to Klein, instead of the Great Depression or the Great Recession, environmentalists look to the Great Transition.

Klein cautions that action in first world countries must take place immediately and consumption by the individual and by the community must be reduced. Congress must help low-income Americans and minorities make the transition. Klein believes an improvement in quality of life can be realized through less consumption. She believes that society must provide a safety net that promises health care, education, food and clean water for everyone but that is a politically challenging proposition. Solutions that will bring about the needed change include focus on vision, planning, regulation, higher taxing of the wealthy and giving communities the power to make changes.



Analysis

Klein provides some history on the matter of climate change. By doing so, she hopes that more advocates for change will be recruited. What had set off the entire debate and made climate change a main topic of conversation was an astronaut's testimony before Congress that he was confident global warming was caused by human activity. In the aftermath of the passage of some environmental controls, a period of confusion and finger-pointing evolved. Progress made by the environmentalists was often challenged in the courts. Corporations would use trade agreements to trump agreements on climate. An early treaty signed by the international community to limit emissions was called the Kyoto Protocol. There was immediate non-compliance with the treaty due to conflicting trade agreements which could lead to lawsuits if violated. Many years later in 2015, a revised Kyoto Protocol was signed in Paris.

Klein uses the struggle to balance emissions on a global basis as a means to demonstrate the complexity of what is referred to in broad terms as climate change. By doing so, she emphasizes that while there are no easy solutions, there are solutions. She acknowledges that it is a complicated matter which is made more complex by trade agreements that often are in directly conflict with environmental agreements. Democrats in the U.S. opposed the NAFTA trade agreement because it drove down wages and safety standards. Klein indirectly refers to the long reach of billionaires in the fossil fuel industry who do not want to cede any ground and more importantly any profit. The movement lost the support of some big green organizations that surprisingly abandoned their liberal network and got behind NAFTA.

Klein has focused on the many political, ideological, societal and industrial complexities of the attempt to address climate change in order to take actions that will have sustained results.

Vocabulary

bureaucratic, moribund, moratorium, arcane, orthodoxies, hubris, voracious, audacity



Chapter 3: Public and Paid For

Summary

Hamburg, Germany, took back control of their electricity, gas and heating grids from private corporations in a process called “re-municipalization” or “re-communalization.” Klein writes that the people of Hamburg wanted to be part of the fast-growing transition to green that was sweeping all of Germany. She points out that large factions of Germany’s population have rejected energy privatization.

Klein explains that the trend toward renewable energy and the rejection of privatization has also emerged in the U.S. Boulder, Colorado is working toward buying back its power system to limit damage to the planet. She writes that those communities that have committed to renewable energy are those that have reclaimed their energy systems. Most private sector energy companies use their profits to lobby against emissions reductions. Klein writes that private wind and solar companies provide clean energy to their customers. To meet International Energy Agency projections, the U.S. must quadruple emissions reductions by 2030. From a technical perspective, a rapid transition of energy systems to renewable is possible. A 2013 report indicates that New York State could be transitioned to renewable energy by 2030.

Klein writes that According to a 2009 Harvard Medical School report, 45,000 people die each year in the U.S. because of the lack of adequate health care. Super Storm Sandy underscored the need for universal health care and for energy systems that have backup systems when natural disasters strike. Klein adds that the storm also demonstrated that the poor suffer the most during such a disaster. Floods in the UK in 2013-14 were particularly devastating because the conservative government had severely defunded the Environment Agency which deals with the aftermath of flooding.

Severe weather events like Super Storm Sandy, the British floods, typhoons and tsunamis will continue to be crises that confront nations around the world. Scientists agree that the increase in the frequency of such events is the result of global warming. Klein believes that the higher incidence of extreme weather coupled with the lack of health care and neglect of infrastructure, have turned disasters into catastrophes.

Klein points out that every devastating natural disaster has cost U.S. taxpayers more than \$1 billion. Super Storm Sandy cost \$65 billion. Due to the lack of profit, Klein writes, the private sector isn’t interested in infrastructure renovation; therefore, the onus is on governments. Insurance companies are increasing premium rates and avoiding payouts on weather-related claims. Klein writes that third world nations are in dire need of infrastructure improvements to help protect them from devastating weather events. Klein states that those who are polluting the atmosphere should pay for it. A UN Department of Economic and Social Affairs report indicated that it would take \$1.9 trillion a year to end global poverty and starvation and to adequately prepare for climate change emergencies.



Klein notes that in recent times, public spending has been declining as has the funding of renewable energy projects. Oil companies spend very little on alternative and renewable energy ventures and often use the money set aside for this research to invest in the development of new technologies to extract increasingly dirtier fossil fuels. Klein believes that the only way that oil companies will follow through on pledges to develop alternative energy systems is to force them through federal legislation. The oil companies do not want to give up the huge profits for their shareholders and for their executives.

Klein writes that communities have brought lawsuits against corporations for emissions damage but with little success. She explains that while carbon taxes and higher royalty rates on energy sources could be beneficial the fossil fuel industry vigorously fights anything that cuts their profits. Klein notes that over-consumption is not limited to the private sector; the U.S. military is the world's largest consumer of oil, and slashing its energy budget would have positive impact.

Klein supports the notion that there is a link between wealth and over-consumption – the more money an individual has the more traveling he will do and the larger homes he will have making the case for raising taxes on the wealthy. The “polluter pays” approach could guide the financing necessary to address climate change issues on a global basis. She adds that success also calls for sacrifice which nations and individuals in the past as in World War I and II were compelled to do. Klein reiterates that a sense of fairness is missing from the response to climate control. In an address to the nation, President Jimmy Carter asked individuals to turn off lights and wear sweaters at the same time the world's biggest polluters were increasing their emissions without punishment. Klein believes that sacrifice by the individual is not the answer. U.S. taxpayers bailed out the financial sector after the economic collapse; they are in no mood to pay for damage to the environment caused by billion dollar fossil fuel companies and a lax global manufacturing community. Klein notes that 64% of Americans supported President Obama's 2014 plans to limit greenhouse gas emissions.

Klein believes that much more can be done to institute the necessary steps to save the environment; however, the political class lacks the will and the corporate class has closed the door on them. She comments that society will have to rise up against this resistance in order to avert climatic disaster.

Analysis

In order to convince readers that there is light at the end of the tunnel, Klein focuses on successes and new ways of approaching the governing and control of energy systems. The author provides an example of a very successful program in Hamburg, Germany, a township that used a process called re-municipalization. The town decided to take its energy system back from a private company. By doing so they had a voice in their energy system and they could be part of Germany's transition to green that the nation was making great strides to achieve.



The author provides this case to demonstrate that when people get together on a grass roots level, they can take climate action and create systems that work the best for them. Taking the profit out of the process makes things less complex. The author points out that private sector energy companies often use their profits to lobby against emissions reduction instead of conducting promised research for renewable solutions. The private sector wants to maintain the status quo while communities want to develop energy systems that work for them and answer their needs.

To reach readers on another level, the author discusses how much more the economy loses by not taking steps to turn the tide of climate change. Storms have become more devastating as a result of global warming that was caused by greenhouse gases trapped in the atmosphere. Super Storm Sandy cost the economy \$65 billion. Katrina caused economic and social devastation that the nation is still recovering from. Spending resources to lessen the threat of such devastating weather events would in the long run save money and resources a scenario that appeals to conservatives who always want to cut costs to taxpayers. The entire nation and the world has lived through recent disasters – Klein is using something everyone is familiar with to make her point about the urgency of keeping things from getting even worse.

Vocabulary

privatization, decrepit, ecosystem, decentralized, composting, malaise, beleaguered



Chapter 4: Planning and Banning

Summary

It is Klein's opinion that at the height of the economic collapse in 2009, when President Barack Obama was just newly elected, there was an opportunity to take climate action like never before. The \$800 billion stimulus bill that Obama proposed could have made substantial progress in addressing climate change issues. But, Klein adds, President Obama allowed the banks and the car industry to remain basically intact. It was a missed opportunity to invest in low-carbon infrastructure. Klein feels that it was not due to the lack of power and resources on Obama's part. He had been convinced by powerful ideology that the government should not dictate how the private sector runs their businesses. Klein notes that it is all part of the market fundamentalism that Thatcher warned the world couldn't do without: the market - not a Democratic president - would create the best possible society.

Klein believes that conservative ideology has stalled climate action with claims that economic crisis would result. Progressives need to show that climate change solutions can lead to a more robust economy. She notes that some nations are building industrial planning into their economies offering support to industries if they use profits to provide jobs and source their products locally. There will be winners and losers in response to the climate crisis. Klein points out that when workers are offered jobs in clean sectors they become advocates of green transition. Klein believes that the potential for growing the economy and creating jobs is huge. She reports that renewable energy creates more jobs than the fossil fuel industry. Including the interests of workers and the poor in climate strategies addresses two problems at once. Klein believes that ending the privatization of transportation and energy must be part of the planning and solutions.

Klein writes that natural gas is touted as the bridge fuel between dirty oil and coal and the energy solutions of tomorrow – wind and solar. But there is uncertainty about the wisdom of such a process. She writes that a bridge fuel may not be necessary with as fast transition to renewables have proven to be. She indicates that there is suspicion that natural gas may be used to undercut renewable energy. Klein points out that an overabundance of gas from fracking has already had a negative impact on the wind market. She believes that once clean energy sources have been established, natural gas must be phased out because it is responsible for large amounts of greenhouse gas emissions. It can be controlled through regulation and government mandates.

Klein writes that private companies want to make profits and grow their market. Therefore if gas is to be used as an interim fuel source, it must be strictly managed by the public to ensure that profits are used to invest in renewable technologies. She notes that in some cases, like PetroChina, publicly owned oil companies can lead to government corruption. Energy co-ops run by the communities that use them give people a voice in their operation. Klein reports that the transition to renewable energy in



Germany created nearly 400,000 jobs. Denmark led the way in the 70s and 80s when it switched more than 40% of the nation's electricity consumption to wind. Klein comments that large-scale privately owned renewable projects have failed because of the lack of input from communities. She writes that community ownership that offers people the power to build a better life can have appeal to countries like Greece, a nation in financial melt-down. The rapid implementation of decentralized plans for energy, transportation and water systems can convince communities of their value.

Klein points out that decentralized climate change solutions can also address poverty, hunger and joblessness and all at once. She notes that although Germany transitioned quickly to public sector renewable energy, greenhouse emissions rose due to the government's continued manufacture of cheap coal power to displace nuclear power and gas and for exportation. Klein writes that in June 2014, Obama mandated power plant emission reductions to bring the U.S. into compliance with safe temperature standards. Klein adds that activists were pleased with the move but didn't feel it was enough. She references the old conservative saw that the government should not tell businesses how to operate even if it impacts public health and welfare was in play.

Klein believes that weak regulations helped make way for the 2008 financial collapse and have prevented effective responses to climate change. At the same time research is discovering new ways to harness solar power it is also developing new methods for extracting fossil fuels; fracking and horizontal drilling are two examples. Klein notes that these practices go on virtually unregulated and are largely behind the disastrous levels of warming that the planet is undergoing. Klein writes that energy companies spend billions setting up the facilities for these processes and plan to stay in operation for decades in order to recoup their investments and make profits. However, she points out, climate experts predict that the U.S. must be weaned from fossil fuels before 2050 in order to keep warming below 2 degrees Celsius.

Klein summarizes that the fight against climate crisis is also a fight for a new economy, new energy alternatives and a new relationship with the planet. She points out that the arguments and the science are all on the side of climate activists. Klein writes that the health of the climate and the health of the economy are forever bound. Finding solutions for both will impact the current and future populations of the Earth.

Although the climate crisis has been escalated by globalization and capitalism, Klein writes, the root cause began long before in the late 1700s when the coal production was expanded to a commercial scale. She notes that there was little thought in the past given to conserving Earth's resources that were treated as though they were limitless. Klein believes that the world will have to learn from the past and carve out a brand new political, industrial and societal culture.

Analysis

Klein describes the disappointment that the environmentalists experienced when President Obama failed to take important steps to address climate change when he had



the perfect opportunity. She expresses the feelings of many activists who considered that moment as the last best hope. He had just been elected president in 2009 when the global economy was crumbling. He had \$800 billion in stimulus money to help the failing economy, but instead of using some of the funds for climate action the funds were all used to save the car industry and the banks both of which were allowed to run their businesses as usual with only negligible additional regulation. Obama had bought into the right-wing ideology that government can't interfere in private business.

There is much discussion among environmentalists and scientists about renewable energy and alternatives to fossil-fuel energy including solar and wind. The opportunities for new jobs and brighter futures for the people lay within the renewable industry. Right-wing ideologues would have everyone believe that if the fossil-fuel industry were to be abandoned, the global economy would collapse. Clean natural gas may be a bridge to alternative energy sources. However, there are fears that the gas industry will subvert research for renewables and falsely offer its product as a solution rather than a bridge.

A weak regulatory system made the 2008 economic collapse possible and took the focus off the climate. Klein describes the race that is taking place between the development of alternative energy solutions and the ambitious efforts of the fossil-fuel industry to develop new techniques to extract oil and gas. It is obvious that the industry has no intention of putting up the "closed for business" sign. The fight for climate activists is a multi-faceted one that is intrinsically tied to the economy.

Vocabulary

mandate, tribunal, anathema, exponential, shale, heresies, holistic, phalanx, rapacious, exacerbate, hyperbole, incumbency, oligarch, amorphous



Chapter 5: Beyond Extractivism

Summary

Klein writes about the South Pacific island of Nauru which was stripped of its natural resource phosphate by foreign mining companies that literally destroyed the ecology and made the island nearly uninhabitable. Climate change is finishing the job. It is an example of what is currently happening around the world. Klein adds that the devastation of the island nation was allowed to go on in part because of its remoteness to the civilized world. Turning a blind eye to the people of Nauru is similar to the reaction to carbon pollution. It is there but no looks at it.

Klein points out that the story of Nauru also belies the belief that there are unlimited resources and always more land to expand and exploit. Nauru teaches the lesson that the abuse of Earth with careless unregulated digging and extraction has been dangerous from the start. Man is said to have stewardship over the earth; extractivism undermines that responsibility. Klein writes that, like Nauru, the fossil fuel industry has decided which pieces of earth are not important and can be sacrificed.

Klein tells the story of Sir Francis Bacon who convinced British elite that they should not consider Mother Earth as the giver of life; man was her dungeon master. He was a strong voice for the unhinged exploitation of the earth and its resources. Klein notes that philosopher William Derham wrote in his book *Physico-Theology* that man can ransack the whole globe. Klein points out that explorers hunting for new land to exploit depended on the wind to sail back and forth from their nations to new territories. Factories were limited on where they could locate because of their dependency on water power.

Klein writes that the steam engine which was powered by coal was invented by James Watt in 1776 gave manufacturers more options. Watt pitched his invention as a way to free man from nature. Water was harmless while the use of coal caused black lung and poisoned water from its run-offs. Manufacturers loved the new energy source. Klein points out that it was cheaper and allowed them seek cheap labor and settle anywhere.

Klein underscores the importance of the steam engine which sparked the Industrial Revolution. During this period, Great Britain's importing of raw cotton rose from 2.5 million to 366 million pounds in just 80 years. The market economy and the fossil fuel economy emerged at the same time during this period. Klein notes that fossil fuel allowed unimagined production of consumer goods. Man had conquered the Earth. He could use and abuse it and not depend on the fluctuations of the earth and weather to slow technological advancements. Mother Earth was down but not out. She is now back in full force wanting retribution for centuries of mistreatment. Klein writes that the power over Earth that Bacon promoted and Watt promised was a myth. When Watt was declared a hero, the facts were not yet all in. Klein believes that from the early miners that died of black lung to the rising ocean levels and the collapsing ice shelves – they all



are part of Watt's legacy. There were early warning signs and protests but they were all ignored.

Klein writes that Bacon's philosophy that God placed man in his rightful place above nature has always brought on protest. The post-Enlightenment western society offers no alternative to the lopsided relationship between man and Earth: man abuses nature on a non-reciprocal basis. Klein believes that it is a challenge to those on both the political left and right to take the necessary steps that will sustain Earth. Klein believes that socialistic societies are as guilty as capitalistic societies in their over-consumption and abuse of natural resources. Both societal systems share the belief in the centralization of power and expansion. According to Klein, Scandinavian Social Democracy has produced some of the most important green breakthroughs to date.

Klein reports that African and South American nations liberated from colonization have strived to diversify their economies with less reliance on the exploitation of natural resources. These strategies have led to increased job opportunities and a decrease in poverty in many of the South American countries. She writes that Bolivia and Ecuador have both relapsed into old ways with the escalation of extraction industries. Greece forgot all about climate change issues when it struggled to survive economic calamity. Klein points out that many nations are rejecting the extraction-redistribution route to prosperity. Indigenous people in South American and Africa are most vulnerable to injury from the expansion of corporate extraction activities. According to Klein, in some cases like Mexico's Zapatista revolt in 1994 the indigenous people are finally having a voice.

Klein writes that conservation started in America as a movement by mainly wealthy men who hunted and fished. They were not concerned with the overall environment; They wanted pockets of protected areas where they could enjoy their sports. Klein points out that some of these men saw the deeper damage the environment was suffering from careless industrialists who drowned pristine valleys and damned wild rivers. Klein writes that naturalist Henry David Thoreau countered Bacon's theory by writing that the earth was not dead; it was a living body with a spirit. Environmentalist Aldo Leopold called for the conservation of all elements of nature. Beliefs like these sparked modern ecological thought but initially posed no threat to industry. Klein writes that Rachel Carson's *Silent Spring* published in 1962 exposed the dangers of chemicals like DDT and inspired a new generation of activists. Recently published books like *The Limits to Growth* contain dire warnings about the depletion of Earth's natural systems and resources. The earth is maxing out on the amount of byproducts it can absorb. The belief that man can abuse earth without restraint is only palpable to those who ascribe to it because they believe that man will in the end devise a way to turn things around.

Analysis

The dangers and ramifications of depleting the earth's resources are described by the author by using the example of the South Pacific Island of Nauru. It was an idyllic tropical island until phosphate was discovered. Phosphate is a natural fertilizer that has



great value on the open market. Foreign concerns invaded the island and stripped the island of its phosphate and in so doing destroyed the island's ecosystem. The center of the island where the phosphate had been mined was literally uninhabitable. The island people had to live on the coast and eventually there was thought of moving them to Australia because the situation on the island was so unhealthy.

The author uses this as an example of what can happen when resources are treated like unending sources of profit and to raise the red flag about the same type of process at work at the very moment. She refers to Sir Francis Bacon as the patron saint of today's conservatives who have a similar attitude as that of the mining companies that destroyed Nauru. Bacon believed that man was superior to earth and that the planet should be poked and prodded for everything its worth. He believed that the earth would naturally replenish itself. Some resources may be replenished but what he and others who ascribe to that philosophy don't consider – it may take millions of years to replenish a resource that has been exhausted.

Klein describes the irony that conservation was initially created by wealthy businessmen who liked to hunt and fish. They wanted the areas where they enjoyed their sports to be free of pollution and debris. What's ironic is that these men were probably conservative Republicans. Of course, their brand of conservation was a personal one. They had no idea that it would lead to a fight between conservative businessmen in future generations fighting with environmentalists who want them to abandon their operations.

Vocabulary

voraciously, emissaries, titular, bravado, extractivism, apocryphal, comeuppance, precipitous, indigenous, noblesse oblige, zeitgeist



Chapter 6: Fruits, Not Roots

Summary

In 1965, the Natural Conservancy purchased land in Texas that was the natural habitat of endangered Attwater's prairie chicken. The conservancy ultimately hired oil and gas extraction experts and began its own drilling operations eventually causing the chickens to completely disappear. Klein cites this as an example of relationships that sometime develop between private conservation groups and the fossil fuel industry. Green groups compromise with fossil fuel companies by agreeing to half-measures that merely put a band-aid on problems. Klein feels that these groups are left off the hook too easily for their ineffective practices and policies.

Klein relates that environmentalists became aggressive in the 60s and 70s spurred on by Rachel Carson's *Silent Spring* and the 1969 Santa Barbara oil spill. In addition to Friends of Earth and Greenpeace, new groups were established including the Environmental Defense Fund which had many scientists and lawyers as members and regularly brought lawsuits against environment violators. According to Klein, one of the lawsuits led to a ban on DDT a pesticide. The ban resulted in the return of many species of birds including the bald eagle. Klein says that following this victory, 23 federal environmental laws were enacted in the U.S. in the 1970s. The Superfund Act of 1980 required industries to clean up their toxic waste. The UN passed similar international laws. Klein refers to it as the Golden Age of environmentalism and states that real progress was made.

Klein writes that in the 1980s things began to change. President Ronald Reagan was a conservative president who brought in many ideologues from right-wing think tanks into his administration. He consulted with scientists who supported the fossil fuel industry and denied climate change. Klein notes that Reagan's interior secretary accused green groups of wanting to take over society, comparing the movement to Nazism. Progress that had been made in the prior 20 years began going in reverse. Klein writes that environmentalists began to acquiesce to a new paradigm of conformity and collaboration versus one of confrontation. The movement experienced deep schisms among its member organizations. Protests that were held on Earth Day 1990 along with acts of civil disobedience to gain attention for true environmentalism and proclaim disdain for fossil fuel's infiltration into the movement.

Under the leadership of a young attorney named Fred Krupp, the formerly intrepid Environmental Defense Fund began to create markets for energy companies rather than bringing suit against them, a change that created the comingling of the two former adversaries. According to Klein, the EDF became partners with polluters rather than litigants. They vowed to put results ahead of ideology. The 90s represented the era when Big Green became pro-corporate. According to Klein, climate change was characterized as a technical problem that could be easily solved by the market. Environmentalists were reluctant to take action that might upset the economy. In the



2000s, high profile elitists and celebrities took over the cause but the on-the-ground movement had stalled. Klein writes that it was a return to early days when wealthy men supported policies that protected land and waterways. Environmentalists may have caused a decline in the belief that climate change was caused in part by human activity.

Klein points out that the American Gas Association claims that natural gas is a solution to the greenhouse effect. Although fracking causes dangerous leaks of methane gas, donations are pouring into environmental groups from fossil fuel and fracking companies. Klein adds that some environmentalists are cooperating in studies to prove that fracking isn't a danger. Billions of dollars are being invested in infrastructures that will support fracking for many decades to come.

When the international community met to develop the Kyoto Protocol, there was an assumption that first world nations that were the biggest consumers would cap emissions and then reduce them. Klein writes that President Clinton proposed a cap-and-trade system in which pollution permits or carbon credits could be purchased that would allow nations to pollute more – obviously defeating the purpose. Its exclusion was considered to be a deal breaker by the U.S. After winning this point, Klein pointed out, the U.S. failed to ratify the protocol. The carbon emissions trade system proved to be a largely flawed one that became corrupted, was easily abused and put indigenous people at risk.

Klein writes that in 2013, more than 130 environmental and economic organizations called for the end of the EU's Emissions Trading System to make way for real solutions. Worldwide emissions had increased during their operation. According to Klein, the cap-and-trade legislation that failed to pass the U.S. Congress was no great loss because it did not present effective solutions. The U.S. Climate Action Partnership issued free allowances to cover emissions were actually bribes. Klein notes that the failure of effective cap-and-trade legislation to pass the U.S. Congress was partially due to the lack of groundswell pressure from below. Fred Krupp of the EDF believed that the failure was due to greens who should have compromised more.

Analysis

Along with climate change activists, it is obvious that Klein felt betrayed when green organizations pledged to fight for the cause. Klein provides a case study of an environmental organization joining the other side. In 1965, the Natural Conservancy purchased land in Texas that was the natural habitat for Attwater's prairie chicken – an endangered species that they would try to keep from going extinct. In a huge turnabout, the Conservancy wound up calling in drilling and gas extraction experts and began its own drilling operation. The chickens were basically ignored after the oil drilling began and disappeared. The Conservancy may have wanted to use their profits for research but their actions are difficult to defend.

Klein writes glowingly of heroes of the past, pioneers who predated the current climate change movement but whose innate sensibilities were predictive of the ramifications of



despoiling the environment. Rachel Carson's *Silent Spring* was published in the 60s and exposed the dangers of DDT, a popular pesticide at the time. It also exposed the dangers of other pesticides and herbicides. Her work was pioneering and led to the establishment of the Environmental Protection Agency. Although she was initially ridiculed for making the claims she did, she was proven right over and over again. DDT and other chemicals that she had researched were banned. After the banning many species began to return including the bald eagle.

Klein attributes the stall in the progress that was started by Carson and others on the politics of the conservative movement that took over the world in the 1980s. The environmental fervor of the 60s and 70s died down when the iconic conservative President Ronald Reagan was elected and his conservative counterpart in Great Britain, Margaret Thatcher, became Prime Minister. They were both staunch capitalists. Thatcher often said that there was no alternative to market fundamentalism – the heart and soul of capitalism. Klein points to these era in hopes that a groundswell of resistance will rise and keep history from repeating itself. Some environmental progress that had been made in the prior 20 years began to be reversed. Ironically, big green companies became partners with corporations who they used to protest against.

Klein describes the frustration of climate change activists who also feel betrayed by the failure of countries to follow agreements about climate control. She provides the example of the first Kyoto Protocol was signed by the international community. It provided emissions limits and provided guidelines for climate action. However, it was largely ignored because of fears that compliance with the agreement would cause violations of trade agreements. In 2015 the second Kyoto Protocol was signed in Paris and has more teeth than the original agreement.

Vocabulary

proviso, hypocrisy, unilaterally, endowments, arcane, panoply, galvanized, coalesced, dissonant, schisms, acrimony, largess, tantamount, intrinsic, formidable



Chapter 7: No Messiahs

Summary

Klein writes that in 2006 Al Gore convinced Richard Branson, founder of Virgin Group that the world was in climate crisis. He and his development director created a new approach to doing business that was called Gaia Capitalism. Branson pledged to spend \$3 billion over the next decade to develop alternate fuels to fight climate change. Klein explains that the money would come directly from profits earned from Virgin's fossil fuel burning jets and trains. By doing this, Branson was setting an example for other business owners. The next year Branson offered a \$25 million award in a competition called Earth Challenge for the innovation of a method to sequester one billion tons of carbon from the air each year. He also vowed to develop a low carbon jet fuel.

Klein notes that Branson stood out has a heroic figure willing to risk profits for the sake of the planet. Other billionaires have contributed to the fight against climate change including Warren Buffett and Jeremy Grantham but they didn't go as far as Branson. She writes that for Buffett there were too many conflicts between green concerns and his business operations. He wasn't willing to give up profits on the scale that Branson had vowed. Tom Steyer is a billionaire has become a major voice in climate change. He left the company he founded to devote all his time to the cause.

Klein writes that Michael Bloomberg a billionaire and former New York City mayor has made large donations to green groups but has done little to make changes in his own vast holdings which include oil and gas assets. Bill Gates, billionaire founder of Microsoft speaks out about climate change yet the Gates Foundation has invested billions in fossil-fuel companies. Klein adds that Gates urges research and development to come up with "energy miracles." Gates has been derisive about alternate energy particularly renewable technologies. T. Boone Pickens, a Texas oilman, launched the Pickens Plan which recommended ways for the U.S. to end its dependency on foreign oil through advancements in solar and wind technologies. Klein notes that Pickens changed his plan after fracking became popular by excluding mention of renewable energy and focusing on gas extraction.

Klein notes that in the years since taking his vow, Branson has invested in agrofuel businesses and been involved in several biofuel pilot projects. He has not been able to develop the miracle fuel he had hoped to. It is Klein's opinion that Virgin has lost interest in alternative fuels. Many of Branson's investments were in climate change-light development. His accomplishments have not earned the hype that accompanied his original announcement. He has not invested near the \$3 billion he had pledged; the figure is closer to \$300 million. Klein points out that he declined to be specific about his pledge which he came to refer to as a "gesture." During this time he increased the presence of his fossil-fuel burning planes and expanded his operations by founding Virgin America which ultimately lost millions. In all, Branson added 160 planes to his global fleet adding to the already escalating greenhouse gas emissions in the



atmosphere. Branson has spent millions on Virgin Formula One Racing and Virgin Galactic.

Klein writes that in November 2011, in Calgary, Branson announced the 11 most promising entries for his announced \$25 million Earth Challenge prize. There was no winner yet; their proposals would be reviewed by experts. Ironically, Calgary is the heart of Canada's tar sands business operations. Klein reports that Alan Knight was named Branson's advisor for the contest. Knight had close relationships with two of the biggest tar sands developers. The contest was re-engineered to focus on the development of technology to recycle CO₂ from the air for the oil industry which needs carbon dioxide for the smooth flowing of oil. Klein writes that the process presumably would release vast volumes of oil that had been inaccessible – obviously not an emissions solution.

Klein reports that the environmentalist group Forest Ethics asked U.S. and Canadian airlines to adhere to their own low carbon fuel standards and to oppose tar sands and other exotic forms of fuel. Branson refused their request because he did not support boycotts. By 2006, Klein writes, public discourse over concern for the climate increased especially in the UK which was considering a wide-ranging climate change bill that would target the airlines. If the legislation passed into law, regulations would eat into airline profits including those of Branson.

Klein notes that Mike Childs of Friends of the Earth UK believed that Branson's opposition to the regulations exposed that his oath to reduce emissions was a ploy to attain heroic standing and increase profits. According to Klein, Branson made the choice to abandon his pledge and profit from expanding his business despite the increased emissions. Branson's idea of using profits from systems using fossil fuels to develop renewable technologies is a practical one. According to Klein, the problem is that most companies use profits to develop technology for the extraction of more fossil fuels. Branson pockets millions of dollars from his publicly subsidized rail operation at the same time the trains remain outdated and fares continually rise. The miracle green fuels that Branson and other billionaires have promised could be developed might be at a time that will be too late.

Analysis

Although the promises sound good, Klein stresses that billionaire entrepreneurs will not solve the climate problems. A top-down process is not what is needed for effective change. Klein states that a bottom-up, grassroots movement is the only pathway to success. The passion of the people and communities that are most impacted is an important element in the movement. Richard Branson, billionaire entrepreneur and owner of Virgin Airlines, vowed to spend \$3 billion over a decade's time to develop an alternative jet fuel. He also offered a \$25 million award for the scientist who could develop a methodology to address the accumulated greenhouse gases. It all sounded good but Branson wound up spending much less. The announcement made a big splash and could have been well-intentioned, but Branson found other more interesting things to spend his billions on. A winner in the \$25 million competition is yet to be

announced. By using this example, Klein demonstrates that self-interest still rules the day.

There is also mention of the efforts of billionaires Michael Bloomberg, Warren Buffet and Bill Gates. It has been proven time and again that throwing money at the problem is not the solution. There has to be drastic changes in the economy that will sustain any progress that is made. Bill Gates, founder of Microsoft, feels certain that when the chips are down an IT solution will be developed to address the greenhouse gases. The emissions are already at crisis level – what's he waiting for, asks Klein?

Klein writes that wealthy men like Branson find it difficult not to take advantage of the current economic structure. He pocketed millions in subsidies for his failed railway system which was allowed to continue its operations despite the deteriorated state of the train cars and the rising fares. Klein includes the efforts and failures of billionaires who make a lot of noise about climate change solutions but in the end effect no change, because the capitalistic society is structured to produce profits. To effectively address climate change, Klein stresses, a new economic system is essential.

Vocabulary

manifesto, epiphany, tranche, labyrinthine, ephemeral, hyperbolic, conglomerates, penchant



Chapter 8: Dimming the Sun

Summary

The Royal Society, Britain's academy of science, in 2009 called for a Plan B if governments did not reduce emissions. Two years later, the Society issued a report stating that the only remedy for global warming could be a partial blocking of the sun. The World Academy of Sciences and the Environmental Defense Fund were chosen to co-sponsor a retreat to iron out details about the geo-engineering necessary to develop an emergency plan.

Klein reports that the retreat focused on geo-engineering methodology that the scientists believed had the most potential. Solar Radiation Management (SRM) was one of the methods reviewed. The process would manage the amount of sunlight that reached earth. According to Klein, other methods were discussed like the Pinatubo Option named after the eruption of the Pinatubo volcano in the Philippines. The scientists at the retreat discussed the pros and cons of each of the proposed plans. Klein notes that moral considerations were a part of the discussion. The SRM could cause climate conditions that were worse than current ones specifically in Africa and Asia.

As far back as 1965, scientists warned President Lyndon Johnson about climate change. According to Klein, they offered a few solutions but did not address limiting emissions. Weather manipulation had been discussed as a weapon of war by the generation of storms that would destroy enemy supplies. Klein writes that scientists weren't interested in such programs because of the potential moral hazard. In 2006, geo-engineering became part of scientific discourse. Paul Crutzen who won a Nobel Prize in chemistry suggested that consideration be given to the Pinatubo Option which called for the injection of sulfur into the stratosphere. Klein writes that Nathan Myhrvold the former Microsoft chief technology officer and his team developed the StratoShield which he claimed could negate global warming. Scientists would rely on Plan B only if Plan A (emissions reductions) were insufficient. They didn't want to defer to geo-engineering but they felt there might be no choice.

According to Klein, the focus of the retreat was to discuss how to govern a process once it was in place. Since the skies and the sun belong to no nation, the management of a system to diminish the impact of the sun would need the unanimous agreement of the global communities. In the end, no significant agreements were made. She notes that discussions were held to weigh the pros and cons and the morality that each process presented. How the Earth would react to large-scale geo-engineering is a complete unknown.

In Klein's opinion, a common response to the dangers of geo-engineering is that climate change presents even greater dangers. A slow-ramp geo-engineering approach that moderates the process has been suggested as a viable option. Computer modeling



indicates the risks of injecting sulfur into the stratosphere depending on where the injections are made. Klein comments that there is little doubt what choice would be made between putting Africa at risk or putting the United States at risk. Klein writes that advocates of engineering like Bill Gates look at geo-engineering as an emergency plan to have in our back-pocket in case of emergency. However, Klein points out, there is the risk that multiple nations could launch geo-engineering projects simultaneously with completely unpredictable results. The hacking and manipulation of the system are also concerns. In considering geo-engineering solutions, Klein stresses, it must be remembered that man's job is not to fix the world but to fix ourselves and refrain from damaging our planet.

Klein reports that there is speculation that some proponents of geo-engineering solutions support this option so that current fossil-fuel and fracking processes can continue at full speed. They warn of economic decline if companies are over-regulated in order to reduce greenhouse gas emissions. BP participated in a decade-long research project on Solar Radiation Management. Klein believes there is robust support in conservative think-tanks for geo-engineering solutions; they would rather regulate the sun than the emissions from Big Oil. Klein says a real Plan A is needed to reduce emissions so the sun doesn't have to be "turned down." Klein writes that plans to reduce emissions, adopt agro-ecological methodology, legislate regulation and punish emissions violators must all be considered.

Klein notes that when the first images of Earth were taken by satellite in the late 1960s there was hope that there would be a greater understanding of our responsibility to it. It spins alone in space and it is our only home. From a distance it looks perfect and pure but on closer inspection the ugliness of pollution, hunger, death and danger becomes visible. In Klein's opinion, there are those that seem to have given up on Earth with talk of colonizing Mars when Earth becomes inhabitable or cataclysmic events occur. Klein writes that with talks of Plan A going nowhere and Plan B risky and unpredictable, some find comfort in Plan C – abandoning Earth. To many, Plan B and Plan C are preferable to simply changing human behavior. Surveys reveal that the public has little confidence in plans that turn down the sun. Klein writes that a new movement is at hand comprised of those who have witnessed the failure of Big Oil first-hand, specifically BP's deepwater drilling debacle. The new generation of activists isn't willing to sacrifice the irreplaceable with the promises of fossil-fuel engineers. The fossil-fuel industry is frightened.

Analysis

In this chapter, Klein describes some unusual alternate solutions. Scientists are actually conducting research and creating computer modeling for systems like the Solar Radiation Management (SRM) which in essence will turn down the sun. There are several methodologies for achieving a lessening of the sun's intensity like injecting sulfate into the atmosphere. Such proposals are all referred to as geoengineering solutions.



Klein describes a strange new world in which mad scientists turn down the sun. Reducing the intensity of the sunrays that reach earth will cool the planet's temperature. Scientists can't be sure of the consequences of such radical actions and they are impossible to test. The selling point of geoengineering solutions is that emissions could build up without danger of increasing the earth's temperature. Fossil-fuel companies could continue or even increase their drilling and mining without causing harm. Of course, drilling and mining causes other damage to the earth but geoengineering only addresses the greenhouse gases.

The response to opposition to such bizarre solutions is that unchecked climate change presents even greater dangers. Controlling such technology is one of the considerations that would have to be firmly established. Multiple nations could attempt geoengineering fixes at the same time with chaotic results. Klein points out that it is mind-blowing to think that some would opt for solutions that belong in a sci-fi movie rather than get fossil-fuel companies to control their emissions.

Vocabulary

elixir, fallible, triumphalism, paradox, obliquely, spatial, antithesis, consternation, omniscient, chimera



Chapter 9: Blockadia

Summary

Klein writes that Blockadia is a mobile transnational conflict zone, climate change activists who appear wherever dangerous extraction projects are taking place. These extraction projects include open-pit mines, fracking and tar sands pipelines. Running out of options, fossil-fuel companies are expanding to new areas with their untested and unregulated operations. The planned construction by Eldorado Gold of an ore mine in the Skouries Forest, an old-growth forest in Greece, came to the attention of the activists. The local people were completely against the mine fearing that it would adversely impact their health. The Greek prime minister wanted the project to proceed because of the economic collapse of the nation. The forest has become a battle zone for the opposing sides with military checkpoints along the road that leads to the forest. Similar scenarios are taking place around the world in locations as diverse as Romania and Canada. Klein writes that Blockadia has disrupted industry activities in Great Britain and joined Greenpeace on board the Arctic Sunrise to bring attention to the dangers of drilling in the Russian Arctic. Blockadia activists were arrested and later released in the incident. Blockadia supported Mongolian herders who were resisting plans to make their oil-rich region into China's energy base and helped blocked a coal mine in Australia.

According to Klein, Blockadia's biggest target is the Alberta tar sands and the proposed Keystone XL pipeline. The project has two phases. Part of phase one has already taken place with 14 spills occurring in the U.S. It sparked civil disobedience in Washington, D.C. in 2011 and a 40,000 person protest in front of the White House in 2013. Klein notes that Blockadia also protested another Canadian pipeline called the Northern Gateway which was planned for the delivery of oil from Edmonton to British Columbia where it would be loaded onto supertankers that would navigate through narrow and treacherous channels to the Pacific. The plan put Canada's pristine wilderness at risk.

Klein writes that the resistance of locals against oil company exploration and digging has gone on for decades. Of note are protests against mountain top removal by coal mining companies in Appalachia. Klein points out that many of the tactics used by Blockadia in current times were taken from the successes of Earth First! in the 1980s. Blockadia is fighting against the largest carbon boom due which came about due to new technologies, depleted resources and exploration of new territories. Klein makes the point that tar sands and fracking for oil and gas present dangers to indigenous people and to the land and air. However, the fossil-fuel industry has always been wrought with danger.

Klein writes that the fossil fuel sector had earned a slew of new enemies. Ironically, the Exxon CEO joined a lawsuit opposing fracking operations near his lavish Texas home claiming Exxon was causing homeowners the loss of property value. But people in poor areas remain the biggest victims of the industry. Klein makes the point that many people may not be near the wells and digging; however, everyone is impacted by emissions



and spills caused by the fossil fuel industry. Klein notes that those in poor areas with no power can benefit from the voice of dissent against fossil fuel exploration from those who have more influence. Oil transported by pipeline passes through the homelands of millions of people making them all vulnerable to health concerns. The fossil fuel industry damages other sectors of the economy including fish stocks, farmland and tourism.

The majority of the time, Klein states, the spirit of the activism is an invisible force, but in September 2013 Blockadia's actions were quite visible. The Lummi Nation is a coastal tribe that is leading the fight against what would be the construction of the largest coal export terminal on unwelcome territory on the West Coast. Klein writes that five members of the Lummi tribe traveled from their mountain home in Washington State to Otter Creek, Montana, with a 22-foot totem pole strapped on their flatbed truck. Otter Creek was the site of a planned coal mine. The Lummi and locals including cattle ranchers gathered around the totem pole in protest of the mine. The mine was a threat to everyone in the region.

Klein writes that there are no new regulations, safety standards or research on health and environmental risk for fracking operations, tar sands extraction or bitumen transportation. She points out that Blockadia activists cite the 2010 BP disaster in the Gulf of Mexico as a turning point – it was the moment that they knew they had to win their battle. Large and small spills occur with great frequency, many virtually unreported in the media. Klein notes that when investigated, the causes behind most incidents are lax regulations and lack of monitoring. The public has lost confidence in the fossil-fuel industry and government oversight for good reason.

In the past, according to Klein, the environmental movement has worked with business and government in an effort to balance company profits with the need to address greenhouse gas emissions. Blockadia threw that all aside and focused on taking action whenever human health or the environment is at risk. She notes that Blockadia believed that it was up to the industry to prove that their practices were safe. The fossil fuel companies do not intimidate the new movement and Blockadia doesn't hesitate or negotiate when danger lurks.

Analysis

Author Klein introduces a new kind of environmentalism and a new movement headed by an international organization called Blockadia. By highlighting the methodology of this group, Klein emphasizes the importance of turning up the volume on climate action. Quick, bold and aggressive action is necessary to make a dent in the progress that must take place.

These activists quickly mobilize to wherever on the globe they are needed. They are aggressive in their activism and focus particularly on open-pit mines, fracking and tar sands pipelines. Blockadia activists joined with locals in Greece who were opposing an ore mine being constructed in an old-growth forest called the Skouries Forest. The government which was a proponent of the mine because Greece's economy had



crashed and burned ordered armed guards at checkpoints along the road to the forest. A number of Blockadia activists were arrested and later released in this incident.

Blockadia also came to the rescue of the Lummi Nation a coastal tribe in the Pacific Northwest. The target of the activism was a mine in Otter Creek, Montana. The mine was opposed not only by the local Indigenous people it was also opposed by cattle ranchers. The activists, cattle ranchers and the Indigenous people all joined together and so far have delayed construction of the mine. A delay is almost as effective as a stoppage, Klein points out. When a project is delayed many investors fall away and the project dries up.

To Blockadia activists, the turning point was the 2010 BP disaster in the Gulf of Mexico. The devastation of that event made them convinced that they had to win the battle. Blockadia, unlike environmental movements that went before them, do not work with governments or industry to negotiate a deal or compromise their goals.

Vocabulary

arbitrary, juxtapose, seismic, inauspicious, ostensibly, insurgency, infrastructure, amnesty, hinterlands, pillage, omnipotent, behemoth, paucity



Chapter 10: Love Will Save This Place

Summary

Klein writes that members of a review panel flew to Bella Bella, British Columbia, the site of the proposed Northern Gateway pipeline. The panel had been holding hearings about the pipeline and its impact on the environment. Bella Bella high school students were particularly compelling in expressing their concern for their community should the pipeline be responsible for a disaster. Klein writes that everywhere the panel travelled in British Columbia, it was met by protestors voicing unanimous opposition to the pipeline. Open hearings had been cut short in Bella Bella because of alleged threats of violence against panel members.

Klein writes that the fossil fuel industry and governments have underestimated the cultural concerns that people have for an ugly pipeline being plopped down in their communities, a pipeline that would make already rich fat cats richer and do nothing but bring harm to them. Klein points out that Indigenous people are closely bound to their land, while oil company employees are just passing through – they have no long-term plans to stay and no real connection to the land.

Klein writes that one of the most important matters that communities at risk are concerned with is clean water and are well aware of the damage that fracking and other operations can do to water. The tar sands pipeline would carry its poison across a thousand waterways. Opposition to the Keystone XL pipeline grew when the TransCanada announced that it would be routed over the Ogallala Aquifer, a vast underground freshwater source under the Great Plains. Klein notes that it would impact the drinking water of two million people. The fracking process itself needs 2.3 barrels of water to produce one barrel of oil from tar sands. Klein reports that it is estimated that the average amount of water needed for an entire fracking event is five million gallons. The people see their pure drinking water used for a process that may well poison it. People can live without Exxon or Chevron but they can't live without water. Klein notes that the warning about collapsing the economy doesn't work with these people – broken banks can be fixed but the broken Arctic cannot.

Klein points out that activists have had many successes in shutting down fossil-fuel and coal operations and banning fracking in areas around the globe. Efforts against tar sands pipelines have not been as successful yet although they have won delays. According to Klein, the delays are partial victories because money dries up if investors don't see certain profit. The delays also allow time for clean energy to make a bigger impact on the market and for the general public to become further educated on the dangers of tar sands pipelines and make demands for clean energy. Such demands are gaining strength in Asia and India. It is Klein's opinion that China has finally looked in the mirror and acknowledged that they must address their horrific air pollution problem.



Klein writes that the activists are pressuring public institutions like universities and municipal governments to sell off investments in fossil fuel companies. The divestment tactic has been particularly powerful with successes seen around the world. According to Klein, the ultimate goal of activists is for oil companies to be viewed as pariahs much like cigarette companies are. But no tactic is a strategy for major policy changes that will regulate carbon reduction. In Klein's opinion, the Sierra Club that had gone over to the dark side has been renewed and has joined the divestment movement as have some foundations that fund the activists. Fossil fuel companies began to feel the burn of these divestments when their profits began to tank in 2014.

According to Klein, fossil-fuel companies are fighting back citing investor provisions of free trade agreements. Trade and investment rules provide legal means for foreign concerns to fight restriction on the exploitation of fossil fuels. Klein believes that trade laws needed to be amended to take the ability of the fossil fuel industry to skirt regulatory constraints. As Blockadia's successes grew so did challenges to trade agreements. Klein believes that energy companies will continue to fight hard to maintain operations wherever in the world they want to. This aggressiveness has brought new scrutiny to the treaties which could have a backlash effect on the oil companies. According to Klein, to get effective legislation passed the activists will ultimately have to deal with a corrupt political system.

Klein believes that, in a sense, Blockadia is transforming into a grassroots pro-democracy movement. People are becoming more territorial and protectionist about what is done to their community, their land. However, efforts on the local level are often thwarted by the collusion by big oil and state or federal governments. Klein reports that Pennsylvania's Homeland Security Department ordered surveillance on the activities of anti-fracking groups.

Klein writes that Canada's chair of the Canadian Security Intelligence Services (the nation's CIA) was a registered lobbyist for Enbridge, the company behind construction of the Northern Gateway pipeline. According to Klein, the review panel that feared retribution eventually approved the pipeline even though hundreds of voices had spoken out against it. Canadians do not believe that the Northern Gateway pipeline will be constructed due to legal challenges from the indigenous people. It is Klein's opinion that the expertise and resources it took to develop drone warfare and global markets need to be expended in saving the planet. Community governments are organizing transition policies to deal with climate change, including Transition Town in Devon, England. Local governments may prove to be the driver of resistance to carbon extraction.

Analysis

This chapter is largely devoted to the efforts of the Indigenous people around the globe who are leading protests against intrusions into their lands by the fossil-fuel industry. In their single-minded goal of making money, the industry has ignored the cultural concerns of the Indigenous people.



To many Native Americans and Native Canadians, the earth is a spiritual part of their culture. They believe that violating the earth will bring them ill fortune. Tradition is also important to these people and part of that tradition is to teach new generations hunting and fishing skills on their beloved land. They also resent losing the land that was promised to them in treaties. Indigenous people are taking their causes to the courts with some successes. The courts have acknowledged that governments have allowed extraction events without getting the permission of the Indigenous people who did not sell their share of land to the government. These kinds of landmark decisions could have far-reaching consequences.

Klein emphasizes the importance of an on-going campaign by environmentalists to urge universities, municipal governments and universities to divest themselves of investments in the fossil-fuel industry. Further, they are suggesting that these divestments be reinvested in research for the development of energy renewables and the fight to reduce emissions. When the divestment campaign first got off the ground oil and gas companies didn't feel the burn. However, later when profits tanked during the economic turn down they felt the loss of funds. The activists view their divestment campaign as another pressure point that they can use against the industry to gain leverage.

Vocabulary

galvanize, moratoria, ambivalent, quantitative, arcane, insidious, nexus, unfathomable



Chapter 11: You and What Army?

Summary

Arthur Manuel, a spokesman for the Indigenous Network on Economies and Trade, worked with First Nation leaders to find a way to legally downgrade Canada's AAA credit rating through Indigenous land rights. By doing so, it would give the Indigenous people more leverage in their fight to ban or limit fossil-fuel drilling. Manuel argued that Canada didn't deserve the AAA rating because of the unpaid debt that had accumulated over decades from allowing the wealth of Indigenous land to be extracted without permission.

Klein reports that Manuel and Guujaaw, the president of the Haida Nation, met with a representative of Standards & Poors, the credit rating service, and presented their case. They were told that since First Nation leaders didn't have the power to collect the alleged debts that S&P couldn't hold it against Canada in their credit rating. According to Klein, it is one of Blockadia's goals to transform Indigenous rights into being treated as realities and not just in theory. Using Indigenous land rights have resulted in successfully creating barriers for the fossil-fuel industry, Klein argues.

In the 1990s the Canadian Supreme Court handed down a series of decisions that affirmed land rights to the Natives. Non-Natives protested and violence and racism ensued. Later, the Natives staged a protest against a fracking site and invited non-Natives to join them. Klein notes that many people of diverse cultures, ethnicities and backgrounds gathered in a united cause. There were solidarity protests in towns and cities all over the nation. According to Klein, Indigenous rights did not have to be negotiated by politicians. No treaty gave Canada the right to radically change the ancestral lands of the Natives. The treaties may be the last best hope to save the pure drinking water for future generations.

When the U.S. State Department sent out a trial balloon that there may be approval of the Keystone XL pipeline, the Lakota Nation spoke up saying that the construction of the pipeline would be illegal. Representatives from Alaskan Native tribes won a major courtroom victory against Shell's Arctic drilling on the basis that Indigenous rights were being violated. Klein reports that the court ruled that Shell's risk assessments were unrealistic. Shell put its Arctic drilling plans on hold. Indigenous people in the Amazon are holding up oil company activities that would damage the rain forests.

The United Nations passed the UN Declaration of Rights of Indigenous Peoples in 2007. But, according to Klein, there is a big difference between what countries agree to do and what they actually do. The governments in Bolivia and Ecuador have allowed energy extraction without approval of the Indigenous people. While suits are filed and lawyers argue in court, the drilling goes on. It is Klein's belief that this goes on because the Indigenous people lack power, influence and resources. Another tribe took on Shell and the government over a large tar sands mine expansion that was planned. There are many David and Goliath stories in the fight by Indigenous people to save their land.



Idle No More, an environmentalist group that formed in 2012, held flash mobs in shopping malls across the U.S. In Canada, Native leaders went on hunger strikes and blockaded roads and railways. The movement was sparked by the Canadian government's attack on Native sovereignty and loosening of environmental protections to make the way for tar sands expansion, mega-mines and projects like the Northern Gateway pipeline. Klein reports that the government overhauled regulatory laws and removed key parts of the water protection act – changes that were all to the benefit of the oil and gas companies, Klein points out. The Idle No More movement was launched in protest and seemed to be a game changer. According to Klein, their efforts had results – Canada was no longer on the top of the world's best mining locations list. There were articles supporting the movement in the newspapers and Neil Young kicked off his "Honour the Treaties" tour and donated the entire proceeds to the movement. The tour made the cause even more high profile and generated more discussion.

Klein writes that in some cases, Indigenous people make deals with oil companies because they are desperate for the money needed to fix other parts of their lives. Many live in neglected communities that have no sewage or running water. In Klein's opinion, climate change is increasing the pressure on these communities to make these "dirty" deals. Weather changes are making it difficult to hunt and fish in some of these regions. The receding glaciers in Greenland are opening up the once pristine nation to exploration and digging. The former Danish colony depends on \$600 million a year from Denmark for its survival. In 2008 a self-governance referendum gave Greenland more independence but made it vulnerable to drilling and mining. It is Klein's belief that poor nations see deals with fossil-fuel companies as the best of bad options. These deals cause fractures within communities and even within individual families. In a sense, Klein writes, the poor and powerless Indigenous people are fighting the fight for the rest of us. Klein believes that they need support and plausible alternatives in order to help save their land and the earth.

Analysis

This chapter, like the last, delves into methods other than blockades and protests that can be used to convince the fossil-fuel industry to address climate change. Another attempt to have leverage against the fossil-fuel industry was made by Indigenous people in Canada. They made the case that Canada's AAA credit rating should be lowered because they had allowed the fossil-fuel industry use of the land that was partially owned by Indigenous people for decades without their permission. They were owed a lot of money and Canada had not paid.

Klein lays out the frustrating David and Goliath fight that Indigenous people face against the fossil fuel industry. Although their argument may have had merit, Standard & Poors, the credit rating service, refused to lower the Canada's credit rating because the Indigenous people had no means of collecting what they considered unpaid fees. However, this tactic could be applied in future cases with more success.



Klein gives hope to the movement with various grassroots movements that are taking place organically. When there was word that the U.S. government may approve construction of the Keystone XL Pipeline, the Lakota Nation asserted that such construction would be illegal. Alaskan Native tribes won a legal victory against Shell and prevented their planned Arctic drilling.

Klein uses the example of the UN which got on board and passed the Declaration of Rights of Indigenous Peoples which the international community signed on to. However, Klein is a realist and points out, that while it's a victory for the UN to make a declaration it's another thing to get the nations to do what they agreed to do.

Vocabulary

charismatic, undaunted, solidarity, cynicism, capricious, omnibus



Chapter 12: Sharing the Sky

Summary

Klein writes that the fossil-fuel industry wants to get at the gigantic reservoir of coal that sits in southern Montana underneath the rolling hills of cattle country. It is estimated that there is enough coal to supply the U.S. for 200 years. Klein points out that much of the coal would be earmarked for export to China. The coal is underneath and around the Northern Cheyenne reservation. The tribe has been fighting off the coal mining companies since the 1970s. Anti-coal activists had lost a court battle resulting in the go-ahead for a new coal mine at Otter Creek. According to Klein, opposition transitioned to the proposed railway that would haul the coal from the mine because it would cut through burial grounds. At the same time there were plans to construct a coal-to-liquids plant near the Crow Reservation. Liquefying coal is a particularly noxious process and emits twice the amount of carbon as gasoline.

Klein notes that a kind of triage was presented to environmentalists – in what order should these three dangerous projects should be addressed? In one suit, the Northern Cheyenne argued simply that they had the right to breathe clean air. Klein writes that tribe members were tempted by offers of monetary awards for their support of the mining company. Sixty-two percent of the tribe was unemployed and many suffered from substance abuse, so the promise of jobs and money caught their attention.

According to Klein, the Black Mesa Mine put the water supply for the Navajo and Hopi in Arizona at risk. Black Mesa activists devised a plan to capture solar energy in an area abandoned by mining companies. Once implemented the plan would provide needed revenue to the Navajo and be a start in the transitioning away from coal. It is Klein's opinion that providing feasible alternatives to extraction is also important for farmers and ranchers who are offered money for leasing their land for fracking or pipeline construction. Local construction workers often support fracking and mining companies because they need the work, Klein explained.

Fracking and other disruptive processes are coming closer to communities formerly not touched by the processes. Climate change is teaching the public that there is no place left on earth to escape from greenhouse gas emissions. It is Klein's opinion that people woke up to reality in Vermont when their beautiful farmland wound up under river sand after Hurricane Irene came through.

Klein writes that activists are learning that they have to offer solutions when they protest. Blockadia is striving to build a new economy rooted in very different values and principles than the current system. An opportune time to promote a new approach is in the aftermath of a natural disaster when everyone is paying attention and public funds are on the table. Klein believes that public pressure can convince governments to not only rebuild after a disaster but invest money in an improved infrastructure that is devoid of fossil fuel extraction. After 95% of Greensburg, Kansas was destroyed in a tornado in



2007, they rebuilt with a green approach and today is a model “green town.” The value of land stewardship was reborn for the people of Greensburg.

Klein writes that members of the Northern Cheyenne Reservation asked to be compensated by the international community for keeping their resources in the ground which had been Ecuador’s experience. Klein reports that the fossil fuel industry had been after the 850 million barrels of crude oil located under the Yasuni National Park in Ecuador. Part of their argument was that the Indigenous people should be compensated for the impact of climate change that they didn’t create. Klein believes that the poor people of Ecuador could turn down Big Oil’s money if they were otherwise compensated. Those who caused emissions are said to owe a “climate debt” to those who did not.

Klein notes that some developing countries feel that it is their “turn” to pollute their way to wealth as the West has done. But things are different now. The West began polluting when there were no accumulated emissions. These developing countries can’t emulate the West because the emissions are already at dangerous levels and adding to them would only exacerbate the disaster. Klein writes that it’s not fair but it’s just the way it is. Klein stresses that the ultimate goal to save the earth is to abandon reliance on both dirty fuel and endless economic growth. The best solutions are the emerging alternatives to fossil fuel extractions.

Klein writes that movements in the Global South are working toward the development of such models. One proposal is a global feed-in tariff that would create an international fund to support energy transitions in the developing world. Developing countries have to “develop” differently and the first world countries have to support that development by paying their climate debts. According to Klein, unlike slavery and colonialism for which some seek reparations, climate change leaves a toxic trail, is in the here and now and must be dealt with. Of course, all forms of repression have impacted the poor and vulnerable, created unpaid debts and are interconnected.

Klein feels that having been “wronged” in past generations is not a ticket to repeat the same mistakes. The EcoEquity think tank and the Stockholm Environment Institute have developed a model for a fair approach to emissions reductions called the “Greenhouse Development Rights” system. Klein explains that a nation’s carbon debt is determined by a nation’s responsibility for historical emissions and its ability to contribute. The plan calls for the majority of the cost to come from corporations responsible for the climate crisis and not from taxpayers.

Analysis

Klein focuses on the efforts of Indigenous people to save their ancestral land. Klein feels she will engender support for the climate change action because everyone wants the underdog to be victorious over the big bully. The Northern Cheyenne is another Indigenous people who are fighting the fossil-fuel industry’s takeover of their land. They have been fighting for years to keep drilling out of the huge reservoir of coal that rests



underneath cattle country in southern Montana. The coal is estimated to be so large that it could satisfy the needs of the U.S. for 200 years. So far the Cheyenne have prevented any drilling but no one can predict how long that will last.

As Klein points out man, like the earth, is resilient at least to a certain extent. When the activists and Indigenous people lost their fight against a new mine in Oak Creek, Montana, they tried a different tactic. They were able to make the case that should the mine be constructed, the railway that would be necessary to haul the coal would cut through their burial grounds which would be an unforgivable effrontery to them and their ancestors.

When the Hopi and Navajo lost a battle to stop the building of the Black Mesa Mine, they came up with an energy solution that could benefit them. They decided to use the site of an abandoned mine to capture solar energy. It would be an opportunity to make revenues and to transition away from their dependency on coal. The conservative think tanks don't have anything on the Indigenous people once they put their heads together, Klein states.

Vocabulary

throes, galvanized, noxious, triage, stewardship, antithesis, utopian, idyllic, surreal, profligate, rapacious

Chapter 13: The Right to Regenerate

Summary

Klein writes that for the five years that it took her to write *This Changes Everything* she was also trying to get pregnant for the first time. She had a difficult time – miscarriage, monthly disappointments, a pharmaceutical regimen and many clinic visits. She couldn't help but make comparisons to her fertility and Mother Earth who was facing many fertility problems herself. When Klein gave up on the clinic, she learned she was pregnant. But it was a dangerous ectopic pregnancy that required medication to force miscarriage. She writes that the unfortunate pregnancy had nothing to do with any toxins she might have inhaled on a trip to the Gulf to learn if the oil had entered the marshlands, an aquatic incubator where juvenile shrimp, oysters, crab and fin fish develop into adults.

Klein makes note of the fact that the vast majority of prescription drugs have never been tested on children. The dosages are based on a 5'7" man weighing 157. Studies have shown that babies born near a fracking operation often have low birth weights and are 30% more likely to be born with congenital heart defects. Klein adds that in other areas around fossil-fuel operations there was an unusually high number of baby girls born and miscarriages were higher than average. The abundance of chemical plants and refineries in and around Mossville, LA, an African-American community, drove half of the residents away. Klein makes the point that even when there aren't accidents, factories spew on an average four million pounds of toxic chemicals into the atmosphere each year. A high number of hysterectomies were performed on Mossville women.

Klein writes that the functioning of the fertility systems of women and of Mother Earth often goes unnoticed. In BP's risk assessment report before drilling in the Gulf, there was mention that some animals might be "stressed" by the drilling but there was no mention of the impact on eggs or larvae. A year after the disaster, fishermen experienced reduced catches. Klein writes that the damage to the Gulf's aquatic fertility will have impact for decades. When baby dolphins were being found dead on Gulf beaches and marshes people paid attention. By April 2014, 235 baby bottlenose dolphins had been found dead; scientists estimate that that number was probably only 2% of the actual death count. Klein adds that the already sick dolphin population was hit with another blow when an inordinate amount of fresh water flushed into the bay. The lack of salinity and cold water was a shock to their already fragile systems.

According to Klein's reporting, climate change is impacting the ability of many animals to procreate. Water along the Pacific Northwest coastline is acidifying so rapidly that larvae are unable to form in their shells and perish. A similar situation occurred in British Columbia with the collapse of the scallop population. Klein adds that on land, the caribou birth and survival rates are down. In Maine, Arctic terns are dying from



starvation because of the decline in seafood. There are many examples of the decline in populations of many species of land and sea animals around the world.

Klein learned that she was suffering from stress, adrenal insufficiency and low cortisol levels and that they had an impact on her ability to reproduce. The radiation that she was exposed to during her frequent plane trips could have contributed to her physical ailments. She followed the treatment plan provided by her physician. While going through this phase, Klein writes, she visited a cutting-edge agro-ecological farm at the Land Institute in Salina, Kansas, and learned about the agro's latest advancements. It was around this time that her son was conceived. Klein writes that she was gun shy having had a miscarriage and an ectopic pregnancy. She hiked to hilltops where she could see the salmon swimming in estuaries after months at sea. Klein recalls that she compared their fight to make it upstream to the baby she was carrying to survive and be born. Oil spills and industrial accidents have caused a 40% drop in the salmon population in the Pacific Northwest. Klein writes that her baby boy was full-term and healthy when he was born. Man - like nature - is resilient; both survive but do not necessarily thrive in a deteriorating environment.

Klein met with educator Leanne Simpson who was an advocate of the Indigenous Anishinaabe system – a way of living that generates all life in balance and harmony. “Anishinaabe” can be translated as both “the good life” and “continuous rebirth.” Klein writes that Indigenous people have taken leadership roles in the fight against extraction. A reproductive rights movement is emerging that includes the rights for humans, animals and for Earth to reproduce. It is Klein's opinion that people are returning to feelings of their responsibility as stewards of the Earth. Communities can transition from extraction-free zones to new worlds that rise in the rubble. The new spirit is busy at work promoting and protecting life and life is rebounding.

Analysis

This chapter provides some insight into the personal side of author Naomi Klein. Klein never felt closer to Planet Earth than she did during the five years she was writing *This Changes Everything* because she was also trying to get pregnant with her first child. She shares with the reader the angst of monthly disappointments, the drudgery of multiple visits to treatment centers and the experience of trial and error with pharmaceuticals. She had a miscarriage and an ectopic pregnancy that had to be ended along the way. She wrote how she related to Mother Earth who was in her own fight to survive the onslaught of toxins and noxious emissions and rising temperatures in order to procreate herself with her own struggle to have a child. Was Klein's struggle a metaphor for that of Mother Earth or was Mother Earth a metaphor for Klein's own trial? If there was any doubt, this chapter clearly defines Klein as a dedicated advocate of climate action.

Klein also covers the human toll that climate change is bringing about. Babies born near fracking operations have lower than average birth rates and are more likely to have heart problems. In Mossville, LA, the overabundance of refineries and factories drove



half the people away. The women of Mossville were more likely to have hysterectomies than the general population.

Klein broadens her focus on global warming by describing the wide variety of destruction that it has caused. She uses the examples of the coastal waters of the Pacific Northwest which have acidified and have adversely impacted the procreation of sea life there. A similar situation has developed in British Columbia. The caribou in British Columbia are not reproducing at the normal rate. Terns are dying off in Maine because their seafood diet has been depleted. Sea life in the Gulf of Mexico will not fully recover for decades to come due to the BP oil spill. Hundreds of dead baby bottle nose dolphins have been found on the shores and marshlands of Louisiana. By providing this diverse and wide-ranging description of damage, Klein underscores that climate change is about so much more than a few degrees Celsius here or there.

Vocabulary

nihilistic, ecological, vortex, labyrinth, invocations, ectopic, zooplankton



Conclusion

Summary

Klein reports that at the Fall Meeting of the American Geophysical Union in San Francisco in 2012, University of California professor Brad Werner laid out an advanced computer model showing how the Earth is basically “screwed” because of the climate change it faces. There was one element of his model that held a glimmer of hope: the broad establishment of resistance movements by people who have adapted beliefs that do not fit into the capitalist structure. Klein writes that massive protests and blockades by Indigenous peoples, workers and activists could slow down the economic machine. The general public has become more educated and knows where fossil-fuel activities will lead. She adds that activists recognize that they have to address the economics of environmentalism.

According to Klein, progress has been made by Blockadia and other groups in organizing and mobilizing local communities, driving interest in the divestment/reinvestment model, advocating the passage of local laws that bar extraction and winning court challenges led by Indigenous people. She characterizes them all as elements of successful resistance. Klein has seen the full gamut of the climate-change debate – activists sobbing on her shoulder in Copenhagen, Heartland right-wing intellectuals laughing at the concept of extinction and mad scientists developing serious plans to turn down the sun. Klein concedes that there were many disappointments: one of the largest green groups in the world joined the dark side and drilled for oil and extraction events ripped and prodded the Earth to get at Alberta’s tar sands.

Klein writes that one of the main areas of progress has been the education of the general public about the perils of extraction. As a result, more groups have formed to protest and resist extraction events and the digging of new mines. The urgency for action has only escalated – the ice sheets are melting faster than predicted and emissions are still rising. According to Klein, the trapped greenhouse gases will create a world that is increasingly hotter, colder, wetter and drier. A climate revolution is in order.

According to Klein, meeting science-based targets for emissions reductions is vital; scientists predict dire results if we ignore their warnings. A complete revitalization of the economy is needed. She notes that the economy has made dramatic shifts before during times of crisis as in times of war. Those shifts are top-down from the president or prime minister. However, the needed economic revolution that is on the horizon is a bottom-up, grassroots movement. It is Klein’s opinion that there has never been anything like it in the history of man.

Klein writes that social movements can cause big change as evidenced in the civil rights movement, the struggle for women’s rights and the fight for LGBT equality. None of these movements are as challenging as achieving radical economic change. Klein notes that since the 1950s several large democracies have nationalized parts of their



extractive activities and distributed profits to the people. But achieving economic equality is difficult. Klein writes that civil rights were won in apartheid South Africa but economic parity is yet to be achieved and poverty has become more deeply entrenched. The abolition of slavery, the ultimate failure of colonialism and the movement for Third World independence have each resulted in some economic progress. It is Klein's belief that the abolishment of slavery had a deep, long-term impact on the economy in the Deep South. Haiti's independence resulted in a failed state with an impoverished population. The South's reliance on slavery can be compared to the current economy's reliance on fossil-fuel.

According to Klein, the massive global response that is needed to address climate change requires huge investments. Serious money on the table would provide an opportunity to correct areas of the society that have been abandoned or ignored. Klein notes that the world has seen victories in civil rights and social justice but economic fairness lags far behind fostering discrimination and deep pockets of poverty. Environmentalism can encompass and embrace the economy as well as those areas of inequality left behind. According to Klein, extraordinary social movement is essential to achieve economic balance. Real economic change will come as it did during the Great Depression, a time when everyone felt the burn and everyone became an activist.

Klein believes that the public doesn't trust that their elected representatives will address the changes that are needed in the economy and in the fossil-fuel industry because most of them had been supported by Big Oil campaign funding. For its part the general public can't see itself sacrificing its way of life. Therefore, according to Klein, it is crucial that the world see the environmental crisis as part of a much larger fight and understand that a new worldview - one that involves many segments of society - is vital. Klein believes that transforming worldview is accomplished through wide-ranging social transformation and by changing one mind at a time.

Just as Adam Smith appealed to people's concern about economics when he wrote about slavery in *The Wealth of Nations*, Klein believes that an appeal can be made to the people to address climate change because it makes good economic sense. But to win the ultimate battle in achieving a healthy climate, an argument on the basis of morality is more impactful. Klein notes that no cost can be affixed to millions dying of thirst or the right of future generations to benefit and thrive in a pristine environment. That argument has not yet been made effectively although Blockadia and other green groups are finding their voices.

Klein cites movements like Occupy Wall Street and student protests in Chile and Quebec as signs that the timing could be right for real change. Society may decide that it has had enough and understand that the economy must be rebuilt to keep the Earth and the people safe – no one can settle for anything less.



Analysis

There are dire warnings from climate scientists of taking no action to reverse the effects of global warming. The activist movement has picked up steam and has new and diverse members – Indigenous people, ranchers, activists, the average Joe. Progress is being made by Blockadia and other more aggressive environmental groups. The divestment/reinvestment campaign is building steam.

One of the major advancements in the last decade is the education of the general public. Most people are not buying the right-wing ideology that climate change is a hoax or that the UN is trying to take over the world. Another reason the average person is paying more attention to climate change and its dangers is because the fossil-fuel industry is running out of options and inching their operations closer and closer to larger populations that not that long ago were untouched by drilling and fracking.

Klein summarizes her five-year journey in writing the book. She had seen crying activists, non-believers smirking at the idea of extinction and mad scientists seriously discussing turning down the sun. There have been disappointments including environmental groups that partner with fossil-fuel companies and court findings that favor Goliath instead of David.

Klein compares the climate movement to other movements like civil rights, equity for the LGBT community and feminist causes. She points out that the climate change cause is unique from the others because it is an intrinsic part of the economy. The effective climate action and capitalism are not compatible. Klein makes the point that there is only one earth; there are many economic systems. The push for real change has to come from the people.

Vocabulary

submersible, bifurcations, dynamics, geophysics, dystopia, manifestations, nascent, coup d'état, apartheid, colloquially, paradoxically



Important People

Naomi Klein

Naomi Klein is the author of *This Changes Everything*. She not only wrote the story but she is part of the story. She attended many of the seminars and meetings about climate change. She experienced the mind-set of right-wing think tanks and their t to any laws or regulation that addressed climate change. She learned that many of these individuals, mainly men who were in some way connected to the fossil fuel industry, didn't even believe that climate change was taking place. As an advocate of climate change action, Klein was able to see first-hand what climate change advocates were up against.

Klein is an award-winning journalist and the author of an international number one blockbuster entitled *The Shock Doctrine: The Rise of Disaster Capitalism*. She has written a number of other non-fiction books that focus on current events and important issues facing Planet Earth. Writing about climate change, therefore, was a natural for Klein.

Klein writes that she took five years in researching and writing *This Changes Everything*. During that time she was going through her own personal struggle to become pregnant with her first child. She had some rough going along the way – a miscarriage, an ectopic pregnancy and months of disappointment – but she persevered. She compared her struggle to procreate with that of Mother Earth who she saw as struggling to give new life to her damaged air, land and sea.

Jimmy Carter

Jimmy Carter addressed the American people in July 1979 about the conservation of energy. Klein writes that it came across as a lecture but initially was well-received. Carter said that Americans “tend to worship self-indulgence and consumption.” He went on to say that success was no longer defined by action but by what one owns which he believed was a loss of values. Klein points out that he asked Americans not to take unnecessary trips, to carpool, use public transportation and obey speed limits. And in the home, he suggested that thermostats be turned down. He ended his statement telling his fellow Americans that conserving energy wasn't just logical it was patriotic.

Klein wrote that, after people had time to digest his words, the speech was criticized and referred to as the “malaise” speech. Carter's loss to President Reagan in the next election was attributed in part to the speech. Carter had not been speaking directly in terms of climate change; his focus was on conserving energy which was experiencing a scarcity at the time.

It is Klein's opinion that conservatives roundly oppose talk of Americans sacrificing their lifestyles for the sake of an environmental crisis that they don't really have buy-in for.



Politicians feel that evoking the Carter message is a suicide mission. Klein writes that if a politician wants to lose an election like Carter did, he needs to ask his constituents to change their lifestyle to save the earth.

Paolo Maccario

Klein tells of a case in Ontario, Canada, directly pitted free trade against responses to climate change. Paolo Maccario was an Italian businessman who moved to Toronto, as owner and operator of a solar factory. Very quickly the company lost its customers to Chinese companies that produced lower-grade panels at less cost. Klein writes that Maccario's parent company, Silfab, dropped plans to invest in advanced machinery for him because of the loss of his customer base. New customers were hard to come by because they didn't think he'd stay in business.

Klein writes that around the same time he launched his business Ontario announced its Green Energy and Green Economy Act that focused on the banning of coal as an energy source and encouraged reliance on renewable energy sources. According to Klein, one caveat of the green acts was that solar energy providers had to source at least 40-60% of their content from within Ontario. The Canadian dollar had gained value making it expensive to produce anything. By 2012, Ontario was the largest solar producer in Canada. As time went on, Japan and the European Union accused Ontario of violating World Trade Organization rules by discriminating against equipment made outside Ontario.

The WTO agreed that Ontario had established illegal protectionist policies. Support was pulled for Maccario's factory and he was left with a failed venture. It was an outrage. Klein points out that Ontario was instituting policies in compliance with the Kyoto Protocol which Canada signed onto in 1997 but they butted heads with trade agreements which apparently had more clout.

Sarah Palin

The former governor of Alaska Sarah Palin a known critic of environmentalism and famous for saying, "Drill, baby, drill!" is credited with the following statement, "I love that smell of the emissions."

Nastaran Mohit

Klein writes about a group of youths led by Nastaran Mohit who called themselves "Occupy Sandy" and provided assistance to middle class neighborhoods in the Rockaways in New Jersey which had been severely impacted by Super Storm Sandy. Mohit and her team saw an urgent need to help the average people of the area while the National Guard was busy helping out the wealthier residents hit by the storm. In addition to handing out clothes and blankets, Klein adds, they helped people shovel out the muck and mud from their flooded basements. They also organized a team of



doctors and nurses to tend to the people's medical needs in a storefront emergency center arranged by Mohit. Klein reports that the clinic had been sorely needed and treated hundreds of people just in the first few weeks following the storm.

Chris Horner

Klein describes Chris Horner as a senior fellow at the Competitive Enterprise Institute and one of the rock stars of the anti-environmentalism crowd. He believes that it's not reasonable to believe in global warming and files frequent Freedom of Information Act (FOIA) "fishing expeditions." Klein writes that he is one of many right-wing conservatives who believe that climate change is a fraud and a plot to steal American freedom.

Patrick Michaels

Klein writes that Patrick Michaels of the conservative think tank The Cato Institute was asked if rich countries had any responsibility to help poor countries pay for warmer climate adaptations. Michaels responded that there was no reason to give money to a nation that couldn't adapt on its own. Klein writes that the solution was to elevate free trade with the nations.

Barack Obama

Klein writes that when the world economy was on the verge of total collapse, President Barack Obama had just been elected and was in the first days of his presidency. The three huge economic drivers – the banks, the auto industry and the stimulus money – were all in the hands of Obama. It is Klein's opinion that the money could have been used for the construction of public transit systems and smart grids. The auto industry could have been reengineered and its factories rebuilt to limit emissions. Klein writes that banks that were dependent on bailout money could have been convinced to help fund the retrofitting of factories. It is Klein's opinion that although Obama is a Democrat he bought in to the long-held conservative belief that the government should not interfere with the operations of private business.

Bill Gates

Klein writes that activists disagree with philanthropists like Bill Gates, founder of Microsoft, that the developing world is in need of a "New Green Revolution." The reference is to claims made that the mid-century efforts to introduce industrial agriculture in Latin America and Asia saved the world from starvation. Klein points out that there was plenty of food but people still starved because there was no plan for the affordability, distribution and control of the food. Klein notes that activists have also found fault with Gates' conclusion that there is a future IT-fix at hand for the climate change crisis but fails to consider solutions for now.



Sir Francis Bacon

Klein writes that Sir Francis Bacon is the patron saint of today's extractive economy. Bacon was an English philosopher, scientist and statesman. He was a persuasive individual who convinced the elite in Britain that the earth was made for man to exploit. It was his philosophy that any notion that the earth was a live-giving entity was fantasy. Klein notes that according to Bacon the Earth should not be revered and respected. Man was earth's dungeon master. Modern conservative dogma falls in line with Bacon's beliefs about man's exploitation of the earth. They believe, like Bacon did, that man was superior over earth and that resources were limitless.

Klein notes that Bacon alluded to the earth being able to replenish its resources in his 1623 *De Augmentis Scientiarum* in which he wrote, "... you will be able, when you like, to lead and drive her afterwards to the same place again." To Bacon the earth was at man's mercy and that man needn't have any mercy. Klein writes that his concept of a controllable earth sparked the Scientific Revolution and ultimately the colonization of the New World. Ships were dispatched to new lands that were prodded and poked for resources and riches and then returned to their countries with the wealth they stole from faraway lands.

Klein writes that much to his detriment, Bacon, a scientist, tested another hypothesis that he had theorized. Ironically, he was correct in believing that frozen chicken wouldn't rot but his experiment was also his end. However, to prove it he trudged around in cold weather stuffing a chicken full of snow. He fell ill and died of pneumonia.

Red Cloud

Klein writes that Red Cloud is a Lakota who had won awards for his work with solar energy. People in the Northern Cheyenne reservation in Otter Creek, Montana, were suffering from cold winters and reservation homes that were rickety and drafty. The people had electric bills of \$400 in the winter which they could ill afford. According to Klein Red Cloud agreed to teach the Northern Cheyenne how to install solar heating in their homes to reduce their expenses. The program was a great success.



Objects/Places

Heartland Institute Conference

Klein attended the Heartland Institute's Sixth International Conference on Climate Change in June 2011. Heartland a right-wing think tank that opposes taking climate action; many members, in fact, are non-believers and think that the entire climate control matter is a hoax. One speaker offered the possibility that the movement was a Trojan horse to sabotage democracy with the establishment of Marxist socioeconomic doctrine.

The Yale Cultural Cognition Project

Klein writes that the Yale Cultural Cognition Project found that one's political leanings had a large impact on whether he believed in climate change or not. An individual's political leanings are a bigger indicator of their belief in climate change than age, ethnicity or education level. A much larger percentage of climate change deniers are conservative Republicans. Deniers do not like to believe that their actions may be harming the environment which gives them more fodder for not believing that climate change exists.

The Risky Business Project

The Risky Business Project was a project launched in June 2014 by former New York City Mayor and billionaire Michael Bloomberg and former U.S. treasury secretary Henry Paulson and hedge fund founder and environmental philanthropist Tom Steyer. It warned that climate change would ultimately cost the U.S. billions of dollars a year because of the rising sea levels alone. Klein writes that the men urged the corporate world to take their warnings seriously – it was “risky business” not to.

Americans for Prosperity

According to Klein, Americans for Prosperity, an organization affiliated with oil baron brothers David and Charles Koch, were against a federal aid package after Super Storm Sandy devastated much of the cost of New Jersey and New York reasoning that people should be responsible for helping themselves. The fact that many energy companies operate on a tax-free basis and are subsidized by taxpayer money apparently is not included in being dependent on the government.



World Conference on the Changing Atmosphere

The World Conference on the Changing Atmosphere was the first major international meeting with a goal of setting standards for emissions reductions. It was held in Toronto in 1988 and was attended by 300 scientists and government representatives from 46 countries. Had the world community followed the standards set at the meeting, Klein reports, emissions levels would not be at a crisis level today. However, the nations failed to take action after the meeting.

China

Klein writes that China is having a huge public debate about the state of its polluted air caused by heavy reliance on coal. Everyone has seen Chinese people wearing surgical masks as they walk around in the smoky climate. In the past the people have been intimidated about speaking out but China's elites are voicing their concerns about industrialization and the toxic air it causes. According to Klein, safety standards are set by the World Health Organization at 25 micrograms of fine particles of dangerous air pollutants at 25 micrograms or less per cubic meter. In Beijing that level hit 671. In response, China has cut its goal for growth and launched alternate energy programs. If the use of coal drops substantially, it will impact the coal industry in the U.S. and other nations.

ICCC and IPCC

Klein writes that right-wing climate change deniers often mimic credit scientific conferences by naming them names that are misleading like "Restoring the Scientific Method" and the International Conference on Climate Change or ICCC. The ICCC is just one letter off from the IPCC which is the United Nations' Intergovernmental Panel on Climate Change (IPCC). The intention of the deniers, Klein explains, is to muddy the conversation and confuse the general public about a subject that is already confusing and complex.

Harassment and Threats

According to Klein, climate change activists have been the target of the vitriol of conservatives that deny that climate change is taking place. Some climate scientists have reported that they have been the victim of harassment that was once reserved for physicians who performed abortions. In San Francisco, local Tea Party activists who are climate change deniers have disrupted community meetings when climate issues are on the agenda. The Tea Party has accused climate activists are UN-sponsored as part of a plot to create a world government.



Global Equity

It is Klein's opinion that global equity is part of the climate change debate. Proponents of global equity make the argument that global warming is caused by greenhouse gases that have accumulated over roughly two centuries. As such, those nations who were early polluters have contributed the majority of the emissions. Klein reports that many developing nations that have contributed the fewest emissions are being hit with the impact of the pollution simply because of geographics. To persuade fast-growing nations like India and China to reduce emissions, early polluters like the U.S. and Europe should take a larger share of the burden in terms of resources and technology. According to Klein, conservatives are adamantly against this process referring to it as a redistribution of wealth which they consider to be socialistic not capitalistic.

Fracking

Klein reports that fracking is one of the biggest targets of environmentalists. Hydraulic fracking is the process in which highly pressurized water is injected into the ground during drilling in order to fracture shale rock and force the release of natural gas. According to Klein, it is considered more dangerous and much dirtier than conventional oil and gas extractive activities. Methane leaks are common during fracking. Klein adds that methane warms at a temperature that is six times greater than carbon dioxide.

Klein writes that for years the U.S. gas industry has claimed that there is no connection between fracking and tap water that nearby residents could literally set on fire. The fracking industry was inexplicably excluded from federal monitoring and regulation. It was called the Halliburton Loophole that was established under the George W. Bush administration. According to Klein, since then there has been a wealth of evidence that fracking puts drinking water at risk. The methane in water near fracking sites was found to be six times denser than that found in normal water sources. Klein writes that earthquakes have also been tied to fracking operations. While fracking extraction shows little visible damage, the process is much more disruptive to the ecosystem than the drilling and extraction of crude oil.

Blockadia

Klein describes Blockadia as a new climate change activist organization that mobilizes around the globe wherever they are needed. They work with Indigenous people and locals to strengthen grass roots movements. Blockadia is fearless and aggressive in blocking the progress of mines or drilling and do not deal with governments or industries to negotiate agreements.



Themes

Climate Change Activism

Klein reports that climate change activists are working around the globe to reduce emissions and offer alternative solutions to the world's dependency on energy provided by the fossil-fuel industry. The U.S., one of the main centers of the movement, must cut its emissions this decade in order to bring China and India and other developing nations into the fold by the next decade. Klein believes that addressing climatic problems will help advance other causes including most importantly the global economy. The time is right for change and greater understanding of the impact of climate change. According to Klein, the right-wing ideology that is diametrically opposed to climate change activism has less impact now than it did in the 80s and 90s. People are seeing evidence of the destruction caused by global warming themselves and are on to the big oil companies that keep billionaires making more and more money. The current economic model is failing the vast majority of people on earth.

Klein points out that activists know that barring new extraction operations and shutting down current ones will not address the existing emissions and those that will be added to them from on-going operations. There is current discussion about establishing international laws that include a ban on fracking in Europe. According to Klein, there are also active movements to establish an international ban on offshore drilling, enact a global moratorium on tar sands extraction and prohibit the removal of mountaintops by coal companies in Appalachia.

Klein writes that large agricultural concerns that produce high yields are a major source of greenhouse gas emissions while small organic farms contribute fewer chemical inputs although they produce lower yields. The option that falls between the two is the process of agroecology which is small-scale farming based on science and local know-how. Klein points out that evidence indicates agroecological methods are superior to the use of chemical fertilizers in the increase of food production. A process in which locals have ownership of food production ensures that more food is produced and distributed to everyone.

Klein writes that some environmentalists have been too zealous in their fight to turn climate change around and reduce toxic emissions. While arguably nothing could be more important than saving the earth, there are many who do not believe in climate change. According to Klein, savvy environmental groups have learned to be more tactful and soften their approach to the uninformed and the non-believers with whom they must deal. They have come to understand that they can turn people off when they act as though their cause is the most important or even the only cause. Klein writes that poverty, starvation, women's rights and other causes are, to many, just as important. There is an element of urgency for climate action but those who do not believe that it is a crisis aren't moved by warnings that the earth itself is at stake.



Klein writes that the development of renewable energy from solar and wind is one of the main goals of climate change activists. The American Gas Association claims that natural gas was not a bridge to renewable but a solution itself, a response to the greenhouse effect. According to Klein, many high-profile green organizations agreed that there was a place for clean gas in the plans to fight climate change. Renewable technology is efficient and affordable while most natural gas extractions are accomplished through fracking. It is Klein's opinion that natural gas undermines the potential of renewables. Fracked gas is not necessary for the transition to renewables; new infrastructure is not necessary for the changeover. It is Klein's reporting that billions of dollars are being spent to design an infrastructure that will support fracking for decades to come which demonstrates that the fossil-fuel industry has no intention of slowing down their operations.

Klein notes that the amount of oil extracted in the U.S. in just five years increased the number of rail cars necessary to haul it by a shocking 4,111%! With this volume of oil being extracted, loaded and transported around the country it is obvious that oil is touching most everyone to some degree. According to Klein, the production of tar sands oil will soon outpace the capacity of the current pipelines that's why the fossil-fuel industry is pushing construction of the Keystone XL and Northern Gateway pipelines.

Klein writes that private energy companies are turning to dirtier practices like the production of lignite coal and the extraction of tar sand deposits. Increased offshore drilling into deeper and icier waters runs the risk of spills that cannot be cleaned up. She notes that the practice of blasting bedrock for oil and gas seems almost desperate; it pollutes water with toxins and endangers mountains and forests.

Resource Depletion

According to Klein, environmentalists warn that in addition to polluting the air, over-extractive processes cause the depletion of resources, destruction of the ecosystem of the over-taxed land and even the decline in the health and welfare of the indigenous people. The South Pacific island of Nauru is a perfect example of such abuse by man's unending pursuit of profit. Klein points out that Nauru was a tropical paradise for centuries until phosphate of lime, an agricultural fertilizer, was discovered on it and a German-British firm began mining operations. The people enjoyed an upscale lifestyle from the profits made from the phosphate. Klein writes that by the 1960s, the island's interior was ravaged from the phosphate extraction operations. Life was only sustainable on the coasts – the interior was inhabitable. The mining companies had one goal – keep mining until the island was an empty shell. Klein writes that they knew life would be unsustainable after the island was mined to death. The people would have to be moved to Australia or elsewhere.

In 1968, the Nauruans took back control of their island hoping to salvage their home - but it was too late. Klein points out that while phosphate continued to be mined, the island government became ineffective and corrupt. The people had lived the good life for years, lazing about and overeating. Ultimately, they suffered from diabetes and



obesity and a lowered life expectancy. Klein adds that in the 1990s the island turned to scams, money-laundering and phantom banks to support its population but wound up in bankruptcy. The island became a dumping ground for Australian refugees. Camp conditions were horrific – hot, crowded and rat-infested. According to Klein, the UN questioned the island nation's compatibility with international human rights because of these camps. A book, the *Undesirables*, was written about the plight of the refugees.

To make matters worse, Klein points out, the island faced climate crisis due to drought, ocean acidification and rising waters. Nauru's destruction was due to the over-mining of the phosphate but also because of the lack of concern about tomorrow by foreign interests. Klein adds that while using up the island's natural resources they destroying the trees and lands and put the population at risk. It is a microcosm of what is happening around the world today.

According to Klein, resource depletion is not limited to remote South Pacific islands. There have been toxic waste and dangerous spills that have wreaked havoc with ecosystems everywhere. The vast majority of oil activities have taken place in poor areas among poor people allowing the rest of the world put its head in the sand. However, Klein writes, of late due to the depletion of resources and the need to go beyond the normal "sacrifice zone" the activities of oil companies are edging their way into more prosperous communities and have dug wells on church and school properties and on university campuses.

Changing Sides

Klein reports that in 1965, The Natural Conservancy bought land in Texas to save the Attwater's prairie chicken from extinction. Its potential demise began when their natural habitat was taken over by oil and gas developers. Mobil Oil donated its Galveston Bay property to the conservancy. Paradoxically in 1999, Klein notes, the conservancy hired oil and gas operators to extract the fossil fuels from the land. Drilling was planned near the nesting areas of the endangered birds.

In 2002 the Los Angeles Times exposed the venture. That year, captive birds were released and killed by predators because their scheduled release had been delayed due to extraction activities. Klein writes that eventually all the Attwater's prairie chickens disappeared. The New York Times wrote that the conservancy had ironically destroyed an endangered species in its natural habitat while the oil extraction activities continued.

It is Klein's opinion that this case underscores the reality that some private environmental agencies have relationships with those entities they are fighting against. Some have invested their funds in energy companies. Klein notes that many foundations have their roots in old money like the Rockefeller family which is directly connected to the fossil fuel industry. There is evidence that the policies of the some environmental groups have been influenced by energy companies and have made the issue so convoluted that it's become unnecessarily muddled. To Klein most ironic of all



is the November 2013 UN climate summit that was held in Warsaw, Poland, and sponsored by a number of fossil fuel companies.

According to Klein, the Environmental Defense Fund claimed that it did not take donations from companies they had formed partnerships with. However, it seemed they had an end-around plan. While their partner Wal-Mart didn't donate to the EDF, the Walton Family Foundation gave \$65 million to the EDF over a four-year period. Klein points out that EDF claims Wal-Mart was given no special treatment although it had a very poor environmental record. Wal-Mart is one of the biggest donors to environmental organizations and seems to have input into the environmental agenda.

Klein discovered that some green organizations found it profitable and politically convenient to align with fossil-fuel companies. Big Green companies that partnered with fossil-fuel companies do not welcome what they consider an intrusion and do not support calls for banning drilling. Environmentalists are receiving donations from corporations that have strong connections to fossil fuel and fracking companies. Klein reports that the EDF partnered with Shell and Chevron to conduct a study on methane with a goal of proving that natural gas should be part of the solutions. The study was rigged and the headlines about it were misleading. However, some Big Green companies like Greenpeace and Friends of the Earth have been unwavering in their support of climate action.

Keystone Pipeline

Klein writes that the controversy of the Keystone Pipeline is a recent high-profile example of the politics of climate change. TransCanada was the Canadian company that was behind the construction of the Keystone XL Pipeline. TransCanada was certain that the Keystone XL pipeline would become a reality. Its trajectory would cut through the heartland of the U.S. south from Alberta to the Gulf of Mexico. Klein notes that people in all walks of life were adamantly opposed to the pipeline because of the toxic nature of the tar sands.

Klein reports that the Canadian tar sands had been a habitable region filled with life but was engineered into lifelessness in order to access oil known as bitumen. Its extraction produces three to four times as much greenhouse gas as the extraction of conventional oil. Bitumen is the oil that the proponents of the Keystone Pipeline want to send across the United States to the Gulf of Mexico. More than 1,200 people showed up in Washington, D.C. to protest the pipeline. Many of the Indigenous people of the region in both Canada and the U.S. were leaders in the fight against the pipeline's construction.

Klein points out that should there be a breach in the pipeline as the bitumen travel across the U.S., extremely toxic elements would be unleashed into the atmosphere and land along the pipeline. There was great debate over the pipeline but in the end it would be a "yes" or "no" from President Obama that would decide the fate of the pipeline. According to Klein, it took three years of studies and deliberation on Obama's part to make a decision. He had a hard time saying no to the fossil fuel industry and he was

being pressured by Republicans to approve it. Obama announced in November 2015 that he rejected the proposal. But the issue isn't going away. According to Klein, the Canadian company and the conservative politicians in both the U.S. and Canada are hoping that a Republican will be elected as U.S. president in 2016 and approve the pipeline. There will be voracious opposition to the construction; the final outcome is not predictable.

Styles

Structure

This *Changes Everything* is separated into three main parts. Part One: *Bad Timing* describes the fundamentals of the debate between climate change activists and deniers who believe either that climate change is not taking place at all or if it is, it is a cyclic, natural occurrence and is not due to human activity. Author Naomi Klein begins with her account of attending the Heartlands Institute Conference which is a gathering of right-wing think tank opinion makers who are climate change deniers. She provides their arguments which are driven largely by ideology and their belief that capitalism is the only economic model that can be successful and that market fundamentalism will solve all problems.

Part Two: *Magical Thinking* goes into great detail about the damage that the fossil-fuel industry has done to Planet Earth and its atmosphere. Klein includes the dire warning of climate scientists, 97% of whom state that climate change is occurring and that humans have a role in the crisis. The ways that ideology can be overcome to allow a new economy to emerge are explored. An exhaustive review of possible solutions is explored which includes actually dimming down the sun. Klein stresses that billionaire entrepreneurs are not the answer. The solutions have to be bottom-up and grassroots driven.

In Part Three: *Starting Anyway* discusses encouraging foundations and universities to divest of any funds invested in the fossil-fuel industry and to reinvest them in renewable solutions. Lawsuits filed by Indigenous people are having success in the judicial system in protecting the lands that they have ownership in based on treaties signed long before. Money to fund research for renewable solutions should come from the fossil-fuel industry which has contributed the majority of the accumulated greenhouse gases. While ideology deflated the activism that began in the 60s and 70s, recently a new movement has emerged led by green organizations like Blockadia and by the Indigenous people who see their once pristine land being decimated and destroyed.

Perspective

This *Changes Everything* is a non-fiction book that is narrated in the first person by author Klein. Klein, who is a journalist, has more interest in the subject matter – climate change and its ramifications – than merely writing about it. She has been part of the movement and has observed much of which she writes about up close and has interviewed many principles in the fight to save the earth. Klein is dedicated to the fight to address climate change and its myriad causes and complexities. In her comprehensive work, which, at its roots, is a study of environmentalism versus capitalism, Klein has ventured into every corner of the subject.



While she is a reporter who is devoted to providing the facts of a topic and has provided every side and argument, she has made conclusions based on research and study that align with the cause of climate change activism. Klein brings to the story her personal struggle to conceive her first child. During the five years that it took to write *This Changes Everything*, she was also trying to get pregnant. She went through testing, treatment, disappointments and tragedy before giving birth to a healthy son. While she was carrying her son she compared her struggle to reproduce with Mother Earth's fight to procreate in the face of the damage she has sustained from man's abuse and greed.

While this comprehensive book is a history of man's abuse of the earth and the emergence of possible solutions that will save her for future generations, the book has a personal touch from the author who as a mother is empathetic with the duress and fight that Mother Earth is enduring to save her life, reproduce and sustain the planet's splendor.

Tone

As a journalist, Klein presents a balanced account of the history of climate change and the debate that has been on-going for decades. She sticks with science and facts and provides the dialog of both sides of the debate.

Although she largely sides with the environmentalists who promote climate action, Klein presents an even tone and an obviously comprehensive reporting of all facets of the complex and controversial topic. There are statements made by conservatives who oppose climate action. It is a common belief among some conservatives that climate change is a hoax and a plot to overthrow democracy and replace it with Marxist socialism. It is a direct quote, not a characterization by the author.

Some emotionalism is interjected into the work. Klein writes that she was trying to get pregnant for the first time during the five years she was working on the book. She went through some personal angst and tragedy along the way but finally had a healthy baby boy. She makes a comparison between having her son and the climate crisis. She empathized with Mother Earth who was fighting her adversaries to procreate and sustain life on earth with her own struggle to have a child.

Quotes

Climate scientists agree: climate change is happening here and now. Based on well-established evidence, about 97 percent of climate scientists have concluded that human-caused climate change is happening.”

-- American Association for the Advancement of Science (chapter 1 paragraph 1)

Importance: This statement in a report by the American Association for the Advancement of Science issued in 2014 which refutes those who say that there is no consensus about climate change among scientists.

Climate change is the perfect thing... It's the reason why we should do everything [the left] wanted to do anyway.”

-- Joseph Bast (chapter 1 paragraph 38)

Importance: This captures the “conspiracy theory” that left-leaning advocates of environmentalism don't really believe in climate change they are just using it to install liberal policies and practices.

Should you let a group of foolish lawyers, who put together something before they understood these issues, interfere with saving the planet?”

-- Joseph Stiglitz (chapter 2 paragraph 32)

Importance: Nobel Prize winning economist Joseph Stiglitz made the point that corporate lawyers who focus only on their clients' goal to make money should not be the arbiters in decisions that involve saving the planet.

Historically, the private sector has played little role in investing in renewable energy generation. Governments have been responsible for nearly all such investments.”

-- University of Greenwich (chapter 3 paragraph 17)

Importance: A report from the University of Greenwich makes the point that adequate emissions reductions cannot be left to the private sector which is most concerned about its bottom line. The trend away of the privatization energy systems to the public sector will result in more success.

Every time a new record-breaking natural disaster fills our screens with human horror, we have more reminders of how climate change demands that we invest in the publicly owned bones of our societies, made brittle by decades of neglect.”

-- Naomi Klein (chapter 3 paragraph 24)

Importance: This quote captures the environmentalists' belief that the private gas and electric companies should be reclaimed from the public sector so that the people have a voice in the operation of the energy system.



Obama had just been elected on a platform promising to rebuild the 'Main Street' economy and to treat climate change as, in his words, 'an opportunity, because if we create a new energy economy, we can create five million new jobs.... It can be an engine that drives us in the future the same way the computer was the engine for economic growth over the last couple of decades.'"

-- Author/President Barack Obama (chapter 4 paragraph 3)

Importance: The author characterizes 2009 as a time when climate action could have happened. It was right after the election of President Obama, a progressive Democrat who understood the threat of climate change, when the world was in the midst of the economic collapse.

We are trapped, a wasteland at our back, and to our front a terrifying, rising flood of biblical proportions."

-- Kinza Clodumar (chapter 5 paragraph 14)

Importance: Kinza Clodumar was the president of the South Pacific island of Nauru. The island nation had thrived for centuries but was decimated after Western companies discovered phosphate and began mining it. The island was so ravished by these extractions that the island's ecology collapsed and became uninhabitable.

If the new coal plants are coming online under a cap that is bringing total emissions down, then it is not the worst thing in the world. Coal isn't the enemy. Carbon emissions are."

-- Fred Krupp (chapter 6 paragraph 1)

Importance: Fred Krupp was President of the Environmental Defense Fund. This statement is one example how the mindset of environmentalists were being changed by money from the fossil-fuel industry. Krupp was bending to the demands of the fossil-fuel industry and adapting its ideology. Carbon emissions come from coal – if coal wasn't mined there wouldn't be carbon emissions from them. His argument was bereft of logic.

There are various possible sun-dimming approaches. The most gleefully sci-fi is space mirrors, which is quickly dismissed out of hand. Another is 'cloud brightening': spraying seawater into the sky to create more cloud cover or to make clouds more reflective and longer lasting. The most frequently discussed option involves spraying sulfate aerosols into the stratosphere."

-- Naomi Klein (chapter 8 paragraph 7)

Importance: Klein attended a meeting in London at the Royal Society where scientists discussed ways to dim the sunlight so that greenhouse gases would become unimportant. Blocking the sun would reduce the earth's temperature and emissions could continue to accumulate allegedly doing no harm.

We know you never sold your land. But how are you going to make the Canadian government keep its word? You and what army?"

-- Standard & Poors (chapter 11 paragraph 9)



Importance: When Indigenous tribe members tried to get Standard & Poors to reduce Canada's credit rating because of the misuse of the land that they owned by treaty, S&P agents agreed with their claim but they were practical about what results the tribe members could expect due to the David and Goliath fight they would have before them.

The Northern Cheyenne have been fighting off the mining companies since the early 1970s, in part due to an important Sweet Medicine prophecy that is often interpreted to mean that digging up the 'black rock' would bring on a kind of madness and end of the Cheyenne culture."

-- Naomi Klein (chapter 12 paragraph 2)

Importance: The fossil-fuel industry and governments often ignore the cultural concerns that Indigenous people have about their land and their heritage. The only focus that the industry had was on profits.

I realized I had become so convinced that we were headed toward a grim ecological collapse that I was losing my capacity to enjoy my time in nature. The more beautiful and striking the experience, the more I found myself grieving its inevitable loss – like someone unable to fall fully in love because she can't stop imagining the inevitable heartbreak."

-- Naomi Klein (chapter 13 paragraph 2)

Importance: This quote captures the author's expression of hopelessness. After her exhaustive and comprehensive research into climate change, author Klein had learned so much about the barriers to real change that the odds of the success for climate action seemed out of reach.



Topics for Discussion

1

What are hierarchical views and what are individualistic views as they relate to climate change?

2

What has been the role of right-wing think tanks in the climate change debate, as outlined by Klein? How do they see the concept of climate change as a threat?

3

What are the contravening opinions on the role of government after a community suffers from devastation after a natural disaster? What is “green fascism?”

4

What are the three policies of the neoliberal age that prohibit adequate responses to climate change concerns?

5

What is “re-municipalization?” Provide an example of the process and describe its benefits.

6

What are the six steps that could be taken to reduce emissions and raise over \$2 trillion annually? What does the author suggest these funds could be used for?

7

What are the pros and cons of large agricultural concerns and of small organic farms? What is agroecology?

8

What is fracking? Why are its emissions higher than those of conventional gas?



9

What led to the collapse of the South Pacific Island of Nauru? How did the people try to save their island nation? What role did climate change play in their destruction?

10

What is Solar Radiation Management (SRM)? What are other solutions for the problem that SRM addresses? Why did scientists feel that it was vital that such a process be developed?