



Spring 5-8-2015

From The Web Into The World: An Analysis of Millennial Environmentalism

Cherokee McAnelly

Fordham University, cmcanelly@fordham.edu

Follow this and additional works at: http://fordham.bepress.com/environ_2015

 Part of the [Environmental Studies Commons](#)

Recommended Citation

McAnelly, Cherokee, "From The Web Into The World: An Analysis of Millennial Environmentalism" (2015). *Student Theses 2015-Present*. Paper 3.

This is brought to you for free and open access by the Environmental Studies at DigitalResearch@Fordham. It has been accepted for inclusion in Student Theses 2015-Present by an authorized administrator of DigitalResearch@Fordham. For more information, please contact jwatson9@fordham.edu.

From The Web Into The World: An Analysis of Millennial Environmentalism

By Cherokee McAnelly



Source: <https://grist.files.wordpress.com/2014/09/peoples-climate-march1.jpg?w=1536&h=864&crop=1>

Abstract

Environmentalism and sustainable lifestyles have steadily increased in popularity in recent years in the United States, especially among the 18-33 year old age group “Millennials,” also known as Generation Y. Vegetarianism and veganism, involvement in environmental advocacy groups, and the popularity of green products are at record highs. However, research shows that the prevalence of young people living and promoting a sustainable lifestyle online rarely translates into tangible action, a phenomenon known as ‘slacktivism,’ and Generation Y also shows reluctance to identify as environmentalists or activists due to a perceived stigma associated with the term. Through the use of environmental economics, social psychology, politics, and communications and media, this thesis examines the motivations behind millennial pop-culture environmentalism and recommends ways to solve the apparent action rut.

Table of Contents

Introduction.....	1
Chapter 1. Environmentalism By The Numbers.....	4
Chapter 2. Monetizing Environmentalism: The Economics Behind Going Green	11
2.1 The Economics of Climate Change	11
2.2 Economic Development And The Environmental Kuznets Curve	16
2.3 The Price Of Sustainability.....	19
Chapter 3. Politicizing the Planet: The Potential of Environmental Regulation.....	21
3.1 Environmental Laws & Regulations in the United States.....	21
3.2 Case Study: Swedish Environmental Regulation.....	24
Chapter 4. Hipsters & Bloggers & Vegans, Oh My: The Mind Behind What Matters.....	27
4.1 The Social Aspect of Environmentalism	27
4.2 Stigma, Attention Spans, and Trending Activism.....	30
4.3 Climate Change Psychology	33
Chapter 5. Reblogging the Earth: The Internet’s Effect on Environmental Action	37
5.1 Slacktivism & Social Media	37
5.2 Environmentalism As A Trend.....	40
Chapter 6. From Posting To Practice: Solutions For The Action Rut.....	43
References	48

Introduction

The environmental movement is shaping up to be one of the biggest social justice issues of the century. The impact of climate change and pollution on not only the planet but also all of its inhabitants, the human race included, can no longer be ignored. Perceptions of the environmental movement appear far from black and white or pro and con – an enormous grey area exists full of critics of environmentalists as well as people who seem to only attempt to appear sustainable. The “green” trend has spurred an entire industry dedicated not only to aiding the environment but also cashing in on the trend. Climate change and the myriad of other environmental issues plaguing our planet are one of, if not the largest, issue of the 21st century. Environmental activism, especially in mass media and in social media, fuels countless posts and provides a multitude of clickbait articles¹ as millions of people, especially members of Generation Y² log in and weigh in about issues relating to climate change, energy security, extinction rates, sustainability, and countless other environment related issues. The online activism community seems to be thriving, and one would logically deduce that the prevalence of online or media related activism would also translate into tangible pro-environmental activism, actions, and practices. Unfortunately, this statement does not hold true. Actions speak much louder than words, and currently the millennial

¹ (On the Internet) content whose main purpose is to attract attention and encourage visitors to click on a link to a particular web page (Oxford)

² Those aged 18-33

generation's voices much outweigh their actions. Generation Y's voice is extremely powerful, especially when it comes to social issues such as LGBTQ rights, mental health awareness, even the movement towards the legalization or at least decriminalization of marijuana, and expresses these beliefs in a myriad of forums. As a result, there is a constant stream of public discourse about said issues since they remain in the eye of the public. For example, a restaurant in Indiana recently shut down as a result of the kickback they received after publicly announcing that they would not cater same sex weddings (Bowerman). Public opinion is extremely powerful – the legalization of same-sex marriage in many states, the increased understanding and acceptance of mental awareness, and the ongoing debates about abortion give testament to this fact.

If the environmental movement is to succeed, it needs to be approached with the same fervor as social justice issues. However, there are more inputs into the environmental issue than individual actions. Trends, sociology, economics, government regulation, and social and mass media play an integral role in the environmental activism climate in the United States for Millennials as well as for the rest of the population of the country. In order to understand the best way for the Millennial generation to use their enormous influence and population to enact environmental change, it is necessary to understand what is going on in the background. That is, how economics affect sustainable choices, how other countries combine economic success, happiness, and sustainability, how social norms and cues effect decision making, and the

effect of the Internet and social media revolution on activism and motivation. This thesis aims to express the urgency of environmental degradation not only on the planet but also on the economy and on people's livelihoods, understand the motivations behind both online and "real world" environmental action and activism, and explore the impact of politics and media on the environmental movement. Finally, this thesis recommends ways to not only ensure that everyone, especially the Millennial generation, understand the importance of sustainability regardless of political standing or economic stance but also policies and practices that may motivate positive environmental action.

Chapter 1 will analyze the data behind environmental attitudes and the actions in the United States compared to other more environmentally sustainable developed countries while Chapter 2 outlines the economics of environmentalism, from the price to climate change to the cost of green products and the correlation between economic climate and green consumer activity. Moving on to the social sciences aspect of Millennial environmentalism, Chapter 3 will examine the politics behind environmental action, explaining current environmental regulations in the United States and taking an in depth look into Sweden's approach to sustainable action and development. Since positive environmental action often begins with the individual, Chapter 4 will examine the social psychology of environmental movements and the role that trends have on the popularity of living sustainably. Chapter 5 will look into the role that social media and the Internet plays in activism and explore whether it helps or hinders the environmental

movement. Finally, Chapter 6 will propose possible solutions to the activism rut and ways in which to improve environmental sustainability in day-to-day life.

Chapter 1. Environmentalism By The Numbers

One of the most common criticisms of sustainable development and production is its cost compared to other development and production methods that may be more efficient and cheaper but come with the extreme downside of environmental harm. However, if this criticism held as much weight as people tend to think, the United States with the highest global GDP per capita (as of 2013) would have an incidence of environmental measures and activism that coincides with the substantial amount of resources and capital possessed by the United States. According to the World Energy Council's 2014 worldwide Energy Sustainability Index, which ranks countries in terms of their ability to provide sustainable energy policies through the 3 dimensions of the energy trilemma: energy security, energy equity, and environmental stability; though the United States received an A for energy security and energy equity, it only got a C in environmental stability, placing it the 12th country in the world based on the Energy Trilemma Index (World Energy Council 2014). In fact, the US is 83rd in environmental stability – a disappointing ranking based upon its 'A' grade in the other two dimensions of the trilemma. Furthermore, the GDPs of Switzerland, Sweden, and the United Kingdom are within the top 25 in the world and they also maintain "straight A's" on the Energy Sustainability Index.

Based on these rankings and statistics, it is easy to see that GDP and sustainability are in no way mutually exclusive. In fact, in the long run, sustainability actually benefits GDP as well as quality of life.

ENERGY TRILEMMA BALANCE

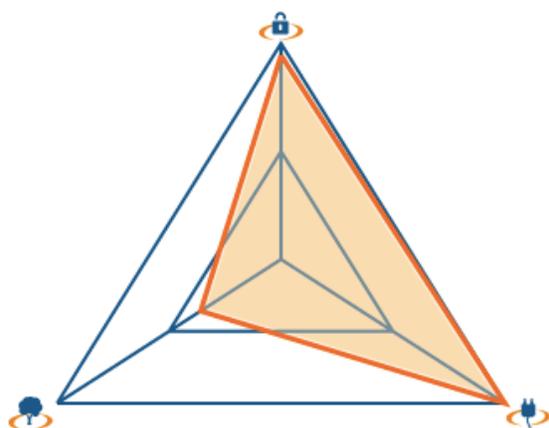


Figure 1: Energy Trilemma Balance

Data source: World Energy Council

ENERGY TRILEMMA INDEX RANKINGS

United States of America

	2011	2012	2013	2014	TREND
ENERGY PERFORMANCE	17	16	15	13	
Energy Security	19	17	12	8	
Social Equity	1	1	1	1	
Environmental Impact Mitigation	90	88	86	83	
CONTEXTUAL PERFORMANCE	19	22	20	19	
Political Strength	30	30	24	20	
Societal Strength	21	27	27	21	
Economic Strength	23	23	29	28	
OVERALL RANK	16	16	15	12	

Copyright World Energy Council 2015

Figure 2: Energy Trilemma Index Rankings

Environmental Attitudes in the United States

According to Wave 6 (2010-2014) of the World Values Survey, 37.2% of people surveyed considered environmental protection more important than economic growth, while 60.2% of people viewed economic growth and job creation as more of a priority, even if the environment suffered as a result. Though these numbers look relatively high for the question being asking, more than $\frac{1}{3}$ of Americans valuing the environment more than the economy, the most recent sample does not paint the entire picture. The product of the same question asked during Wave 5 (2005-2009) of the World Values Survey yielded much more promising results, 54.4% of people choosing environmental

protection and 44.4% of people opting for the economy. Furthermore, viewing the answers of this particular survey by level of education provides astounding results, 85.3% of people with a college degree opting for environmental protection over economic growth in Wave 5 and only 41.9% answering in support of the environment in Wave 6 (World Values Survey). The substantial change in attitudes in such a short period of time, especially among those with university degrees, goes to show that the environment, though always a source of concern, is in many ways at the mercy of trends and changing public opinion.

Based on a 2011 study on environmental attitudes in the United States by SC Johnson, though Americans are more aware of the state of the climate than when the original study was conducted in 1995, they are less likely to believe that individuals have the power to have an environmental impact. Specifically, 73% of Americans “say they know a lot or fair amount about environmental issues and problems – up 20 percentage points since 1995, while 18% of people now agree with the statement “I am very confused about what's good and what's bad for the environment,” down 21% from the 1995 survey. As with the World Values survey, 48% percent of people surveyed believed that though the environment is important, there are more important factors to consider, 41% agree that economic security must be prioritized before environmental concern, and 52% of people surveyed agree that, “Some pollution is inevitable is we are going to continue to make improvements in our standard of living.” Unsurprisingly based on Americans’ attitudes on the

environment versus the economy, 49% of people say that financial incentives and penalties “have a greater influence on their green behavior than pressure from family, friends, and the government” However, Generation Y showed more susceptibility to pressures from people around them, with 35% saying that friend’s actions influence their own as compared to 26% of older Americans. Furthermore, the Millennial generation is 5% more likely to put the environment before the economy, and 45% of 18-31 year olds are more likely to follow the pro-environmental practices of large companies. When it comes to environment responsibility, 45% of people surveyed believe that the federal government should take the lead in addressing environmental issues, while 38% view it as the responsibility of individual Americans and 29% think that business and industry should take the reigns (SC Johnson 2011). The results of the SC Johnson survey, though not completely positive, provide a promising outlook for the future since Millennial attitudes proved greener than their older counterparts.

Though environmental attitudes play a substantial role in the environmental movement, actions speak much louder than words, and environmentally sustainable actions are seriously lacking. In fact, a Huffington post poll revealed that people care less about the environment than they did when Earth Day was created in 1971. In the original survey, called the Nixon poll, 56% of people said that they believed that the government should increase environmental spending, while only 29% of people in the 2013 poll responded yes to the same question. The most surprising and promising survey, however,

was regarding recycling – with 79% of respondents stating that they had actively recycled recently (Swanson 2013). Of the 1000 people surveyed, 22% elected to walk or bicycle rather than drive, 50% cut down on energy usage, and 27% ate organic as opposed to 21%, 20%, and 15% respectively for the same questions in the 1971 survey. Though environmental attitudes have seen a relatively substantial decline, environmental actions have shown an increase in the same period of time, and though the numbers are still not nearly where they should be, and increase in environmental action among the general public is a good sign.

Though the phrase, “money cannot buy happiness” is a commonly heard anecdote, money is necessary for survival, and the more of it a given country has, the more that they can invest in important causes that will contribute to the overall wellbeing of its citizens, such as the environment. The United States is 9th in the world in terms of GDP per capita and 10th in the world in terms of happiness, which makes it appear that the amount of money an individual makes directly correlates with his or her level of happiness. However, public goods also contribute in large part to overall wellbeing – parks, fresh air, etc. If environmental sustainability increases the amount of public goods as well as reduces pollution and its negative effects, one can deduce that a healthy environment leads to a healthy mind and body, reducing in an increased sense of wellbeing and economic security.

Environmental Attitudes in Other Countries

As the global hegemon, the United States holds a certain responsibility to maintain stability not only economically but also socially and politically in order to retain its hegemonic status. However, many other developed countries surge ahead with sustainable action, leaving the United States in the dust of their biodiesel cars and renewable energy sources. Furthermore, many of the countries that lead in sustainability tend to also be ahead of the United States in GDP per capita, as well as ranked as having much happier citizens than the United States. Though, of course, correlation does not constitute causation, one cannot ignore the trend of countries that are sustainable, economically stable, and occupied by fulfilled citizens. Sweden, for example, is the second country on the Energy Trilemma Index, ranked 22nd in GDP as of 2013, and is the 5th happiest country in the world (Helman 2013). When asked the same question about the value of environmental protection versus economic growth during the 2010-2014 survey, ~63% of respondents chose environmental protection over economic growth, while 69% of college educated respondents selected the same answer. Contrary to the decrease in environmental protectionism between survey periods in the United States, consideration for the environment over the economy stayed relatively the same overall between years and increased by 5% among college educated respondents. Obviously, the recession heavily impacted the economy in the United States, but it also affected countries worldwide. Sustainable infrastructure also creates jobs and saves money in the long run, but priorities are often a result of the governmental and economic system to which one is accustomed, and the

United States is largely instant gratification oriented, a fact that this thesis addresses in Chapter 3. Furthermore, though Wave 6 of the World Values Survey did not include Switzerland, the top ranked country in the 2014 Energy Sustainability Index, the results from the 2005-2009 wave of surveys speak for themselves about the importance of sustainability for Swiss citizens – ~71% of whom value environment over economy. Switzerland is also the 8th happiest country in the world and 4th in GDP per capita (IMF 2014).

Based upon the Energy Trilemma Index, Australia is a comparable country to the United States, the US taking 13th place on the index and Australia trailing directly behind at number 14. Therefore, one can deduce that environmental attitudes in both countries are also comparable, especially since both countries have similar governmental systems as well as strong economies – though Australia comes in 12th behind the first place United States in terms of total GDP (WTO 2013), it beats the US by four spots in terms of GDP per capita (Australia is 6th in the world and the United States is 10th) (World Bank 2013). Based upon a 2012 survey conducted by the Australian government, 53% of Australians aged 18-24 expressed general environmental concern, with 61% showing concern about climate change. Furthermore, 29% of Australians partook in some form of environmental activity such as donating to environmental organizations, protesting, and petition signing in 2011-2012, with members of the highest economic bracket being more likely to take part in such activities (36%) (Leviston, Leitch, Greenhill, Leonard, and Walker 2011).

The Australian survey results prove extremely promising, especially given the Millennial generation's pro-environmental attitudes.

Since some of the most sustainable countries in the world also happen to be some of the most economically successful, especially when it comes to GDP per capita, it seems that economic and environmental security tend to go hand in hand. We must consider the results of these comparisons when weighing the pros and cons of environmental standards, regulations, and actions that may have a higher initial cost than unsustainable actions, but also higher economic and environmental gains down the road. As Moses Henry Cass, the Australian Minister for the Environment and Conservation, said on November 13, 1974 during a speech in Paris at a meeting of the Organisation for Economic Co-operation and Development, "We have not inherited this earth from our parents to do with it what we will. We have borrowed it from our children and we must be careful to use it in their interests as well as our own" (Cass 1974). In other words, actions and practices that negatively impact the environment not only harm current generations, but also create an enormous burden for future generations that will impact billions of lives.

Chapter 2. Monetizing Environmentalism: The Economics Behind Going Green

2.1 The Economics of Climate Change

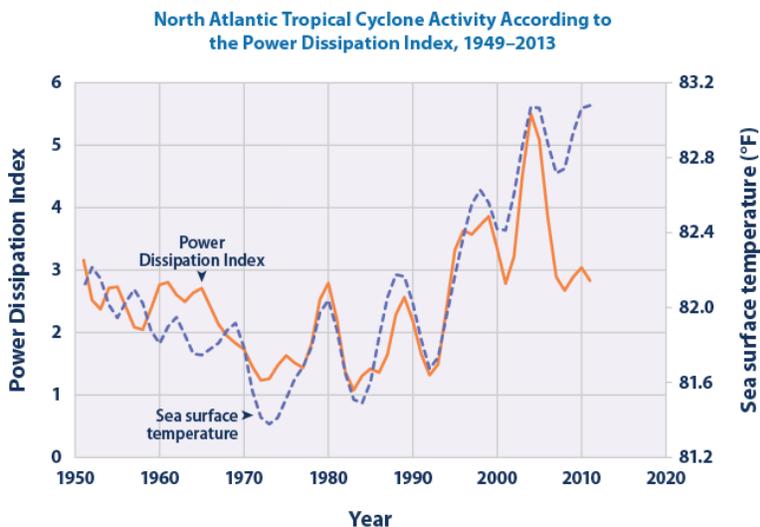


Figure 2: North Atlantic Tropical Cyclone Activity³

Identifying oneself as an environmentalist and involvement in a sustainable lifestyle both in the United States and globally seems reserved for people with the luxury of focusing on an imminent but seemingly not immediate threat. Billions of people worldwide must focus too much on where their next drink or meal will come from to worry about the state of the planet. However, food and water accessibility is an environmental issue to its core, and the natural disasters that have been occurring with increasing fervor over the past decade would beg to differ that climate change can wait. For example, California has been enduring the worst drought on record since 2011, drastically affecting the enormous agriculture industry in the state, thereby affecting a cornucopia of

³ "This figure presents annual values of the Power Dissipation Index (PDI), which accounts for cyclone strength, duration, and frequency. Tropical North Atlantic sea surface temperature trends are provided for reference. Note that sea surface temperature is measured in different units, but the values have been plotted alongside the PDI to show how they compare. The lines have been smoothed using a five-year weighted average, plotted at the middle year. The most recent average (2009–2013) is plotted at 2011." (EPA 2014)
Data source: Emanuel, 2014

food production related jobs. As of 2014, the drought not only cost the state \$2.2 billion due to crop revenue loss, additional pumping costs, and livestock and dairy revenue loss, but it has also resulted in the loss of over 17,000 jobs (Howitt). These impacts clearly demonstrate that one does not need to be an environmentalist to care about the implications of negative environmental impacts on society.

Though the environment clearly warrants consideration based upon its inherent value, monetizing the impacts of environmental degradation seems to be one of the few motivators of pro-environmental action. As such, as myriad of reports, projections, and models exist which attempt to predict and explain the economic impacts of climate change. Projections of the economic effects of climate change based upon formal integrated models such as the RICE-99⁴ model appear relatively modest, at least for the next century, especially in the United States as a “result of its relatively temperate climate, small dependence of its economy on climate, the positive amenity value of a warmer climate in many parts of the United States, its advanced health system, and low vulnerability to catastrophic climate change” (Boyer, Nordhaus 96-97). In countries more vulnerable to climate change such as India, as well as the entire African and European continents, though the estimated economic

⁴ “In the RICE-99 model, the world is composed of sovereign countries, represented by large countries (like the U.S. or India) or large regions (like the European Union or Africa). Each region is assumed to have a well-defined set of preferences by which it chooses its path for consumption over time. The welfare of different generations is combined using a social-welfare function that applies a pure rate of time preference to different generations. Nations are then assumed to maximize the social-welfare function subject to a number of economic and geophysical constraints. The decision variables that are available to the economy are consumption, the rate of investment in tangible capital, and the climate investments, primarily emissions reductions of greenhouse gases” (Nordhaus).

impact remains relatively moderate, their susceptibility to catastrophic climate change is worrisome because of the extreme costs in all sectors that disasters have on the economy and livelihood of an affected area's inhabitants. Though the projected economic costs for the United States as well as other regions seem low, the drastic impact that major disasters have cannot be discounted. In fact, "the catastrophic costs are estimated to be twice as large as all other impacts combined for a 2.5°C warming," a quite modest estimation of temperature warming in the coming decades (Boyer, Nordhaus 98). Due to the fact that catastrophes are unpredictable by definition, it is essential that attention is paid not only to the more predictable parts of environmental economic models, especially since climate change will result in a much higher volume and intensity of catastrophic events that will cost thousands, if not millions, of lives, and billions, if not trillions of dollars.

Changing weather patterns, largely contributed to by climate change, have already taken their toll in recent years both in the United States and abroad. According to the Environmental Protection Agency (EPA), "between 2000 and 2013, roughly 20 to 70 percent of the United States experienced drought at any given time," while 90% of the "years for top extreme one-day precipitation events have occurred since 1990" (EPA 2014). Furthermore, "Average temperatures have risen across the contiguous 48 states since 1901, with an increased rate of warming over the past 30 years [and] seven of the top 10 warmest years on record have occurred since 1998," with worldwide temperature trends following a similar vein and extreme temperature

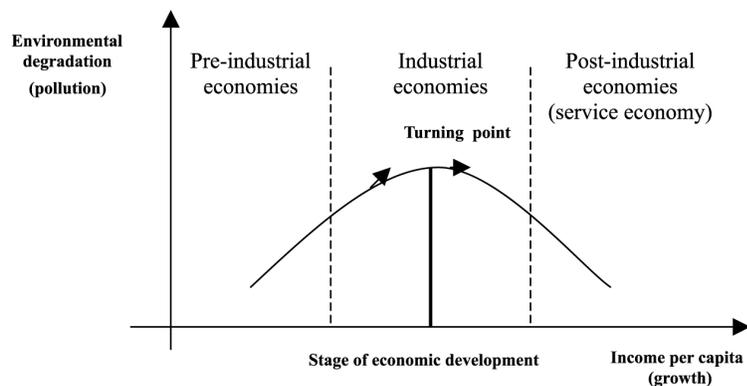
conditions becoming more common, trending more towards extreme high temperatures than extreme lows (EPA 2014). Along with the previously mentioned example of the drought in California, Hurricane Sandy on the east coast of the United States cost an estimated \$30 million in construction costs and loss of tourism in New Jersey alone (US Department of Commerce). Though formal integrated models such as the RICE-99 model project lower estimates of the negative economic impacts of climate change, taking these analysis as the be all, end all projection of climate change's effects on global systems would be a mistake, especially since there are limitations inherent in said forms of economic modeling. According to the Stern Review Report on The Economics of Climate Change, there are much larger economic risks associated with approaching climate change with a 'business as usual' (BAU) frame of mind than projected by past models:

Relying on the scientific knowledge that informed the IPCC's TAR, the cost of BAU climate change over the next two centuries is equivalent to a loss of at least 5% of global per-capita consumption, now and forever. More worrying still, when the model incorporates non-market impacts and more recent scientific findings on natural feedbacks, this total average cost is pushed to 14.4%. Cost estimates would increase still further if the model incorporated other important omitted effects. First, the welfare calculations fail to take into account distributional impacts, even though these impacts are potentially very important: poorer countries are likely to suffer the largest impacts. Second, there may be

greater risks to the climate from dynamic feedbacks and from heightened climate sensitivity beyond those included here. If these were included, the total cost would be likely to be around 20% of current per-capita consumption, now and forever. (Stern Review)

Needless to say, a loss of 5% per capita consumption would be a glaring blow to the economy, and quality of life as a consequence, not to mention the other projections that estimate a 14.4% to 20% economic cost. Recall the statistics on economics and climate change cited in Chapter 1. By placing the economy in front of the environment by continuing with detrimental environmental actions in order to bolster the economy, the long run – or more likely the near future – effects would cause environmental harm as well as economic harm on a much larger scale than proposed in order to increase sustainability now with relatively minor adjustments such as higher taxes.

2.2 Economic Development And The Environmental Kuznets Curve



Source: Panayotou (1993)

Figure 3: Environmental Kuznets Curve

The Environmental Kuznets Curve is a hypothesis that attempts to explain the systematic relationship between the economy and the environment based on the “evidence that the level of environmental degradation and conventionally measured per capita income follows... [an] inverted-U-shaped relationship” (Yandle, Vijayaraghavan, and Bhattarai 2002). As such larger, stable economies can allocate more funds for environmental issues because they must allocate less for basic economic development efforts. In other words as countries develop and industrialize, their environmental impact increases until it peaks and then eventually falls as they become economically stable enough to make environmental impact a consideration in their industries and policies. However, developed countries do not spontaneously become sustainable when they reach a certain level of economic stability – “income growth without institutional reform is not likely to be enough... the improvement of the environment with income growth is not automatic but depends on policies and institutions” (Yandle, Vijayaraghavan, and Bhattarai 2002). By definition, the Environmental Kuznets Curve allows for environmental degradation for the purpose of industrialization and economic security in the hopes that once the economy reaches a certain level, environmental degradation will decrease as economic wellbeing increases. Unfortunately, the world is in a completely different state than it was during the industrial revolution, or even a century or half century ago. As such, countries cannot continue developing their economies without regard for the

environment and expect the same results yielded in the past without external consequences.

Based upon the changing attitudes towards the environment and the economy in the United States as evidenced by the drastic shift in public opinion between Wave 5 and Wave 6 of the World Values Survey, it appears that economic downturn resulted in a sort of miniature Environmental Kuznets Curve in which economic consideration became even more of a priority before due to the increase in unemployment and foreclosures. Before 2007, college graduates enjoyed a relatively high rate of postgraduate employment, a number that promptly plummeted as a result of the recession. Record numbers of debt ridden recent graduates were forced to move home and either find a job that they were extremely overqualified for and unhappy in just to make ends meet, or received rejection after rejection due to over qualification and lack of funds in companies that previously could have hired them (Paitsel 2013). As such, it appears that there is a tradeoff between growth and development not only for developing countries, but also for developed countries experiencing tumultuous economies. The Environmental Kuznets curve is not a one and done situation in which once a country reaches a certain level of development it turns its attention towards the environment and doesn't look back. Rather, it is a phenomenon that is constantly in flux on the small scale as well, affecting groups in developed countries as well as those in the process of developing due to the increased initial price of sustainable development and production.

2.3 The Price Of Sustainability

On the other side of the coin lies the costs of living a sustainable lifestyle – from going organic to driving hybrids and applying solar panels to one’s home. Numerous industries recognize and take advantage of the fact that environmentally sustainable products, especially organic food and hybrid vehicles are in high demand. However, the money making potential of sustainable products does little to increase their importance, especially since capitalist societies are built on the recognition and supplying of apparent needs in a given market. Nonetheless, the disparity in price between cheaply, unsustainably, and mass-produced but less expensive products and sustainable, organic, fair trade, and recycled or recyclable products must be addressed, especially because the price of these products heavily impacts consumer decisions to purchase one over the other. Unfortunately, sustainable products are pricier because their ingredients and transportation costs are more expensive than bigger brands (Clifford and Martin 2011).

Prior to the recession, “green” products, from the Prius to household cleaning supplies and organic food, were steadily increasing in popularity. However, according to a 2011 New York Times article entitled “As Consumers Cut Spending, ‘Green’ Products Lose Allure” by Stephanie Clifford and Andrew Martin, recent years have seen a decrease in the amount of money spent on certain “green” products due to the reduction in expressed interest in the environment and said products after the inception of the recession in 2008. Clorox, for example, introduced an ecofriendly and Sierra Club endorsed line of

products called Green Works in 2008, which grossed \$100 million that year alone. However, Clifford and Martin (2011) explain that as the recession worsened, so did the sales of Green Works and related “green” products such as recycled toilet paper. As of 2011, sales of Green Works had fallen approximately 40%. Though an expressed interest in sustainable products remains, it does not translate to purchasing power as well as it would seem. David Donnan of the consulting firm A.T. Kearney states that, “Every consumer says, ‘I want to help the environment, I’m looking for eco-friendly products, but if it’s one or two pennies higher in price, they’re not going to buy it. There is a discrepancy between what people say and what they do.” This discrepancy became all too clear during the recession, when people nixed environmental concern for economic concern because supporting the environment through the purchase of ecofriendly products is “something you buy and think about when things are going swimmingly” (Clifford and Martin 2011).

Though the purchase of many ecofriendly products has decreased, American Millennials are in the lead in terms of green product purchasing. This fact proves extremely important when considering the National Geographic Society’s and GlobeScan’s Greendex, an annual survey of 18 countries conducted since 2008 “to measure and monitor consumer progress toward environmentally sustainable consumption [in order] to provide regular quantitative measures of consumer behavior and to promote sustainable consumption.” Based on the results of the 2014 Greendex report, the United States has remained the least sustainable country of the 18 surveyed every

year since 2008, and to make matters worse, responsible consumption behavior has decreased since 2012 (Greendex 2014). Thankfully, the Millennial generation, with a purchasing power of an estimated \$200 billion in economic worth according to the United States Chamber of Commerce, is the most environmentally conscious when it comes to green products. In fact, according to a 2014 consumer poll of US adults, 27% of Millennials are more likely to buy green products and services, and 56% are willing to pay more, as opposed to 18% and 24% of than adults ages 35 and older, respectively. These statistics provide a positive outlook into the sustainability of future consumers since, “the nearly 80 million Millennials in the United States will account for 30 percent of retail purchasing by 2020. This demographic shift will have major implications for businesses across all industries, especially as it relates to sustainability” (Retail Customer Experience 2014). The Millennial generation’s purchasing power has the potential to completely change markets, and if Millennials want sustainable products, then their wallets have the power to make environmentally friendly goods and services the norm.

Chapter 3. Politicizing the Planet: The Potential of Environmental Regulation

3.1 Environmental Laws & Regulations in the United States

Living in a democratic and wealthy country such as the United States means that citizens have the luxury of a government for the people, by the people. As such, the government and its policies is in many ways a reflection of

its electorate as voters have the power to put people in office and vote for or against certain laws and regulations. Since gaining political office requires the candidate gain the popularity of the voters, the passing of unpopular laws and regulations that often times would be beneficial but also come with an economic or social cost is uncommon. However, command and control environmental regulations are the most widely used tactic in the reduction of environmentally detrimental practices as well as in the increase of pro-environmental practices such as recycling and reducing emissions. These regulations do not leave much room for freedom of choice, rather they mandate the use of environmentally sustainable technologies and practices (Sustein, Thaler 2008). The Clean Air Act, for example, “is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, this law authorizes EPA to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and to regulate emissions of hazardous air pollutants” (Environmental Protection Agency 2015). Such regulations prove effective, but do little to motivate environmental consciousness or consideration since the recipients of such regulations feel forced, rather than making an independent choice to act in an environmentally sustainable fashion (Sustein, Thaler 2008). The cost of adhering to the Clean Air Act is estimated to reach \$65 billion annually by 2020, but also estimated to “yield substantial air quality improvements which lead to significant reductions in air pollution-related premature death and illness, improved economic welfare of Americans, and better environmental conditions. The

economic value of these improvements is estimated to reach almost \$2 trillion for the year 2020” (Environmental Protection Agency 2011). Unfortunately, the costs of adhering to regulations such as the Clean Air Act are immediate while benefits take time to be recognizable. Though the environment clearly warrants consideration based upon its inherent value, monetizing the impacts of environmental degradation seems to be one of the few motivators of pro-environmental action – a case in point for the necessity of economic based environmental laws and regulations.

As mentioned in the previous chapter, people will rarely take it upon themselves to make a change because of the perception that a single person or small group of people cannot enact change as well as the amount of time that it takes for a change to become apparent. If laws do not exist to steer people in the right direction, change cannot occur. As such, regulations with repercussions must exist in order to incentivize people to care about the environment and as they will rarely do it on their own, and if they do, it is unlikely that it will be done on a large enough scale to see positive results. There are currently two forms of government incentive based regulations regarding the environment: taxes or penalties for polluters, or the cap-and-trade system (Sustein, Thaler 2008) in which “the government determines which facilities or emissions are covered by the program and sets an overall emission target, or “cap,” for covered entities (firms held responsible for emissions). This cap is the sum of all allowed emissions from all included facilities. Once the cap has been set and covered entities specified, tradable

emissions allowances (rights to emit) are distributed (either auctioned or freely allocated, or some combination of these)” (Center for Climate and Energy Solutions 2011). However, as mentioned in Chapter 3, market based incentives are not nearly as effective as they could be because they are not properly aligned and people do not receive adequate feedback about the detrimental effects that their actions have on the environment. For example, raising the tax on gas to reduce emissions would likely result in less vehicle based pollution, but it would also be met with resistance from the millions of people who do not want to see gas prices increase (Sustein, Thaler 2008). As such, economic environmental incentives are difficult to enact because of their lack of popularity with the electorate due to the fact that the costs of environmental degradation, such as pollution, are hidden, while the cost of acting sustainably versus unsustainably is often extremely clear.

3.2 Case Study: Swedish Environmental Regulation

It’s no secret or surprise that many countries beat out the United States in terms of sustainability and pro-environmental action and attitudes. Such regulations give citizens and corporations no choice but to act sustainably and adapt to the new laws, benefitting themselves as well as the environment through increased energy independence due to the use of renewable energy sources, bolstered economies through the creation of new jobs and economic sectors, and a higher quality of life as pollution decreases. The United States could stand to learn a few lessons from the actions of more sustainable countries such as Sweden, Switzerland, and Denmark. True, the United States

is a great deal larger than these European countries, but that also means that countrywide or even state wide environmental regulations could drastically impact the state of the environment at home and abroad.

Sweden was an extremely early adopter of environmental regulation, realizing its necessity as early as 1960. Currently, Sweden has an environmental code of 16 government and parliament environmental quality objectives to achieve by 2020 including reduced climate impact, clean air, aero eutrophication, sustainable forests, and a protective ozone layer (Swedish Institute 2013). Furthermore, the Swedish government is also part of the EU Environmental agreement Roadmap 2050 focused on the reduction of CO₂ emissions and aims at achieving zero net greenhouse gas emissions by 2050 and is on the right track to do so thanks to economic developments and incentives such as a CO₂ tax (Swedish Institute 2013). In fact, Sweden's greenhouse gas emissions are among the lowest in the EU and the world, and as of 2012, "Swedish GHG emissions totaled 58.3 million tons of carbon dioxide equivalents, compared with 72.7 million tons in 1990 – a near 20 percent reduction" (Swedish Institute 2013). Additionally, the Swedish government aims to "achieve a fossil fuel free transport sector by 2030" (Swedish Institute 2013).

The Swedish Environmental Code of 1999 aims to promote sustainable development and is integral in achieving these objectives. The Environmental Code "concerns all types of measures and operations that may be of importance to those interests the Code is intended to protect, regardless of

whether they are part of a private individual's daily life or are some form of business activity... Primarily, it decides what types of environmental issues can be examined in a court of law, for example, a condition that may be imposed for an environmentally hazardous activity to start might be anything that promotes sustainable development” (Swedish Environmental Protection Agency 2015). In order to achieve its goals, the Environmental Code “contains a number of general rules of consideration that express, for instance, the precautionary principle, the polluter pays principle, the product choice principle and principles regarding resource management, recycling and suitable localization of activities and measures. The rules have a preventive effect since they make binding demands on anyone running a business or an operation or taking action to learn about the environmental effects of such activities and express the principle that the risks of environmental impact should be borne by the polluter and not by the environment” (Swedish Environmental Protection Agency 2015). In other words, the Sweden achieved it’s high level of sustainability through cooperation with other countries as well as code that impacts every aspect of Swedish society – from enormous corporations to individual citizens, and focuses not only on regulation but also on prevention and education in order to achieve its goals. As such, the Swedish Environmental Code is an integral part of the Swedish identity, making Sweden synonymous with environmental sustainability, thus creating national pride based around environmental protection and sustainable development.

Chapter 4. Hipsters & Bloggers & Vegans, Oh My: The Mind Behind What Matters

4.1 The Social Aspect of Environmentalism

The environmental movement is extremely popular among millennials. Living a sustainable lifestyle has become increasingly en vogue since the turn of the century, spiking substantially in 2007 after the release of Al Gore's *An Inconvenient Truth* and the 2007 IPCC Report on Climate Change. This focus on the state of the environment defines a substantial part of social consciousness for Generation Y as knowledge of current events and progressive views characterize a great deal of the Millennial age group, especially in populous cities such as New York, San Francisco, and Washington, D.C. The Millennial population, numbering 77 million, makes up 24% of the population of the United States and is moving in droves to work in big cities and live in the surrounding areas, bringing their liberal ideals and degrees with them (Athwal 2015). A 2009 report from the Center for American Progress entitled "New Progressive America: The Millennial Generation" concisely expresses the social and political ideals of Millennials as it pertains to the environment:

Millennials have strongly progressive views on energy and environmental policy, often more progressive than the public as a whole. Millennials believe we need to move away from dependence on fossil fuels and embrace the need for major investments in new energy technologies, and they think doing so is vital to our economic future. What's more, Millennials think that environmental protection and transforming the

economy away from fossil fuels is one of the defining features of their generation.

Furthermore, 67 percent of respondents agreed in a survey asking Millennials if they believed that the generation would be widely characterized by a focus on environmental concern and protection, while 79 percent of Millennials agree that that it is their individual my responsibility to improve the environment (Madland, Teixeira 2009).

Though environmental issues have garnered a significant amount of attention in recent decades, especially from governments, regulatory efforts cost billions of dollars and often come with problems with enforcement and unintended consequences that can even have the effect of harming the very resource that the regulation attempts to save (Sustein, Thaler 2008). However, government environmental regulation often seems like the only viable solution since people are not likely to act sustainably on their own, especially considering the delayed consequences of environmentally detrimental practices. As such, there is little incentive to act in favor of the environment when not doing so might save money and time in the short run, and do little perceived harm in the long run (what's the worst that could happen if you neglect to recycle or drive a gas guzzling SUV?). In other words, incentives to aid the environment are not properly aligned with the reaction to a given action (Sustein, Thaler 2008). Furthermore, since people do not receive adequate feedback on the harmful nature of certain actions on the environment, it is

easy to continue with business as usual without a second thought (Sustein, Thaler 2008).

Despite all of the progressive views and pro-environmental motivations that Millennials possess, the desire to aid the environment does nothing when not acted upon. In fact, expressing but not acting on said desire might do more harm than good because people like to conform and are as such easily nudged by other people to either act or refrain from acting (Sustein, Thaler 2008). For example, academic performance in college students is impacted by how well their peers are doing, and federal judges on three-judge panels make decisions that are influenced by the voting patterns of their colleagues (Sustein, Thaler 2008). Conformity experiments have been conducted over 130 times in seventeen counties, and the results have remained relatively similar, with 20 to 40 percent of people conforming in group settings but tending to act or decide differently when results are anonymous or revealed individually (Sustein, Thaler 2008). The prevalence of the tendency of people to reproduce group norms reveals the important role that image and perception play in people's public lives.

Findings about the important role that conformity plays in everyday life and social interactions provide a possible solution for the problem of a lack of tangible environmental action. It seems that public expression of environmental support has the potential to encourage further environmental action, especially when done in conjunction with social media. Since Millennials make up about a quarter of the population of the United States and

are substantially more progressive as a group than the rest of the country, especially when it comes to the environment, their actions have enormous potential to impact the actions of not only those in their age bracket, but also the actions of the rest of the country. Generation Y is currently the youngest generation of adults, and as such they have the power to impact policy going forward since they have the power to vote as well as public office (one more year and the oldest Millennials will be at the minimum age to run for president), as well as impact the younger generations who are growing up with Generation Y dominating popular culture and eventually dominating political office.

4.2 Stigma, Attention Spans, and Trending Activism

The stigma that surrounds the prevalence of young, successful people who engage in an environmentally sustainable lifestyle stems largely from a belief that caring about the environment is a privilege bestowed upon only those who can afford to care. Though this statement is not without truth, a given cause's popularity in society will directly affect the amount that is done about it both in the public and private spheres. However, "education is the only indicator of socioeconomic status consistently and strongly related to environmental concern among the general public" (Morrison, Dunlap 1986). It isn't a surprise that the people who believe that environmental protection is in many ways more essential than economic growth tend to be college educated – education results in an understanding of the most pressing social and political issues of a time period. Therefore, the statement that the environment is trending given

that young people's opinion's tend to dictate trends and the millennial generation is the most educated generation in history is not only unsurprising, it is completely normal and expected. In fact, according to the National Center for Education Statistics, enrollment in degree-granting institutions increased 32% between 2001 and 2011, and 22.3% of Americans aged 18-34 have a Bachelor's Degree or higher, up 29.6% from 1980 (US Census 2013). However, the reduction in people, especially in the college educated bracket, placing the importance of the environment before the importance of the economy between the two phases of the World Values Survey reveals an extremely important truth about the human psyche. Given the fact that the higher percentage of pro-environmental attitudes came from the 2005-2009 survey, and these numbers plummeted drastically in the 2010-2014 survey, it is easy to deduce that the economic climate drastically affected people's attitudes, especially considering that average Millennial incomes dropped from \$37,355 in 2000 to \$33,883 in 2013 (Census 2013). The first round of survey numbers was from a sample taken during 2006, a relatively stable economic period prior to the recession of 2008. Since unemployment in the United States was at a low of 4.6% in 2006, people tended to feel economically stable enough to give the environment extra consideration. However, unemployment more than doubled by 2009, reaching 9.6%. Thankfully, the economic climate has been slowly but surely returning to normalcy, and as of March 2015 unemployment is down to 5.5%, which hopefully means a renewal of environmental spending and consideration is on the horizon (Bureau of Labor Statistics 2015).

The framing of environmentalism as an aspirational goal by playing to economic and social trends, though elitist if looked at purely in terms of the price of green products and living, is an effective marketing technique, especially for such an image focused society. Public opinion and a crowd mentality play a large role in what people are willing to vote yes on or what people are willing to purchase or support, as explained in the previous section. In the same way, the framing of the environmental movement is an extremely important part of its success. The straight facts about the dangerously damaged state of our earth obviously aren't enough to convince people that a change needs to occur. If they were, everyone would be riding bicycles, composting, recycling, and installing solar panels on their houses. Instead, activist groups and pro planet politicians must scream from the rooftops about the importance of sustainability, while media and communications groups include allusions to sustainable living in their movies, TV shows, and magazine articles in order to sway public opinion.

It is no secret that fads and trends dictate the choices that people make, from the clothes they wear to the movies they see and the causes they support, therefore determining social interaction in a myriad of ways. However, trends tend to not have much staying power, especially when considering how much attention spans have decreased in recent years. According to The Associated Press, as of 2013 the average attention span is eight seconds (one less than that of a goldfish), down from twelve seconds in 2012 (The Associated Press 2015). Furthermore, web page views in this Internet based society are lucky if

they last more than a few seconds – only 4% of web pages are viewed for more than ten minutes, while 17% last for less than four seconds (The Associated Press 2015). Moreover, Millennials also check social media platforms an average of 27 times an hour (Seppanen, Gualtieri 2012). Based on these frightening statistics, extremely short shelf life of trends is unsurprising. The amount of time that trends last also translates into the amount of time and attention people are willing to dedicate to the “cause of the moment,” and the caring about the environment unfortunately seems to be one such cause based on observations of environment related Google Search Trends examined in Chapter 5.

4.3 Climate Change Psychology

As the previous sections revealed, social cues substantially impact environmental attitudes and actions. However, climate change impacts people’s minds and lives as well as the planet, and psychological cues play an enormous role in people’s decisions to partake in green action. According to the American Psychological Association’s assessment of 2011 of psychology and global climate change, the climate change risk perception and response in the United States is relatively lacking compared to that of other countries:

75% of people in the United States assess global warming as a “very” or “somewhat” serious problem— similar to the level in Russia (73%) and lower than that in many other nations: 87% of Canadians, 81% of Mexicans, 95% of French, 88% of Chinese, 97% of Japanese, 96% of Brazilians, and 94% of Indians assess global warming as a “very” or

“somewhat” serious problem. Regardless of the stated level of concern however, few people in the United States see climate change as an immediate risk and tend to rank it as less important than many other social issues, like the economy and terrorism (Krosnik, Holbrook, Lowe, & Visser, 2006; Leiserowitz, Kates, & Parris, 2005). This comparative lack of concern about climate change consequences is strongly related to political ideology (Dunlap & Saad, 2001) and poses a problem for effective communication about these risks.

The fact that terrorism is often considered a more daunting risk than climate change is extremely ironic given the fact that climate change is not only much more likely (in fact given current practices it is inevitable) than terrorism, it is also projected to affect millions more people than terrorism ever has or likely ever will. There are extensive social and community impacts of climate change. For one thing, since a causal relationship exists between heat and violence, “current models predict a rise of about 24,000 assaults and murders in the United States for every increase of 2 degrees Fahrenheit in the average temperature.” The projected increase in violence is extremely interesting given people’s perceptions of climate change risk versus terrorism risk, since climate change will likely correlate with an increase in violent acts (Janet, Clayton, Doherty, Gifford, Howard, Reser, Stern, and Weber 2010).

The way in which media outlets and other information sources frame climate change affect risk perception of the issue, which in turn affects how people’s actions regarding the threat. For example, “Potential catastrophes from

climate change (of the kind graphically depicted in the film *The Day after Tomorrow*) have the ability to raise visceral reactions to the risk (Leiserowitz, 2004).” Though such rapid change has a higher likelihood of being dreaded, the perception that people can simply remove themselves from the hazard zone is common. Furthermore, since catastrophic climate seems out of one’s control, it is more likely to result in dread than pro-environmental behavioral change. Predictions suggest, however, that responding to climate change will result in positive social and community impacts. For instance, “Research on some youth conservation programs has shown preliminary evidence that participants gain in self-efficacy, social competence, and sense of civic responsibility,” and recycling results in intrinsic benefits such as “a sense of frugality, participation, and competence” (Janet, Clayton, Doherty, Gifford, Howard, Reser, Stern, and Weber 2010).

There are a myriad of psychological barriers to consideration regarding climate change and other environmental issues. One of the most obvious barriers to action is ignorance about either environmental issues in general or which actions people can take to combat the issue, as well as which actions harm the environment. Another factor hindering action is uncertainty about the verity of climate change, resulting in self-interested rather than environmentally focused actions as well as providing justification for a lack of climate change related action. Mistrust and reactance to scientists’ reports and suspicion surrounding policy makers results in fear that new pro-environment policies result in the loss of freedoms. Other barriers to climate change action

are denial and judgment discounting regarding the seriousness of the issue, place attachment, habit, perceived behavioral control and risks from behavioral change, tokenism and the rebound effect in which people cancel out pro-environment actions by doing things such as driving farther in a fuel-efficient vehicle than they would in a gas guzzler, social norms, conflicting goals and aspirations (e.g. the environment versus the economy), and belief in solutions out of human control. As mentioned in previous sections, social norms and conformity play a large role in both pro and anti-environmental action.

Precedent exists for encouraging environmental action through the use of peer norms. For example, when homeowners are told the amount of energy that average members of their community use, they tend to alter their use of energy to fit the norm (Schultz, Nolan, Cialdini, Goldstein, & Griskevicius, 2007), increasing or decreasing their energy use accordingly. The increases can be prevented by giving low energy users positive feedback about using less energy” (Janet, Clayton, Doherty, Gifford, Howard, Reser, Stern, and Weber 2010).

Though there are a myriad of factors acting against the psyche in terms of environmental action, there are also a myriad of factors working in our favor – if people acknowledge the threats of climate with a sense of control rather than fear or hopelessness, they can change while also recognizing the part that individuals play in the process, they can correct their actions and aid the environment.

Chapter 5. Reblogging the Earth: The Internet's Effect on Environmental Action

5.1 Slacktivism & Social Media

People are more connected to each other than ever before – through tweeting, texting, reblogging, posting, checking in, and FaceTiming – which opens up the door for public image based incentives. With 75 percent of Millennials with profiles on social networking sites, Generation Y is often called the “Me Generation” because of the importance that public image and social media holds in every day life (U.S. Chamber of Commerce 2012). According to a survey about the future impact of the internet, 67% of respondents agreed with the statement that, “By 2020, members of Generation Y (today’s “digital natives”) will continue to be ambient broadcasters who disclose a great deal of personal information in order to stay connected and take advantage of social, economic, and political opportunities. Even as they mature, have families, and take on more significant responsibilities, their enthusiasm for widespread information sharing will carry forward” (Anderson 2010). The high number of people who believe in the staying power of social media is evidence of the way in which social interaction and movements of the future will continue. A high value is placed on posting likeable material that makes the poster look good while also getting lots of likes, comments, or traffic on a given post. Millennials receive a substantial amount of flack for taking part in things for the purpose of posting about it later, such as going on service trips only to take pictures to plaster all over their various accounts. In fact, many slang terms and phrases

exist that perfectly illustrate the importance of “fake internet points” for the millennial generation. For example, the phrase “do it for the gram” is a commonly heard statement pertaining to partaking in an activity for the explicit purpose of taking a photograph to post on Instagram. However, the prevalence of social media, though mainly used as an individual’s way of connecting with other and sharing accomplishments, also means that there are many more ways to communicate important issues and ideas.

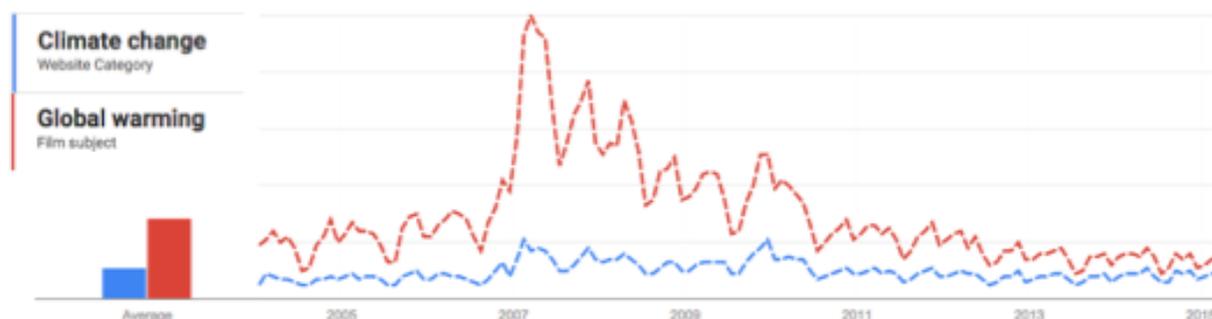
With the cornucopia of mediums available to post, share, and interact on, it comes as no surprise that activism and political opinions have also taken root in such forums. The Internet allows one to sign a petition, simply click on a link to provide a family with a meal or a child with a book, or argue about a controversial law or incident, all from the comfort of one’s own home. Doing so provides the benefit of the illusion of a good deed without having to actually put time or effort into the act. The term “slacktivism” exists to encompass and explain this new type of political and social action, or rather inaction. Many people seem to think, or at least act as if, online personas seem to have the ability to replace ‘real world’ action when it comes to causes such as environmentalism. Whereas people used to come out in droves to protest, such as during the hugely successful Civil Rights movement, one can now express their distaste for a situation online. Of course, demonstrations still occur, such as the Occupy Wall Street movement and People’s Climate March, but their impact is both enhanced and overshadowed by the power of social media. Both modern movements communicated their goals, purpose, and plans online

through Facebook, YouTube, and Twitter as a way to augment participation. Occupy Wall Street, for example, used social media to “create new contexts for activism that do not exist in old media [by using] social media [to] foster an ethic of individual and collective participation, thus creating a norm of perpetual participation [which] creates new expectations of being in the world” (DeLuca, Kevin M., Lawson, Sun 2012). Grassroots activism and protests have enormous potential to enact change. However, when used correctly, so does social media. The challenge, then, is to get online activism to translate into tangible action and change.

A possible explanation for the prevalence of slacktivism rather than activism is the millennial generation’s unprecedented access to information, and the fact that they came of age during this new information and communication revolution. Since they grew up with such technologies, they have expertise in finding forums to express their beliefs online, which might explain why they’re more likely to actively participate in online activism than coming out and protesting. As such, rather than attempting to convince Generation Y to put down their phones and computer and pick up picket signs and recycling bins, it would be better to appeal what they know – technology. Based on the prevalence on activism blogs and the traffic that articles and other information about social issues receives online, one can assume that if millennials were more like their online persona, they’d likely be much bigger activists.

5.2 Environmentalism As A Trend

Figure 4: Google Analytics Search Trend Graph



Data Source: Google Trends (www.google.com/trends).

Viral videos and campaigns tend to affect interests, at least for a time. Environmentalism is no different – dozens of campaigns and films about the state of the planet have been released in the last decade, spurring public outcry and interest in the subject of climate change and other sustainability issues. That is, until something else comes along to capture our attention – humans do not have very long attention spans, as evidenced by the statistics referenced in Chapter 3. Therefore, when something fades out of the eye of the media, it will also soon fade out of the eye of the public.

Al Gore’s widely popular Oscar winning 2006 documentary on climate change, *An Inconvenient Truth*, provides the perfect example of the power of media to enact change as long as it keeps its eye on the prize. Shortly after the film was released, the Intergovernmental Panel On Climate Change (IPCC) released its fourth assessment report in which it warned with 96% certainty that climate change was a result of human activity (IPCC 2007). The coinciding of these events provided for a unique situation that spurred a drastic spike in

interest about environmental issues. Since Google accounts for approximately 80% of global search engine use, Google Trends provide a reliable source of information about the popularity of given search terms. Climate related search terms such as “climate change” and “global warming” spiked substantially between August 2006 and March 2007, correlating with the release of Al Gore’s film and the IPCC’s report⁵.

After the initial drastic increase in interest, the popularity of these terms waned considerably after 2007, and as of 2015 it has all but dropped off of the charts. Referring back to the results of the World Values Survey waves 5 and 6 further solidifies the “trending” nature of concern for the environment since attitudes about the environment versus the economy mirror the results of Google Trends. However, the previously mentioned media events are not the only contributors to interest levels in climate change. According to William Anderegg of Princeton University, “There is no single reason why the public have become less interested in climate change. However, research certainly suggests that economic issues, such as the recent recession, tend to take precedence over environmental issues like climate change” (Anderegg 2014). As mentioned in Chapter 2, the state of the economy also seems to have a positive correlation with environmental concern – the better the economic climate, the more interest people are willing to dedicate to the environment.

Environmental activism, however, need not be entirely economic based in order to succeed. There is just as much power in numbers as there is in

⁵ Refer to Figure 2

money, as evidenced by online phenomena and trends that resulted in a huge volume of dialogue and action. For example, during 2014 a global social media trend for a cause called the “Ice Bucket Challenge” raised awareness and an enormous amount of money for people affected by Amyotrophic lateral sclerosis (ALS), also known as “Lou Gehrig's Disease.” For the challenge, people would make videos of themselves getting ice water poured on them, and then nominate a few of their friends to do the same, often posting the video on Facebook or Instagram and tagging the friends that they had nominated. If nominees didn’t do their challenge within 24 hours, they ‘had to’ donate money to the ALS Association. The Ice Bucket Challenge raised over 220 million dollars worldwide (Holan 2015), and almost 100 million in August of 2014 alone, compared to a measly 2.7 million raised in the same period of 2013 (Townsend 2014). Furthermore, people all over the world, including many major celebrities such as Oprah and Bill Gates, took the challenge and posted almost 4 million videos, proving the power of social media and public exposure to motivate action. Since the nomination for the challenge was a public action that everyone in an individual’s social network could see, nominees were motivated to also take part or risk publicly ignoring the challenge.

The Ice Bucket Challenges provides evidence of the power of suggestion and action when it comes to social networking and activism. The enormous amount of traffic, exposure, and donations that the challenge resulted in is a very good sign about the future of activism. Actually taking part in an action that was then posted on social media in order to motivate others to do the

same shows that the Millennial generation does not need to be defined by slacktivism. Though expressed interest and concern in the environment seems to have dropped across the board in recent years, Generation Y seems to maintain a rather invested interest in the issue online. In other words, the environment is still “trending” for a large portion of the United States, and thankfully the portion that it seems to hold the most importance for is the younger generation that either is currently or will soon have the power to encourage and enact substantial change – that is if interest expressed online and through social media can translate into real world activism and policy changes.

Chapter 6. From Posting To Practice: Solutions For The Action Rut

It is easy to spot a problem, but coming up with a solution tends to be easier said than done, as evidenced by many of the findings in previous chapters. Though statistics reveal that Americans care less about the environment than they do about the economy, especially in recent years, this does not need to remain as such. While economic incentives sometimes work effectively with corporations and people alike, their unpopularity as well as the lines and red tape associated with passing them means that other means to achieve the goal of sustainable action must be taken. Numerous precedents exist for noneconomic incentives with the potential of increasing sustainable action. The Millennial focus on social media, especially when it comes to hot

button issues such as the environment, as well as the sharing of such information, opens the door for a noneconomic approach to environmental action and activism. In order to motivate tangible environmental action, it is necessary to challenge people's real world persona to act more in conjunction with the online activist persona that has become prevalent in recent years. Due to the fact that the Millennial generation is much more willing to have their behavior observed, as evidenced by the U.S. Chamber of Commerce's "Millennial Generation Research Review," said social behavior patterns and preferences further allow for the possibility of enacting nonfinancial incentives to motivate behavior. The ALS Ice Bucket Challenge provides a perfect example of the effectiveness of social media campaigns and incentives to engage in positive social and political activism. Rather than simply liking a page or quietly taking part in environmental activism, posting online and sharing with networks makes actions known and visible, prompting others to do the same. Promoting engaging in tangible actions along with social media interaction will not only result in positive environmental action, but also encourage other people to do the same. A nongovernment incentive to increasing tangible activism, therefore, would be an application on social media sites such as Facebook, Twitter, and Instagram that sends a notification to the holder of an account when an online connection geo-tags their location or action as something deemed as environmentally sustainable – e.g. going to the farmers market or taking a bike ride or public transportation rather than driving. Furthermore, a social media fueled challenge similar to the ALS Ice Bucket

Challenge could create a dialogue about the importance of environmental sustainability. Perhaps something more sustainable than dumping gallons of ice water on oneself during a drought!

Precedent exists for the transformation of environmental attitudes online due to a demonstration of the part that their individual actions play in harming or benefitting the environment. Specifically, a study in which the subjects were responsible for a virtual polar bear on a block of ice that responded to their environmental actions revealed that attachment to this virtual creature resulted in real world pro-environmental action (Dillahunt, Tawanna, Becker, Mankoff, and Kraut 2008). Since Millennials are the most environmentally aware generation based on current surveys and statistics, the use of online motivators like the virtual polar bear proves a promising solution for the disconnect from online to tangible action. Incentives such as the ability to unlock special features on phone applications and other platforms on are often used as motivators to take surveys and partake in other exercises to provide user feedback. Said programs have the potential to become activism focused if widely used social media platforms such as Facebook, Twitter, and Instagram could instate programs that reward users who post about tangible pro-environment actions they have taken part in, such as biking to work.

Alternatively, the concept of publicly publishing pro-environmental information and social media activism could also be applied to companies and people who engage in environmentally detrimental practices. Since people tend to act based upon incentives, they would be substantially less likely to engage

in activities that harm the environment if shaming was used as an incentive to cease said detrimental actions. A possible policy solution to reduce unsustainable actions would be the use of social media and mass media to publicly shame those who harm the environment. For example, state regulators in California named and shamed water departments that were turning a blind eye to people wasting water during the current drought (Nirappil 2015). By combining the viral influence of social media, as well as appealing to the image consciousness of the Millennial generation, the shaming tactic could be used to motivate Generation Y to do more than simply share and like information about environmental activism in the virtual world.

Sweden's approach to environmentalism provides a promising framework with the potential for implementation in the United States. Along with the country's already implemented green policies, the Swedish Environmental Protection Agency published a study on the effectiveness of nudging in public policy on environmental action with extremely encouraging implications. The report found that nudging is most effective when combined with other efforts such as "increasing salience of information by complementing eco-labels with life cycle costing (GreeNudge 2013) or by combining effects of social norms with information provision" (Mont, Lehner, and Heiskanen 2014). Though basic "nudge" tools such as smart meters and displays have been used for some time, they do not take user perspective and framing into account. Therefore, to improve individual inputs to environmental action, nudging and human factors should be designed "throughout the built environment, in energy-using

appliances and every aspect of the information environment (contracts, advertising, invoices, online advice, television programmes, etc.) which influence[s] residential energy use” (Mont, Lehner, and Heiskane 2014). The findings of the Swedish Environmental Protection Agency’s report have the potential for expansion into the social media sphere (e.g. informational banners that appear on the screen when triggered by “green” words), thereby informing people of the energy conservation and other pro-environmental tactics while also motivating said actions by taking advantage of the strength of social norms demonstrated in Chapter 4 (e.g. the social norm conforming effects of peer energy conservation). The Google Maps phone application, for example, could calculate the environmental harm or benefit that different modes of transportation would have for a given trip, thus motivating people to take public transit or other alternate modes of transportation in instances in which cars are not necessary.

The Millennial generation in the United States possesses the potential to completely change the way that the country approaches environmental consideration. Rather than the sustainability being something to consider when the economy is stable and times are good, it could become second nature, just as environmental protection has become for Sweden. Though green products are often more expensive than their less sustainable counterparts, money is not the only way to express environmental consideration. Actions speak much louder than words, and can even speak louder than wallets when used corrected. Social media activism, when brought into the real world, can

organize and assist in enormous impacts, just as it did with the Occupy Wall Street movement. Therefore, the action rut created by online activism is not a roadblock, but rather an open pathway of possibility if the Millennial generation uses it wisely.

References

Anderegg, William RL, and Gregory R. Goldsmith. "Public interest in climate change over the past decade and the effects of the 'climategate' media event." *Environmental Research Letters* 9, no. 5 (2014): 054005.

Anderson, Janna Quitney, and Lee Rainie. "Millennials will make online sharing in networks a lifelong habit." Washington, DC: Pew Internet and American Life Project. Available at <http://pewinternet.org/Reports/2010/Future-of-Millennials.aspx>. Retrieved on July 10 (2010): 2010.

Associated Press, "Attention Span Statistics," March 18, 2015, <http://www.statisticbrain.com/attention-span-statistics/>.

Athwal, Nav. "The Top 5 Cities Attracting Millennials," *Forbes*, March 2, 2015.

Bowerman, Mary. "Indiana Pizza Shop That Won't Cater Gay Weddings to Close." *USA Today*. Gannett, 02 Apr. 2015. Web. 06 Apr. 2015.

Center for Climate and Energy Solutions. "Climate Change 101: Understanding and Responding to Global Climate Change" (PDF). Cap and Trade. January 2011.

Clifford, Stephanie, and Andrew Martin. "As consumers cut spending, 'green' products lose allure." *New York Times* 21 (2011).

"Climate Change Indicators in the United States," U.S. Environmental Protection Agency, December 23, 2014, <http://www.epa.gov/climate/climatechange/science/indicators/weather-climate/index.html>.

Costanza-Chock, Sasha, *Youth and Social Movements: Key Lessons for Allies* (December 17, 2012). Berkman Center Research Publication No. 2013-13.

DeLuca, Kevin M., Sean Lawson, and Ye Sun. "Occupy Wall Street on the public screens of social media: The many framings of the birth of a protest movement." *Communication, Culture & Critique* 5, no. 4 (2012): 483-509.

Holan, M. "Ice Bucket Challenge has raised \$220 million worldwide." (2015).

"Definition of Clickbait in English" Clickbait: Definition of Clickbait in Oxford Dictionary (American English) (US). Oxford Dictionary, n.d. Web. 06 Apr. 2015.

Dillahunt, Tawanna, Geof Becker, Jennifer Mankoff, and Robert Kraut. "Motivating environmentally sustainable behavior changes with a virtual polar bear." In *Pervasive 2008 Workshop Proceedings*, vol. 8, pp. 58-62. 2008.

Doherty, Thomas J., and Susan Clayton. "The psychological impacts of global climate change." *American Psychologist* 66, no. 4 (2011): 265.

"Energy Trilemma Index," World Energy Council, accessed April 7, 2015, <http://www.worldenergy.org/data/trilemma-index/>.

"Facts About Sweden," The Swedish Institute, accessed April 19, 2015, <https://sweden.se/wp-content/uploads/2013/11/Environment-high-res.pdf>.

Field, C. B., V. R. Barros, D. J. Dokken, K. J. Mach, M. D. Mastrandrea, T. E. Bilir, M. Chatterjee et al. "IPCC, 2014: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change." (2014).

"GDP per capita (current US\$)," World Development Indicators database, World Bank, accessed April 10, 2015.

"Gross domestic product 2013," World Development Indicators database, World Bank, April 14, 2015.

Helman, Christopher. "The World's Happiest (And Saddest) Countries, 2013." *Forbes*. October 29 (2013): 2013.

Howitt, Richard, et al. "Economic analysis of the 2014 drought for California agriculture." Davis, CA: UC-Davis Center for Watershed Sciences. Online at https://watershed.ucdavis.edu/files/biblio/DroughtReport_23July2014_0.pdf (2014).

Johnson, S. C. "The Environment: Public Attitudes and Individual Behavior—A Twenty-Year Evolution." Retrieved 24 (2011): 2012.

“Labor Force Statistics from the Current Population Survey,” U.S. Bureau of Labor Statistics, accessed, April 17, 2015, <http://data.bls.gov/timeseries/LNS1400000>.

Leviston, Zoe, Anne Leitch, Murni Greenhill, Rosemary Leonard, and Iain Walker. "Australians' views of climate change." Canberra: CSIRO (2011).

Madland, David, and Ruy Teixeira, “New Progressive America: The Millennial Generation.” Center for American Progress, 2009.

“Millennials lead growth in spending on green products,” Retail Customer Experience, July 15, 2014.

Mont, Oksana, Matthias Lehner and Eva Heiskanen. “Nudging: A tool for sustainable behaviour?.” Swedish Environmental Protection Agency. 2014.

Morrison, Denton E., and Riley E. Dunlap. "Environmentalism and elitism: A conceptual and empirical analysis." *Environmental Management* 10, no. 5 (1986): 581-589.

National Geographic & Globescan. "Greendex 2014: Consumer Choice and the Environment—A Worldwide Tracking Survey." (2014).

Nirappil, Fenit “No more playing nice: California names and shames water wasters as drought intensifies,” *Associated Press*, April 18, 2015.

Nordhaus, William D., and Joseph Boyer. "Warming the world." (2000).

Paitsel, Nicole, “The Recession Generation: College graduates move back in with mom,” *Daily Press*, October 12, 2013.

Panayotou, Theodore. *Economic growth and the environment*. No. 56. Center for International Development at Harvard University, 2000.

Parry, Martin L., Osvaldo F. Canziani, Jean P. Palutikof, Paul J. van der Linden, and Clair E. Hanson. "IPCC, 2007: climate change 2007: impacts, adaptation and vulnerability. Contribution of working group II to the fourth assessment report of the intergovernmental panel on climate change." (2007): 1-976.

Rubenson, Stefan. "The Swedish Environmental Code." *European Energy and Environmental Law Review* 8, no. 12 (1999): 328-332.

Seppanen, Sally, Wendy Gualtieri, “Millennial Generation Research Review.” US Chamber of Commerce Research Foundation, 2012.

Swanson, Emily. "Poll Finds Americans Less Concerned About The Environment Now Than When Earth Day Began." *Huffington Post*, April 22, 2013.

Stern, Nicholas Herbert. *Stern Review: The economics of climate change*. Vol. 30. London: HM treasury, 2006.

"Summary of the Clean Air Act," Last Modified March 13, 2015, US Environmental Protection Agency.

"The Benefits and Costs of the Clean Air Act From 1990 to 2020," March 2011, US Environmental Protection Agency.

Townsend, Lucy. "How much has the ice bucket challenge achieved." *BBC News Magazine* 2 (2014).

United States. Environmental Protection Agency. *Climate Change Indicators in the United States*. 2010.

Weinreich, Harald, Hartmut Obendorf, Eelco Herder, and Matthias Mayer. "Not quite the average: An empirical study of Web use." *ACM Transactions on the Web (TWEB)* 2, no. 1 (2008): 5.

World Values Survey Wave 5 2005-2008 OFFICIAL AGGREGATE v.20140429. World Values Survey Association (www.worldvaluessurvey.org). Aggregate File Producer: Asep/JDS, Madrid SPAIN.

World Values Survey Wave 6 2010-2014 OFFICIAL AGGREGATE v.20141107. World Values Survey Association (www.worldvaluessurvey.org). Aggregate File Producer: Asep/JDS, Madrid SPAIN.

1975, Australian Government Digest, Volume 2, Number 4, (1 October 1974 – 31 December 1974), (Text of speech on Environmental Policy given by Dr. Moses Henry Cass, Minister for the Environment and Conservation for Australia, Speech was delivered on November 13, 1974 at the Ministerial Meeting of the O.E.C.D. Environment Committee in Paris), Start Page 1143, Quote Page 1145, Australian Government Publishing Service, Canberra, Australia. (Verified with scans; Thanks to John McChesney-Young and the University of California, Berkeley library system).