

Climate Change: Fact or Fiction, Changing the Deniers Mindset

Climate Change is an environmental, cultural, and political phenomenon proven by scientific evidence, that if not embraced by climate deniers, threatens humanity's future. Climate change is evidenced not just by scientific studies and daily life activities, but by extreme weather conditions akin to the California wildfires, Hurricane Maria in Puerto Rico, coastal storms in the Northwest and Hurricane Sandy, the storm that personally affected my family and friends in New Jersey. The American Association for the Advancement of Science Board of Directors asserts that "the scientific evidence is clear: global climate change caused by human activities is occurring now, and it is a growing threat to society" (American Association 2009). To accept climate change in the United States, society needs to trust the scientific evidence supporting climate change and be receptive to encounter reasonable risk to change habits with less reliance on fossil fuels, promotion of climate change citizenship, legislative initiatives and strong societal development. Citizens need to unite their communities to build an effort to engage family, friends and neighbors in conversations about climate change benefits. Refutably, "American climate change deniers have been remarkably successful in confusing public opinion and delaying decisive action" (Collomb 2014, 1). Climate scientists publish journals based on scientific inquiry with detailed data, charts, and technical support, "concluding that human activity impacts the climate, but politicians and media always trying to provide an objectivity to issues, discredits scientific findings by exploiting uncertainty in science" (Vardy et al. 2017, 61-2). This skepticism converts to a widespread rejection of scientific evidence by climate deniers. To back a robust economy and during times of societal transformation, United States fossil fuel conglomerates and conservative industrial capitalist organizations lobby to challenge and undercut climate change consensus, invoking the theory of "anti-reflexivity", attacking

environmental science to protect their own economic business interests “to disavow its impact, where contingency and uncertainty looms from institutions [suffering] from legitimacy crises brought on by their inability to solve the ... problems of modernization effectively” (McCright 2010, 103-5). I will argue that American conservative organizations lobby heavily against climate change and distance themselves from the climate change consensus or employ scientists to purposely create conflict among their peers to manifest the smallest discrepancy in scientific reporting. I will also prove this minority of deniers, the “twenty-five percent” of American consumers who doubt climate change because they view that climate change mitigation efforts are limiting, not inclusive of a better society, and communication to promote buy-in is virtually non-existent (Maxwell 2016, 289). In addition, Americans have vast resources available to them and accepting climate change disrupts the American way of life, as choices appear limited. Climate deniers need benefits expressed to them in ways that are understandable, otherwise, to maintain harmony, deniers will select inaction. Scientists’ conflicting communication is partly to blame, as their reports invite individuals to distrust climate change. The scientific community, public advocates and policy makers need to compose consistent climate change narration and legislation that can convince the eclectic audience of United States deniers the severity of climate change, to focus on realistic and positive benefits, solutions and mitigation.

The basis of climate change once considered a passing trend is now a reality dangerous to the future of American people. It is of no surprise that global warming is occurring and the basis for extreme weather conditions in the United States. Human activities have exacerbated the density of greenhouse gases, which include fossil fuels, such as coal, gas, oil and other substances of “carbon dioxide, methane, nitrous oxide, and several other fluorine-containing halogenated substances. From 1990 to 2017, total United States [greenhouse gas] emissions have

increased by 1.3 percent”, despite a slight decline in 2017 (Environmental Protection Agency 2019). This increase is a direct result of human consumption burning fossil fuels affecting health, water, energy, transportation, agriculture, forests, ecosystems and the interactions among these sectors at the national level. America’s landscapes vary dramatically, but within the diversity of each community there must be some commonality and shared attributes with personal anecdotes where families have been affected by climate change. Every United States community faces one challenge or another as a result of climate change, whether it is flooding, hurricanes, tornadoes, forest fires, declining sea levels or other climate disasters. Climate change will be a climate disaster and a real threat to society; it is an obligation of all climate stakeholders to convert deniers to non-deniers.

Scientific evidence and detection of climate change has been continuous, transparent, and with growing sophistication of physical tools and models, assessing the changes in the Earth’s climate globally, and in the United States. The Climate Science Special Report, produced in 2017 has synthesized climate research technical reports and peer-reviewed journals to ensure authenticity, objectivity, and integrity of reporting and assigns a confidence level to findings to equalize possible outcomes. It documented how climate change is affecting weather in the United States and “highlights the increase in greenhouse gases, global temperature warming, the rise of sea-levels, the increase in forest fires and heavy rainfall accompanied by extreme weather conditions” (U.S. Global Change Research Program 2017, 10). The Intergovernmental Panel on Climate Change (IPCC), an international body of 195 nations, which includes the United States, conducts scientific research on climate change, is instrumental in “helping transform climate change from a marginalized phenomenon to one that is now widely recognized as requiring action” (Vardy et al. 2017, 57). The evidence for climate change is undebatable, evidenced over

and over again and an all-on-hands-deck approach consisting of private and public advocates is necessary to abate climate change and overturn climate deniers viewpoints to obtain their engagement.

For decades, global warming has been threatening the atmosphere. In 1988, “Dr. James E. Hansen of the National Aeronautics and Space Administration told a Congressional committee that it was 99 percent certain that the warming trend was not a natural variation but was caused by a buildup of carbon dioxide and other artificial gases in the atmosphere” (Shabecoff). Dr. Hansen is now an adjunct professor at Columbia University’s Earth Institute, directing the Climate Science, Awareness, and Solutions program. He is also an advisory board member of Citizens’ Climate Lobby (CCL), a nonprofit grassroots advocacy organization, that began in October 2007 to focus on national policies to address climate change from a bipartisan perspective. What’s most interesting is that “CCL Led Lobby Meetings increased steadily from 2010 to 2017 from 106 to 1,682, then in 2018, Meetings decreased to 1,406” (Citizens’ Climate Lobby 2019). This decrease makes me wonder that CCL is more partisan than it advertises given the negative climate change perspective of the White House. Despite the decline of meetings, with chapters across the country, CCL has made inroads speaking and tabling events, writing to congress, and supporting legislature for the Energy Innovation and Carbon Dividend Act, H.R. 763. This bill “imposes a fee on the carbon content of fuels, including crude oil, natural gas, coal, or any other product derived from those fuels that will be used so as to emit greenhouse gases into the atmosphere” (2019). This carbon tax is long believed “to reduce greenhouse gas emissions from the use of energy by raising its cost and once the tax is collected, recycle it in terms of credits back to businesses and households, reinvesting the revenue to spur economic growth” (Lipman 2014). I believe an energy carbon tax bill is an effective strategy to mitigate

climate change, but society continues to have an obligation to convert climate deniers to believers to ensure such a bill is passed and bipartisan support is cultivated by advocacy groups similar to Citizens' Climate Lobby, despite the political climate of the day.

Contrary to scientific consensus, climate deniers harp on any scientific uncertainties to justify inaction and postpone climate change mitigation. "Appeals to uncertainty are so pervasive in political and lobbying circles that they have attracted scholarly attention under the name Scientific Certainty Argumentation Methods" which supports climate deniers, naturally seeking an excuse to distrust scientific researchers who are "trained to think in uncommon ways, and are accustomed to possessing views that may differ from their colleagues, let alone from the public at large", placing them in a defensive position having to "engage in dialogue with opposing arguments" (Lewandowsky 2015, 1-4). Scientists operate within miniscule margins of errors and may under or overestimate their measurement findings. They are data driven and report truthfulness with facts based on objective results. Scientists lack the soft skills necessary to engage society and corporations in vernacular that is understood and accepted by the public and private sectors without feeling intimidated, feared, threatened or out of their comfort zone, risking their daily activities and separating themselves from their expected norms. When scientific results contradict scientists' peers, society and media rush to judgement to unilaterally discredit and devalue all climate change scientific research, based on an error in one or more studies, without regard to legitimate reporting. This raises public awareness that uncertainty exists, and lobbyists and American conservative organizations grasp these misunderstandings to promote their subjective interests to boost capital gains and suppress climate change transformation.

These conservative industrialist organizations are public relations savvy and while not definitive, are often top-heavy by “self-identified conservatives and Republicans, [who] have become increasingly less supportive of environmental protection compared to their liberal and Democratic counterparts, and this divide has been more notable among elites, such as members of Congress ...” conspicuously Republicans, who regained control of the Congress in 2010 (McCright 2010, 107). “Ties between corporations and conservative ... think tanks have been well-documented. There is no denying that, in the short term, some industries, such as the coal industry, have a vested interest in averting any government plan to reduce carbon emissions” (Collomb 2014, 1). This capitalizes on the political theory of the “second dimension of power”, whereby conservative industrialists prefer an alternate reality “by confining the scope of decision-making to only those issues that do not seriously challenge their subjective interests by preventing observable conflict from arising in the first place by shaping people’s perceptions, beliefs and subjective interests via ideology and propaganda” (McCright 2010, 106). It is well known that President Trump does not endorse climate change, stating in 2012 that, “climate change was a hoax invented by the Chinese to make the United States manufacturing less competitive” (SustainabilityX 2018). He spreads viral messages on Twitter and disregards climate change because the views of scientists do not concern his subjective interests, therefore he thwarts progress and then back-pedals on his comments, further confusing the public. Graham Readfearn, a climate and environmental journalist who writes for *The Guardian* “sifted through internal documents from the fossil fuel industry, identifying groups of lobbyists, think tanks, and PR professionals that have conspired with the industry for decades on misinformation projects about climate change” (Maxwell 2016, 294). This media spin is disturbing and perpetuates the climate change controversy upholding uncertainty. Furthermore, “the Koch Brothers, who have a

consortium of fossil fuel entities associate themselves with a conservative advocacy group, Americans for Prosperity who went as far as to launch a No Climate Tax Pledge, which received 164 Republican Congressional leader signatures, stating that they will oppose any legislation relating to climate change that would include a massive tax hike” (Collomb 2014, 9). This is intended to preserve wealth at the corporate level and to deepen the pockets of conservative organizations. This makes corporations’ board of directors ecstatic as it supports their short term income interests, rather than simultaneously considering climate change or environmental initiatives, sought by many corporations who are conscientious consumers of social responsibility. What’s more, these fossil fuel conglomerates dominated by special interest groups lobby to members of Congress to act in their self-interest, without regard to societal need or environmental justice, creating dysfunction between policy makers and scientists, an obstacle to making climate change progress to transform deniers.

Climate change denial permeates American conservative corporations to avoid its existence and refute its reality, choosing anti-reflexivity as an insular way to avoid modernity. Anti-reflexivity is “anti-environmentalism, a counter-modernizing force because it undermines the ability of modernization to adapt and sustain itself in the face of self-generated threats” (McCright 2010, 105). It appears that established contrarian scientists are affiliated with many conservative organizations, authoring their names to manufactured climate change reports to substantiate skepticism. This skepticism thwarts progressive social movements to align with conservative organization values and mission goals, reasserting their social order. This may be a sad reflection of the politics of today, where lobbyists and scientists presumably manipulate scientific evidence to influence political power to legitimize their contrarian position. Anti-reflexivity is insular in that it protects corporations from adaptation, change and modernization,

“sustaining a given mobilization of bias is ‘non-decision’ making, whereby a ‘non-decision’ is a decision that results in suppression or thwarting of a latent or manifest challenge, [knowingly climate change], to the values or interests of the decision-maker. When conservative movement activists could not directly control the scientific reports created within agencies of the Bush administration, they resorted to disparaging these reports or omitting official reference to them altogether” (106-16). Thus, lobbyists and scientists who lobby for climate change deniers discredit climate change because it directly challenges the personal and corporate interests of those that hired them; therefore, denying climate change is a non-decision as it challenges the status-quo.

Society in general, and American people in particular use scientific statistical errors to substantiate climate change contrarian arguments, to foster reticence to change current situation and are content with known outcomes. Inaction is a climate deniers’ action. “This inertia, along with the well-documented tendency to discount future losses so they seem less pertinent than immediate costs, further mutes people’s appetite for action” (Lewandowsky 2015, 2). The public turns a deaf ear on progressive liberal environmental recommendations, ignorantly citing scientists as alarmists, believing they can avert the risks of climate change as they are accustomed to “[indulging] in material consumption” and feel climate change should not interfere with their consumption (Collomb 2014, 10). Climate change, on a much smaller scale can be compared to charging for plastic or paper bag usage at grocery stores. Society for the most part, considers this an inconvenience, a change to American lifestyle. But that change, which converts to using a recycled bag multiplied by the number of American households, makes a significant difference in waste reduction and minimizes adverse environmental impacts from materials. America is a democracy. When deniers disparage scientific information made to

the public, communicating that scientists are alarmists and that global warming is economically destructive, environmentally insignificant and removes America's freedom to purchase resources that make our lives more comfortable, then it's time to stand up to and for America and dispute the deniers to illustrate the benefits of climate change.

Scientists, policy makers, and public advocates need to convince climate change deniers to embrace the reality of climate change to ensure human existence. This is no easy task. Progress often comes at a cost, but long-term gains and outlook for future generations is a societal moral obligation that is significantly worthwhile to encounter reasonable risk of change, as avoidance may imperil the planet. There is mounting scientific evidence I presented in this paper claiming climate change is now happening. Climate change is fact, not fiction. A multi-pronged approach to converting climate deniers to believers is necessary. Interpretation of climate change holds different meanings to diverse people and corporations with a myriad of beliefs, ideologies, antecedents, and behaviors. Scientists conduct massive technical research reports, producing data with validity, but do not aid in communicating the advantages of climate change, they just validate the fears. The concepts and benefits of climate change need to be clearly communicated, through literature, grassroots organizations like CCL, and social media on a personal level "by understanding the ways climate change connects with foundational human instincts of nostalgia, fear, pride and justice we open up a way [for]...our collective and personal identities and projects [to] take shape" (Hulme 2009, 42). Benefits need to be communicated, instead of uncertainties. People crave acceptance and inclusion but may have difficulty understanding climate change consequences. What if scientists joined media specialists to create a bipartisan plan to promote and communicate the tangible benefits of climate change in layman's terms? What if an updated version of *An Inconvenient Truth* was filmed for widespread

distribution? I believe America needs to resurrect the engagement President Obama demonstrated in the Paris Climate Accord and the UN Framework Convention on Climate Change. Perhaps, the Green New Deal (H. Res. 109) proposed in the House of Representatives in February 2019 is the answer. What if American schools revised the science curriculum to mandate a climate change unit as it appears the burden of climate change may descend upon the next generation? What if economists highlighted the revenue benefits that would be recycled to corporations and households to offset the conversion to solar power, alternative energy, or renewable energy? Climate change and air pollution are linked. Imagine if air pollution was minimized and health was improved, obtaining a multiplier effect by saving money on medical costs and having society pump that money into the economy. These are realistic benefits that need to be communicated to climate deniers to remake them as believers.

Climate deniers would be more motivated to engage in environmental action if their neighbor was doing so to improve health, water, infrastructure, transportation, and the local community center. In a study by Bain, “framing climate change in terms of producing greater interpersonal warmth and societal development was more effective in promoting environmental citizenship than a frame focusing on the reality and risks of climate change, and this was particularly the case for deniers” (2012, 3). It’s really up to each individual within a community to make climate change conversation happen. A common shared outlook on climate change without the clutter needs to take form. Climate change bickering must stop. Activism needs to be multi-faceted. Mobilization needs to be at all levels of society. Climate change is here and now and the United States can no longer wait until a progressive presidential leader, hopefully, takes office in 2020 to combat climate deniers. Climate change is absolute. Climate believers need to stand up to climate deniers with tangible benefits to convince them to preserve humanity by

embracing climate change. Scientists and United States public and private sectors need to engage in bi-partisan conversation to overcome denier obstacles, attitudes and values by emphasizing positive benefits and solutions that directly impact them, otherwise human existence is threatened, and society will encounter a climate disaster.

References

- “Accomplishments.” 2019. *Citizens’ Climate Lobby*. <https://citizensclimatelobby.org/about-ccl/accomplishments/> (April 23, 2019).
- “Climate Science Special Report: Fourth National Climate Assessment.” 2017. *U.S. Global Change Research Program*. https://science2017.globalchange.gov/downloads/CSSR2017_FullReport.pdf (April 22, 2019).
- “Inventory of U.S. Greenhouse Gas Emissions and Sinks.” 2019. *Environmental Protection Agency*. <https://www.epa.gov/sites/production/files/2019-04/documents/us-ghg-inventory-2019-main-text.pdf> (April 19, 2019).
- “Once Upon A Time, There Was A President That Didn’t Believe In Climate Change.” 2018. *SustainabilityX*. <https://sustainabilityx.co/once-upon-a-time-there-was-a-president-that-didnt-believe-in-climate-change-21414c69e829> (April 21, 2019).
- American Association for the Advancement of Science. 2009 “AAS Reaffirms Statements on Climate Change and Integrity.” <https://www.aaas.org/news/aaas-reaffirms-statements-climate-change-and-integrity> (April 20, 2019).
- Bain, Paul G et al. 2012. “Promoting Pro-Environmental Action in Climate Change Deniers.” *Nature Climate Change* 2: 600-603.
- Collomb, Jean-Daniel. 2014. “The Ideology of Climate Change Denial.” *European journal of American Studies* 9(1): 1-20.
- Energy Innovation and Carbon Dividend Act, H.R. 763, 116th Cong. (2019).
- Hulme, Michael. 2009. “Why We Disagree About Climate Change.” *The Carbon Yearbook: the annual review of business and climate change* 1: 1-3.
- Lewandowsky, Stephan et al. 2015. “Seepage: Climate Change Denial and Its Effect on the Scientific Community.” *Global Environmental Change* 33: 1–13.
- Lipman, Victor. 2014. “Why A Tax On Carbon Can Help Climate Change - And The Economy.” *Forbes*. <https://www.forbes.com/sites/victorlipman/2014/09/08/why-a-tax-on-carbon-can-help-climate-change-and-the-economy/#52f8370b4072> (April 19, 2019).
- Maxwell, Richard, and Toby Miller. 2016. “The Propaganda Machine Behind the Controversy Over Climate Science: Can You Spot the Lie in This Title?” *American Behavioral Scientist* 60(3), 288–304.

- McCright, Aaron M., and Riley E. Dunlap. 2010. "Anti-Reflexivity: The American Conservative Movement's Success in Undermining Climate Science and Policy." *Theory Culture & Society* 27: 100–133.
- Shabecoff, Philip. 1988. "Global Warming Has Begun, Expert Tells Senate." *The New York Times*. <https://www.nytimes.com/1988/06/24/us/global-warming-has-begun-expert-tells-senate.html?auth> (April 19, 2019).
- Vardy, Mark et al. 2017. "The Intergovernmental Panel on Climate Change: Challenges and Opportunities." *Annual Review of Environment and Resources* 42: 55-75.