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Lost In Translation: Environmental Communication Issues in Media and Politics

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INTRODUCTION: THEN AND NOW , WHAT HAPPENED?

For every cause there is an effect, and for every effect, a cause. From infancy, humans quickly acquire the knowledge of causality: "I cry because I am hungry" or "I am fed because I cry". On a micro-level, we learn that all of our personal actions result in some sort of consequence be it good, bad, or indifferent. At a macro-level we understand that the actions of other individuals, nations, and corporations can and do have larger consequences have the potential to affect the global community. We are taught that if there is an undesirable consequence to an action, better known as a problem, there is almost always a solution, usually obtained through behavior modification. In addition, our society stresses the importance of taking ownership of one's actions and resulting outcomes, and expects those who are responsible to make the necessary changes to solve their manufactured complication. Although those responsible for horrific effects rarely take responsibility, others understand their actions can solve the predicaments created by others. And no other effort exemplifies this more than various environmental efforts throughout the 19th and 20th centuries. Organizations such as the Sierra Club, the Audubon Society, the Boone and Crockett club, women's clubs throughout the nation, and individuals like Theodore Roosevelt, Rachel Carson, John Muir, and Richard Nixon understood the idea that human life negatively affects the environment, and used their talents and connections to solve numerous major environmental concerns. From Roosevelt's role in the creation of National Parks, to Muir's involvement in the preservation of Yosemite Valley among other notable efforts, to Rachel Carson's groundbreaking book *Silent Spring* that singlehandedly led to the ban of the DDT pesticide, environmentalism in the 19th and 20th centuries was a result of numerous concerned individuals alleviating national concerns through swift action.

- Within a year of its 1962 publication, *Silent Spring* was not only a best-seller, but the catalyst for President John F. Kennedy's Science Advisory Report on "The Use of Pesticides" which "called for decreased use of toxic chemicals to chemical controls that were less persistent in the environment" (McLaughlin). The EPA was founded in 1970 (EPA website). DDT was banned a decade later (McLaughlin).
- Between 1887 and 1909, Theodore Roosevelt established the Boone and Crockett Club that aided in the preservation of Yellowstone, he established 50 animal refuges including the Pelican Island Bird Reservation in Florida, the Reclamation Service, federally protected 16 million acres of forest through the Bureau of Forestry, established 18 national monuments including the Grand Canyon National Monument and Muir Woods in California (PBS *The American Experience*)
- During his four years in office, Richard Nixon signed the National Environmental Policy Act, the Clean Air Act Extension of 1970, Marine Mammal Protection Act of 1972, Endangered Species Act of 1973, and the Safe Drinking Water Act of 1974 into law, and established the Environmental Protection Agency. (Gunther)

Through their efforts, these individuals along with the millions of other environmentally-conscious citizens proved that through action, humans can enact environmental change. Such changes also demonstrate an environmentally-informed and concerned public. One that, like in the case of *Silent Spring*, sought-out scientific fact, accepted the findings, and called for immediate action.

Environmental efforts enacted by the conjunction of the public, media and politicians were short-lived as a new generation of environmental policy swept over the country. Compared to the swift influence and actions of Rachel Carson, Theodore Roosevelt, John Muir and Richard Nixon, this new school of environmental thought throughout the United States, alienated environmentalists, and instead, fueled by special interest, focused on the economic pitfalls of environmental efforts. Less than forty years after Nixon's resignation, vital environmental laws were repealed or redefined to favor industry practices, and the Kyoto Protocol remains unratified to this day.

In a nation with a rich history of drastic, effective environmental action, it begs the question: "Why does a majority of the American public and government continue to ignore, downplay, or outright deny the existence of global warming and climate change?" After all, for hundreds of years most rational humans have given credence to thousands of scientifically-sound theories, laws, and phenomenon from Newton's Laws of Motion and Gravitation, the effects of aerosols on the ozone, to second-hand smoke's link to cancer. So why is it so difficult to convince a nation that a phenomenon, whose cause the UN declared as "very likely due to the observed increase in anthropogenic GHG concentration" (Climate Change 2007: Synthesis Report, 5) exists?

Such a question does not have a simple answer. If history were to repeat itself, with a wealth of scientific data supporting the issue, most Americans should accept the existence of global warming and climate change and the effects on our environment. However, the data tells a radically different story. In a study, scientific historian Naomi Oreskes

Analyzed 928 abstracts from referred scientific journals with the keywords 'global climate change' published from 1993-2003 and discovered that none of the papers disagreed with the [Intergovernmental Panel on Climate Change's] consensus. However, most Americans remained unaware that a scientific consensus existed...public opinion polls...the latest taken in 2007, indicate that a majority of Americans believe there is "a lot of disagreement among scientists" over "whether or not global warming is happening" (Ceccarelli 204-5)

This discord is caused by a variety of factors; however, there is one general theme: misinformation. Media outlets, politicians, special interests and other public figures continue to provide inaccurate information to the general public by disseminating this idea of a "global warming debate", regardless of the international scientific consensus that acknowledges the existence of global warming and climate change. Despite overwhelming scientific evidence, the

current media and political climates, combined with misleading environmental rhetoric, drastically misrepresent and under represent global warming and climate change, therefore propagating environmental inaction and ignorance amongst the general American public.

1. THE NAME GAME: GLOBAL WARMING RHETORIC

1A. The United Nations Climate Change 2007: Synthesis Report

In 2007, a group of experts and scientists from around the globe released a United Nations-backed report titled Climate Change 2007: Synthesis Report. Throughout its seventy-three pages, the report painstakingly details climate and temperature changes throughout history, anthropogenic impacts on the environment, causes of climate change "projected climate change and its impacts", "adaption and mitigation options", and the long-term effects of "anthropogenic interference" (Climate Change 2007: Synthesis Report). According to the report

Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice and rising global average sea level" (Climate Change 2007: Synthesis Report, 2).

The report goes on to state that

Most of the observed increase in global average temperature since the mid-20th century is *very likely* due to the observed increase in anthropogenic GHG concentrations. It is *likely* that there has been a significant anthropogenic warming over the past 50 years averaged over each continent (except Antarctica). (Climate Change 2007: Synthesis Report)

When discussing the likelihood of global warming causes, consequences and effectiveness of various lifestyle changes, the authors used three unique methods to “describe uncertainties...with a distinct form of language” (Climate Change 2007 Synthesis Report). Italicized words such as *likely*, *very likely*, *high confidence*, and other terms are defined through rigorous statistical analysis as defined in the “Treatment of Uncertainty” table below, found in the index of the full Climate Change 2007 Synthesis Report.

Treatment of uncertainty

The IPCC uncertainty guidance note defines a framework for the treatment of uncertainties across all WGs and in this Synthesis Report. This framework is broad because the WGs assess material from different disciplines and cover a diversity of approaches to the treatment of uncertainty drawn from the literature. The nature of data, indicators and analyses used in the natural sciences is generally different from that used in assessing technology development or the social sciences. WG I focuses on the former, WG III on the latter, and WG II covers aspects of both.

Three different approaches are used to describe uncertainties each with a distinct form of language. Choices among and within these three approaches depend on both the nature of the information available and the authors' expert judgment of the correctness and completeness of current scientific understanding.

Where uncertainty is assessed qualitatively, it is characterised by providing a relative sense of the amount and quality of evidence (that is, information from theory, observations or models indicating whether a belief or proposition is true or valid) and the degree of agreement (that is, the level of concurrence in the literature on a particular finding). This approach is used by WG III through a series of self-explanatory terms such as: high agreement, much evidence; high agreement, medium evidence; medium agreement, medium evidence; etc.

Where uncertainty is assessed more quantitatively using expert judgement of the correctness of underlying data, models or analyses, then the following scale of confidence levels is used to express the assessed chance of a finding being correct: very high confidence at least 9 out of 10; high confidence about 8 out of 10; medium confidence about 5 out of 10; low confidence about 2 out of 10; and very low confidence less than 1 out of 10.

Where uncertainty in specific outcomes is assessed using expert judgment and statistical analysis of a body of evidence (e.g. observations or model results), then the following likelihood ranges are used to express the assessed probability of occurrence: virtually certain >99%; extremely likely >95%; very likely >90%; likely >66%; more likely than not > 50%; about as likely as not 33% to 66%; unlikely <33%; very unlikely <10%; extremely unlikely <5%; exceptionally unlikely <1%.

WG II has used a combination of confidence and likelihood assessments and WG I has predominantly used likelihood assessments.

This Synthesis Report follows the uncertainty assessment of the underlying WGs. Where synthesised findings are based on information from more than one WG, the description of uncertainty used is consistent with that for the components drawn from the respective WG reports.

Unless otherwise stated, numerical ranges given in square brackets in this report indicate 90% uncertainty intervals (i.e. there is an estimated 5% likelihood that the value could be above the range given in square brackets and 5% likelihood that the value could be below that range). Uncertainty intervals are not necessarily symmetric around the best estimate.

This table is vital to the report in that it places numerical and statistical value on what otherwise may seem to be a broad interpretation of a set of adverbs and adjectives. However, this table is not included in the abridged Summary for Policymakers report. In not providing detailed explanations of the statistical value of the italicized terms, the value of such language is then decided by the judgment of the policymaker. Although referenced in the Summary for Policymakers in a footnote: “Words in italics represent calibrated expressions of uncertainty and confidence. Relevant terms are explained in the Box ‘Treatment of uncertainty’ in the Introduction of this Synthesis Report” (Synthesis Report 2), the box’s notable absence prevents policymakers from accurately realizing the true risks and potential consequences of global warming and climate change.

1B. A Change They Don't Believe In

However, the ill-defined climate change rhetoric only begins with the United Nations Climate Change 2007: Synthesis Report. Throughout the past decades, organizations, news agencies and politicians continue to redefine global warming and climate change. Popularized by James E. Hansen after a congressional hearing in 1988 (NASA website), the term has since evolved from global warming to global climate change adopted by the Intergovernmental Panel on Climate Change (IPCC website). According to the National Academy of Sciences, climate change has become the preferred name of the issue due to the fact that “climate change helps convey that there are [other] changes in addition to rising temperatures” (EPA, 3). However, there may be another reason for the name change. According to a leaked American Petroleum Institute document, a seven-year study concluded that

Climate change' is less frightening than 'global warming'. While global warming has catastrophic connotations attached to it, climate change suggests a more controllable and less emotional challenge” (Luntz Research Companies, 142).

The more “tolerable” term climate change combined with continuing changes to definitions of global warming and climate change, undermine the seriousness of the situation at hand, as such indecision can and is interpreted by the media and public opinion as an issue of contention among the scientific community (see Naomi Oreskes' experiment above PAGE).

2. Case Study: President Obama's Changing Dialogue

One of the largest issues in environmental communications is not only the changing rhetoric but the ever-increasing focus on “energy” and “renewable energy sources”, and the decreasing focus on the realities of climate change amongst political leaders in the United States. In a study performed by Brown University, researchers sifted through 1,606 of President Obama's speeches from January 2008 until January of 2011, taking note of any reference to

energy, climate change, global warming and other related vocabulary. The terms were then categorized into two groups: climate or energy. According to the study

The overall ratio for this 3.5 year period is 7.6:1; energy is mentioned over seven times for each mention of climate change. The ratio of energy to climate rhetoric usage was 9.6 in 2008, 5.0 in 2009, 10.6 in 2010 and 14.6 in the first half of 2011. These ratios...tripled between 2009 and 2011-revealing the administration's urgency to outpace..."climate change" imagery with a more upbeat promise of "clean energy". Noteworthy are the State of the Union speeches...these speeches regularly favor energy to climate change messages. In 2009, climate change was mentioned three times to energy's 15; and in 2011, while energy was mentioned 9 times, climate change was not mentioned at all (Kincaid 1).

The Obama Administration's focus on energy and "clean energy", rather than the ongoing issue of global warming and climate change as a whole, encapsulates the attitudes of most politicians and Washington elite in regards to global warming and climate change. Politicians' focus on energy and "clean" energy distract the average citizen from the larger issue at hand. As lawmakers discuss options such as "clean" coal, natural gas, and nuclear energy, the attention is drawn away from actual issue of global warming and climate change. Such rhetoric provides the public with a false sense of environmental security. Additionally, ignoring arguably the most important issue of the century, legislators continue to spread inaccuracies and false truths about global warming and climate change to the American public. In turn, the deluded American public will not pressure lawmakers into enacting environmentally-friendly legislature, as it is not viewed as a pressing issue for most United States citizens.

3. Living in a Digital World: Global Climate Change and the 24/7 News Cycle

There is another major player in this environmental misinformation game: the media. Once thought to be truth-seekers and "muckrakers", journalists and media outlets usually pride themselves on their ability to produce fair and balanced stories for the masses. Although balance is still enforced in the industry, throughout the past two decades, there has been a drastic shift

from straight, detailed, fact-checked news stories, called “hard news”, to sensational, substance-lacking, tabloid-esque stories. Oftentimes, climate and environmental stories will be overlooked as they are considered “old news” and it is assumed that viewers are uninterested in a decades-long issue. Due to the advent of the Internet that provides new news by the second through social media and news websites, and blanketing twenty-four hour news coverage often referred to as the “CNN effect” (Cate), the sensationalization of the news forces journalists to seek audience-pleasing stories in order to hold viewers’ attention, and increase ratings and ad revenue.

According to North Carolina State University Sociologist Dr. Thomas Hoban “The media are generally more interested in politics than science, in simplicity than complexity...they often look for controversy and emphasize opposing views” (Kuban 6).

4. Climategate and the Media

A paramount example of such controversial journalism practice was “Climategate”, in which hackers released several sensitive emails from the Climate Research Unit at the University of East Anglia in the United Kingdom (Leiserowitz 2). Although the emails did discuss errors in the 2009 4th Assessment Report, such as glacier melting in the Himalayas, the emails never claimed the nonexistence of global warming and climate change (Leiserowitz 2). Yet despite the very little evidence of a “global warming conspiracy”, after the emails were leaked to the public, a worldwide media firestorm ensued. As Climategate unfurled, both tabloid and legitimate media outlets sensationalized the emails, crafting headlines such as “Hackers leak e-mails, stoke climate debate” (AP 11/21/09), “Hacked E-Mail is New Fodder for Climate Change Dispute” (NYTimes 11/20/09), “Climategate: The final nail in the coffin of ‘Anthropogenic Global Warming’?” (The Telegraph UK 11/20/09), and “Climate Skeptics See ‘Smoking Gun’ in Researchers’ Leaked E-Mails” (Fox News 11/21/09).

5. Case Study #2: Fox News Special: Global Warming or A Lot of Hot Air?"

One of the most extreme illustrations of the media over-dramatization of Climategate was a Fox News documentary titled "Global Warming....Or A Lot of Hot Air?" In 2009, averaging over 2.5 million viewers per day (Shea 1), Fox News released a forty-three minute "news story", one month after the release of the emails. In the video, Fox News journalists claim that global warming and climate change is not only a naturally occurring phenomena with little impact on the environment and our society, but also a myth fabricated by the United Nations and scientists in an attempt to force developed countries into providing extensive aid to impoverished nations. Feeding off of economic and nationalistic fears of their viewers, Fox News crafted a story filled with generalizations, biased interview questions, economists, and Fox News opinion polls. At the start of the program, anchor Bret Baier leads off with a Fox News opinion poll. Says Baier

To many Americans things [climate change and global warming] don't seem that dire. So it's not too surprising that in the latest Fox News poll, for the most important job for the federal government, Americans ranked global warming dead last. But as Eric Sean reports, proponents of a Copenhagen deal don't have the same priorities" ("Global Warming....Or a Lot of Hot Air?").

In using the poll in the newscast, Baier suggests that global warming and climate change is not a scientific fact, but rather a far-reaching theory constructed by special-interest scientists apathetic to the opinions of the American people. Moreover, Baier latches onto the idea of "seeing is believing" when he suggests that "things don't seem that dire", therefore implying that if the effects of global warming and climate change cannot be directly observed by the average American, then the issue is moot. However, according to the UN Climate Change 2007: Synthesis Report, most noticeable effects of global warming and climate change will occur in the nearer future.

For Africa “by 2020, between 75 and 250 million of people are projected to be exposed to increased water stress due to climate change. By 2020...yields from rain-fed agriculture could be reduced by up to 50%”, for Australia “By 2020, significant loss of biodiversity is projected to occur...including the Great Barrier Reef”, for Latin America “the people at risk of hunger is projected to increase”, and in North America “Cities that currently experience heat waves are expected to be further challenged by an increased number, intensity and duration of heat waves during the course of the century, with potential for adverse health impacts” (UN Climate Change 2007: Synthesis Report, 11).

Although North Americans may not see many effects of global warming and climate change, areas throughout Africa, Southern Asia, and Australia are already suffering greatly with widespread droughts and rapidly rising temperatures in existing warm climates (UN Climate Change 2007: Synthesis Report, 6). Baier’s encouragement of xenophobic environmental policy and thought rooted in outright denial creates a divide between the United States and the rest of the globe, creating an “us versus them” public mentality. In other words, if it is not affecting the United States, then legislators and Americans should not bother with it.

Again exploiting existing economic woes and nationalistic paranoia of their viewership, reporter Eric Shawn warns the audience of the “dangers” that global warming and climate change fears “will” produce. Shawn argues that the United Nations and the Copenhagen Climate conference is essentially a Ponzi scheme, collecting aid from developed countries, and investing it in the welfare of the impoverished with the promise of high environmental returns and decreases in CO₂ emissions, which according to Shawn, has no environmental impact; thus aiding nations will reap no benefit. Sean goes so far as to call the then-Secretary of the UN Framework on Climate Change Yvo de Boer a “salesman-in-chief of the Copenhagen Climate Conference”, and claim that there is a widespread “worry that there will be a worldwide bureaucracy...telling us what light bulbs to buy, what cars to drive”, and that “fears of climate change may put democracy in the balance” (“Global Warming....Or a Lot of Hot Air?”). In airing

a highly-inaccurate “news” story on a top-rated television network viewed by millions each day, the seriousness of global warming and climate change are negated, and the public continues to remain ignorant to the burgeoning dangers associated with global warming and climate change.

6. A Balancing Act: Journalists and the Climate Change “Debate”

Climategate had a tremendous impact on public opinion in the United States. However, before delving into the scientific evidence of the ramifications of the media coverage of Climategate, another major issue plaguing journalism and the media must be addressed. As a working journalist herself, this author understands the importance of balance in a news story. Legitimate media outlets constantly stress story balance in order to prevent accusations of biased reporting. Yet, this focus on balance and addressing all angles in a story actually inhibits journalists from reporting the truth, especially in the case of environmental journalism. Despite an overwhelming scientific consensus on the existence of global warming and climate change, journalists often include opposing viewpoints, usually provided by climate change dissidents such as politicians, economists, and a few rogue scientists. In the words of Jarvis Nitz “The media are scientifically biased in that they promulgate the opinions of anyone claiming to be an expert” (Kuban 10). In the case of the Fox News presentation “Global Warming...Or A Lot of Hot Air?”, the network’s main objecting climate change “experts” included scientist Dr. Patrick Michaels of the Libertarian think-tank the CATO institute, a former mining executive Stephen McIntyre, and Canadian economist Ross McKittrick (“Global Warming...Or A Lot of Hot Air?”). Although Dr. Michaels is a climatologist, he has been widely criticized by the scientific community for his research. According to President Obama’s Senior Advisor on Science and Technology Issues, John Holdren, Michaels “is another handful of US climate-change contrarians...He has published little if anything of distinction in professional literature, being

noted for his shrill op-ed pieces and indiscriminate denunciations of virtually every finding of mainstream climate science” (Holdren 5). Despite only one individual having the proper degree and credentials to speak about global warming and climate change, Fox News used the objections of amateurs as expert opinion.

Fox News is not the only media outlet guilty of such practices. In an Iowa State University study performed by Adam Jeremy Kuban, researchers analyzed the number of “expert” sources cited by the top three television networks: CBS, ABC, and NBC. According to the study the networks consulted 250 sources between January 2000 and December 2005, and only 56% of the citations were from scientists or science-related stories, while 22% were political or governmental figures (Kuban 18). The data shows, as stated by University of Wisconsin-Madison Journalism and Mass Communications Professor Sharon Dunwoody

Many newsrooms assume that good journalistic account must give approximately equal space or time to the various positions regardless of the probable validity of any one claim...an informed scientist’s standpoint on global climate change receives the same amount of time and play as a politicians’ perspective regardless of which testimony is more accurate. (Kuban 8)

The media practice of legitimizing opposing yet unqualified persons as experts on global warming and climate change in order to maintain a “balance” in the story misleads the public. By calling them experts, the public then believes their words have as much weight as expert scientists, when in reality many dissidents of global warming and climate change are financially backed by special interests that stand to lose earnings if the American public accepts the existence of anthropogenic global warming and climate change. This will be discussed in the next section titled “Special Interest’s Role in Global Climate Change”.

7. Special Interest’s Role in Environmental Communications

Special interests have always played a part in policy-making in Washington. Over the

past few decades, special interest groups have waged war on global warming and climate change. Aided by Washington's "revolving door", industry sponsored "research institutes" and strategic media relations, special interest is a major factor in delivering misinformation to the masses. For example, a leading global climate change dissident Dr. Patrick Michaels, according to a 2006 ABC news report, Michaels received \$100,000 from the Intermountain Rural Electric Association, a major investor in coal-fueled power plants (Sandell and Blakemore). The board of Michaels' employer, Libertarian think-tank CATO, an active climate change opponent, contains a variety of special interest individuals including Charles G. Koch, the CEO of energy conglomerate Koch industries (Koch website), John C. Malone, chairman of Liberty Media Corp. which controls 18% of News Corp, Fox News's father company (Forbes), and Preston Marshall of oil exploration company, MarOpCo Inc (Texas Secretary of State). Although it cannot be proven, CATO's stance on global warming and climate change compliment the business ventures of its board of directors.

However, unrelated to CATO, the aforementioned leaked 1998 American Petroleum Institute memo provides evidence that a special interest group planned to deceive and misinform Americans about global warming and climate change. According to Leah Ceccarelli, the memo

Begins with the result of a survey that suggests the public is more likely to oppose restrictions on carbon emissions if told that some scientists contest claims about anthropogenic climate change. It then proposes an action plan for a "National Media Relations Program to identify, recruit and train five new independent scientists who will participate in media outreach to organize, promote and conduct through grassroots organizations... [and] hit news organizations with a steady stream of material to undercut conventional wisdom on climate science...[and] track the percent of media articles that raised questions about climate science" as a ways to measure whether the goal had been met. (Ceccarelli 2006)

With special interest's increasing role in the media and science, the line between scientist and expert, scientific fact and amateur opinion, and legitimate educational academies and industry-financed institutes is almost unrecognizable for the average American. This blurring of the lines

gives rise to the popularity of the idea of a global climate change “debate”, as special interests flood media outlets with anti-climate change propaganda, forcing scientists to defend decades of research supporting global climate change.

8. Human Inaction: Why we won't Accept Global Climate Change as a Reality

The combination of ever-changing rhetoric, media sensationalism, lack of coverage and inaccuracy, and the role of special interests in the media, it is understandable that individuals are hesitant to acknowledge the existence and consequences of global warming and climate change, especially when humans historically do not react well to gradually increasing issues and lifestyle changes. According to Professor Thomas Homer-Dixon “Human beings are notoriously poor at responding to problems that develop incrementally. And most of us aren't eager to change out lifestyles by sharply reducing our energy consumption” (Spencer 385). Moreover, Wouter Veening, President of the Institute of Environmental Security explains this unwillingness to accept scientific fact as “cognitive dissonance” defining it as “the awareness of the tension between the kind of behavioral change the progressing climate science implies...and the actual...behavior we practice. Either you have to make your behavior consonant with the science, or you have to discard the science. Psychologically, the latter is the easiest. It is easier to reconnect a few threads in your brain, than to step out of your air-conditioned or well-heated car and wait for the bus in a bus station which is cold, hot, dirty and full” (Spencer 385). Because humans are unwilling to sacrifice parts of their lifestyle for the good of the environment, they simply ignore scientific fact altogether, as denying global warming and climate change makes it easier to maintain a chosen lifestyle.

Another issue is Americans' ever-decreasing attention spans. With various social

media and technologies, Americans are constantly stimulated. As news, shopping, sports, games, and information in general can be accessed instantly, humans become used to this feeling of instant gratification, and therefore everything and everyone to act just as quickly. Author Tina Wells describes this phenomenon as “Instanity...this convenience has led us to expect everything now...We want our economy fixed right now. We want wars finished right now. In a world of 24/7 news cycle, there is just no time for later” (Wells). Living in a constant state of now inhibits Americans from considering the potential future, and provides them with a false sense of security that, because an issue is not in the news, it must be solved or unimportant. A dangerous combination when dealing with global warming and climate change.

9. How We Can Change It All

However, just because a human brain is conditioned to take the easy way out that does not mean massive changes can be effected in order to reverse global warming and climate change. Everyone just needs to get creative. As a country we need to make appeals for change that are far different than has ever been tried before. We must turn our efforts away from promoting green products, alternative energy sources, and macro-level examples, and focus on global warming and climate change’s effect on the individual through news coverage, education, and campaigns.

The average American citizen does not receive information about global warming and climate change from scientific journals that contain the most accurate information on the topic. Therefore, media coverage of global climate change must increase in quality and quantity. According to Kuban’s study, between 2000-2206, “Only a meager 97 transcripts over a six-year span across three networks included source citations that attempted to explain the causes, consequences, and solutions related to global climate change” (Kuban 25). In order to increase

global warming and climate change media coverage, journalists must band together in fighting against the demands of the networks. They must cover stories that may be deemed unpopular, and refuse to compromise their journalistic integrity in order to increase viewership.

Additionally, journalists must make the shift from informers to educators. Without a strong scientific background, scientific findings and studies may prove to be difficult to understand for some Americans. Journalists should present the details in a way that not only gets the story across, but explains it in such a way that it is comprehended by and resonates with the masses. One way to do this is make the stories personal. Instead of booking a talking head to discuss rising ocean levels, feature a story on the Canary Islands and its people, and discuss the effects that global climate change is having on residents there. Essentially, the media needs to appeal to viewers' emotions, rather than preying on their fears. This shift will allow more journalistic freedom, while effectively increasing awareness of global warming and climate change that may induce changes in US environmental policy.

Education in children's shows is an effective way to increase awareness amongst children and build a future base of environmentally-concerned individuals. To this day, this author cannot litter because of an episode of *Sesame Street*. By informing children during their developmental period, the more likely they will carry lessons learned and information retained into adulthood.

Comprehensive government-sponsored media campaigns can also raise awareness, if executed properly. Instead of launching campaigns aimed at just recycling or deforestation, these environmental campaigns should be about making oneself an informed environmental citizen. Billboards, online ads, and other forms of advertisement testing the environmental knowledge of individuals with a provided link to the answer, will engage viewers and onlookers, and facilitate conversations, inquiries, and perhaps, change. By adding a sense of mystery to the campaigns

and playing into, for lack of a better word, humans' inferiority complexes, informed citizen campaigns would be far more effective than apocalyptic or "clean energy" images used today.

Lastly, and perhaps most importantly, media outlets, private businesses and the public sector must emphasize the financial benefits of "going green". It is apparent that informing customers how much money per year they are saving by not buying a one dollar bottle of water is ineffective. Industries and Washington must provide substantial financial incentives in order for Americans to change their lifestyles. Investment opportunities such as socially-conscious investing programs, tax breaks on solar panels, use of recycled material in homes, public transportation use, energy-efficient appliances, and organic farming, and through identifying environmentally-sound emerging, profitable sectors in financial markets will create a desire to alter an individuals' way of life. By exposing the profitability of living a green lifestyle, more individuals will be inclined to make the change.

Global climate change is the most serious issue facing our world today. Despite decades of research and thousands of top-scientists in agreement that global climate change exists and is a serious threat to the environment and living beings, Americans continue to deny and ignore the data. The combination of changing environmental rhetoric, the present media atmosphere, and special interests groups' influence on science and the media, Americans constantly receive mixed-messages and misinformation about global warming and climate change. These mixed messages are interpreted by individuals and the media as a "debate" on global warming and climate change, when in reality there is no room for debate. As global warming and climate change continue to lose media attention, radical changes must be enacted by journalists, Washington, and individuals alike if we want to protect the environmental security of America and the rest of the world.

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