
Bush Whacking: The Wicked Attempt to Mobilize Civic Engagement

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Table of Contents

Abstract	(2)
Acknowledgments	(3)
Introduction	(4)
Wicked Problems and Climate Change	(4)
Paper Outline	(5)
Background	(6)
The Debate on Scale	(6)
The Individualization of Problems	(7)
Rethinking Individualization	(11)
Situated Context	(13)
Data	(15)
The Sierra Club's Publications	(16)
Greenpeace's Publications	(16)
Methods	(17)
Framework for Interpreting Engagement Messages	(17)
Frameworks for Qualitative Analysis	(18)
Axes of Engagement Bubble Charts Results	(21)
Sierra Club Engagement Messages	(21)
Sierra Club Magazine Engagement Messages by Time	(22)
Greenpeace Engagement Messages by Source	(24)
Greenpeace Engagement Messages by Time	(25)
Qualitative Analysis of Engagement Messages	(26)
Sierra Magazine	(26)
The Planet Newsletter	(28)
Greenpeace Press Releases	(29)
Greenpeace Media Archives	(30)
Key Observations	(33)
Conclusion	(34)
Appendix	(35)
List of Figures	(42)
Bibliography	(42)

Abstract

The broadest goal of my thesis is to contribute to the body of scholarly research that questions and reimagines how we might meaningfully address climate change. My approach is grounded in analyzing scale and the individualization of problem-solving. It is with the salience of scale and the critique of individualization and consumerization of many environmental problems that I ask the overarching question guiding this thesis: In the multi-scaled context of climate governance, how might individuals mobilize to meaningfully address climate change? Grounded in the situated context of the United States during the George W. Bush Presidential Administration (2001-2009), I examine how two of the most prevalent climate action organizations, the Sierra Club and Greenpeace, used their mainstream publications to send messages about how one can engage in climate action. It is in the present day context of the Donald Trump Presidential Administration that I ask my framing question, how did the climate action organizations attempt to mobilize civic engagement during the Bush Era?

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Introduction

"Nothing changes without a movement behind it, forcing change."
- Barbara Shailor, 2016

"Nevertheless, talking about climate change is normally depressing."
- Ulrich Beck, 2010

Wicked Problems and Climate Change

The bread and butter of my education have been thinking about problems and solutions. Specifically, the concept of "wicked problems" has gripped my imagination with their seeming unsolvability. This term was coined by the University of California Berkeley Professor Horst Rittel in the 1960s. His colleague described it as, "that class of social system problems which are ill-formulated, where the information is confusing, where there are many clients and decision makers with conflicting values, and where the ramifications in the whole system are thoroughly confusing" (Churchman 1967). Wicked Problems come in endless contexts and forms, but all share a level of complexity and harm that puts them in a class of their own. It does not simply go away; it gets worse.

Climate change fits the category of a wicked problem, given the failure of international and state governments to properly address it. British scientist Guy Callendar first correlated rising global temperatures with rising carbon dioxide emissions in 1938, nearly eighty years ago, but was dismissed when he attempted to communicate his finding (Amos 2013). It was not until 1965 when the US President's Advisory Committee panel warned Lyndon B. Johnson about the threat of climate change (Amos 2013). This warning went unheeded. It took approximately twenty-three years since the first US President climate briefing for the first official international collective acknowledgment of climate change in 1988. The United Nations General Assembly unanimously agreed that climate change posed a critical global threat and therefore established the Intergovernmental Panel on Climate Change (IPCC) to systematically address this issue (Helm and Hepburn 2009). Since then, the global mean level of carbon dioxide surveyed at Mauna Loa has increased from 351.56 ppm

to 404.48 ppm in 2016 (Tans and Keeling 2016). Though action has certainly been taken, it is also clear that individuals and institutions around the world are not adequately addressing this wicked problem.

Paper Outline

Thus, the broadest goal of my paper is to contribute to the body scholarly research that questions and reimagines how we might meaningfully address climate change. As I will explain in the following section, my approach is grounded in analyzing scale and the role of the individual on multiple scales of problem-solving. In the background section, I will engage with several key thinkers on this subject and use their work to inform the question that frames my thesis: How might individuals mobilize to meaningfully address climate change?

In the Background section *Rethinking Individualization*, I then explore the individual as a political actor, rather than a consumer. More specifically, I review a how groups of individuals (as political actors) can mobilize in the form of civic engagement. I will then examine several scholar's research and recommendations regarding the role of organizations in fostering civic engagement on multi-scalar issues (e.g., climate change). In the section Situated Context, I explain why the United States during the George W. Bush (I shorten his title to "Bush," not to be confused with his father, President George H. W. Bush, whom I do not reference in this paper) is a valuable case study for my research. I then apply the concepts from the previous section to advise the question that focuses my thesis: How did the climate action organizations attempt to mobilize civic engagement during the Bush Era? I then provide a brief political economic history of environmental advocacy in the United States post-WWII to provide a basic understanding of the context for US environmental action and advocacy.

I then explain my methods and data with descriptions of the Sierra Club and Greenpeace's mainstream publications I researched. I then move into a debrief and discussion of my results. I did both a graphical analysis of their engagement messages using Google sheet's Bubble Charts and a qualitative analysis of close reading.

I then I distil and examine my key observations of the results, using the concepts outlined in the Background section to help parse their messaging. Finally, I provide the implications of my research in my Conclusions section.

Background

The Debate on Scale

Part of the complexity of wicked problems generally, particularly climate change, is that it manifests on multiple scales. It does not exist merely in one location, in one boundary of place, but in multiple scales simultaneously. There is an active scholarly debate about the role scale plays in solving environmental problems, especially climate change.

To introduce this discussion, I borrow from Nathan F. Sayre's chapter "Scale" in his book *Companion to Environmental Geography*. He begins this chapter by sharing respected ecologist Simon Levin's argument that, "The problem of relating phenomena across scales is the central problem in biology and in all of science" (Sayre 2009, 95). I propose to expand Levin's claim so that scale is also the central problem in politics. Though scale is regularly recognized as important, it "remains remarkably unclear exactly what scale means and how to use it" (Sayre, 2009, 95). Scale is thus a quintessential "big word", which, Professor Jim Proctor defines it as, "general (big) concepts that are meaningful (big) to many people and enjoy major (big) practical significance. They are thus big in three ways: 1) Conceptual in scope: Many specifics subsumed under them; 2) Cultural resonance: Many people find them meaningful; 3) Practical significance: They really matter in the world of practice" (Proctor 2016). It is helpful to examine scale as a "big word" to recognize its significance and its multifaceted complexity.

To more clearly define this big word, I draw on Max Liboiron, a Professor of Geography. She interprets scale as "a way of describing which processes are dominant and meaningful within certain sites" (Liboiron 2014). Liboiron then uses the example of

what you would see in a skin cell through a microscope, compared to what you would see on the surface of someone's skin. She uses this example to emphasize the point that "there are actually different *things* at different scales. You don't just scale up and get something bigger or scale down to get something smaller; *you get something else entirely*" (Liboiron 2014). Thus, scale is meaningful *because* of the context-specific interactions that take place when zooming out.

In their paper "Scale and Cross-Scale Dynamics: Governance and Information in a Multi-Level World," Cash et al. evaluate three common challenges unique to multi-scalar issues, like climate change. The first one is titled "ignorance," or "the failure to recognize important scale and level interactions altogether" (Cash et al. 2006). This concept is straightforward; if one does not understand something matters, one does not attempt to address it in the first place. The second challenge is a "mismatch." It occurs when "the authority or jurisdiction of the management institution is not coterminous with the problem" (Cash et al. 2006). In other words, a mismatch describes a situation in which the knowledge or the ability to fix something exists on a different scale than the scale with the power to fix it. The final challenge is "plurality," or "the failure to recognize the heterogeneity in the way that scales are perceived and valued by different actors, even at the same level" (Cash et al. 2006). It is a problem of generalization or simplification of knowledge across scales, so that is neither relevant nor accurate.

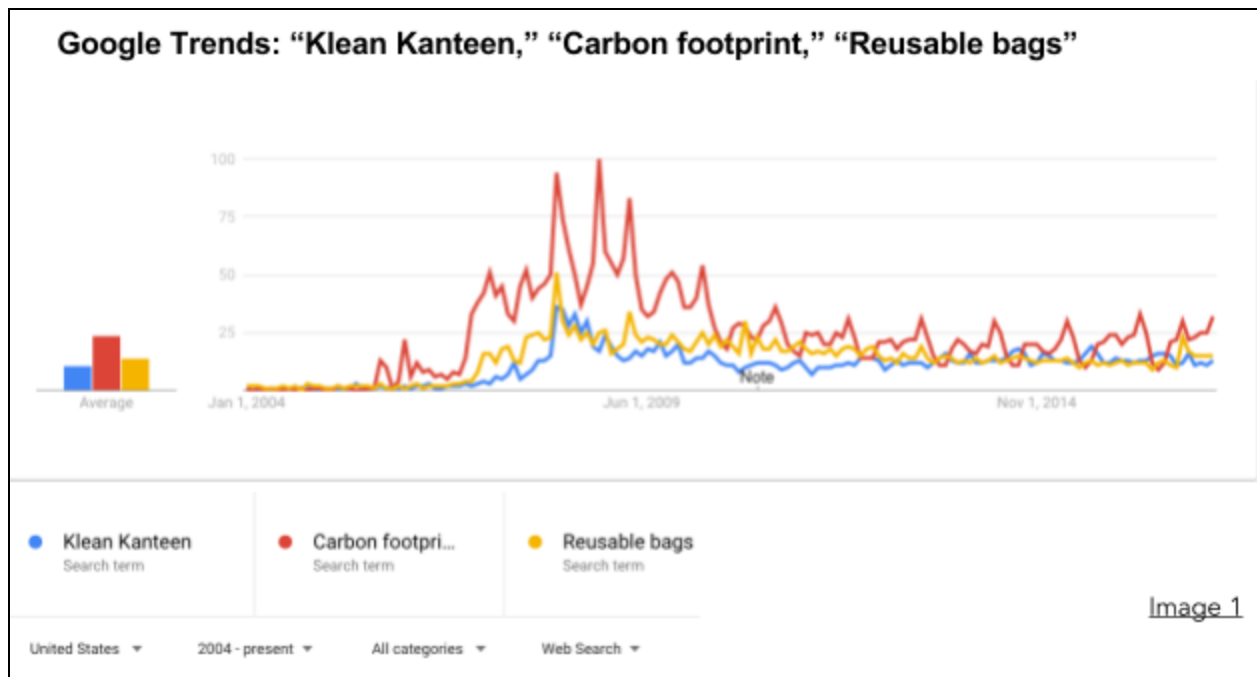
Cash et al. ultimately reasoned that the three issues facing scalar problems --ignorance, mismatch, and plurality-- can all be overcome to reach meaningful solutions. They emphasized the importance of strong leadership, the nuances of knowledge production at different scales, and the significance of prioritizing adaptation and flexibility over formulaic power-sharing between various actors.

The Individualization of Problems

The debate on scale is of greatest interest to me when it touches on how individuals relate to the scale of both the problem and the solution. Many people hear

the message that their actions as a personal matter: buy a Klean Kanteen instead of plastic water bottles; bring reusable bags to the grocery store; reduce your carbon footprint. The phrase *Reduce, Reuse, Recycle* is a well-known slogan present on almost every public recycling can is directed at influencing individual lifestyle choices.

To illustrate the previously enumerated examples of messages sent to people to “green” their way of life, I used the tool Google Trends to visualize the popularity of these consumer-environmentalist tokens¹. A Google Trends graph shows a search term interest over time, available since 2004. This tool allows one to loosely track public interest on a given topic in a particular (or global) geographical boundary. I want to emphasize that this tool examines search terms, meaning that it more accurately illustrates the messages *received* by the public, who then actively tries to learn more via Googling it. Therefore, it should be understood as a proxy for figuring out which messages resonated with the public, more-so than it is an examination the messages themselves or who sent them.



Though there are certainly many other token search terms I could have used to visualize the individualization-consumerist messages, I chose these three as particularly

¹<https://trends.google.com/trends/explore?date=all&geo=US&q=Klean%20Kanteen,Carbon%20footprint,Reusable%20bags>

representative of the overall phenomenon. “Klean Kanteen” is a brand of reusable water bottles that, as documented in the Google Trend chart, rose in popularity around 2006-2007. It is emblematic of the increased consumer awareness and supply of eco-friendly² products that helped patrons feel like they were a part of the solution, simply by buying a similar, but different product. “Reusable bags” serve a similar function as Klean Kanteens, but the market for it is not as dominated by brands as the reusable water bottle market. As the chart shows, the search term “Reusable bags” also rose in popularity around 2006-2007, like “Klean Kanteen.”

Finally, a “carbon footprint,” as defined by the Google dictionary, describes, “the amount of carbon dioxide and other carbon compounds emitted due to the consumption of fossil fuels by a particular person, group, etc.” The Google Trend chart “Carbon footprint” reveals that, like the other two token search terms, there was seemingly little concern over one’s individual emissions of greenhouse gasses until about 2006.³ The point here is not (yet) to speculate why or how this individualization of climate change occurred but to observe that this was a phenomenon during the second term of George W. Bush’s Presidency.

Many environmental studies scholars have critiqued this obsession with the individual as the primary force for solving environmental problems as not only misguided but also potentially harmful to the overarching goal of creating meaningful solutions to the issue at hand.

Julie Guthman, a Professor at University of California Santa Cruz specializing in food and agriculture, critiqued “how to eat books” for their lack of understanding of the broader and more complex political economic and cultural landscape in which food is both produced and consumed. Guthman was responding to the modern food movement thought leaders, such as Alice Waters and Michael Pollan. She explained that they perpetuate the “fantasy” that consumer action (specifically naming the “individual, yuppified, organic, slow food consumption choices”) will bring systematic

² I use the term “eco-ecofriendly” --and similar terms like “green”-- to mirror the language used to market and describe these products to the public.

³ <https://trends.google.com/trends/explore?date=all&geo=US&q=carbon%20footprint>

change to the agricultural system (Guthman 2007). Guthman maintains that such a personal and consumerist approach to food is a form of “neo-liberal anti-politics that devolves regulatory responsibility to consumers’ via their dietary choices.” In her evaluation, such individualization of a solution to a complex issue strips it of its political and economic foundations, preventing any meaningful resolution to evolve. Though her work is in the field of food and agriculture, her argument readily applies to other environmental studies issues, such as climate change and civic mobilization.

Michael Maniates, author of “Individualization: Plant a Tree, Buy a Bike, Save the World?” similarly critiques the diffusion of responsibility for environmental problems to the individual consumer because it ignores the structural roots of the problem. Maniates used Dr. Seuss's epic children’s book “The Lorax,” and its final call to plant a tree, as his example of the implicit, and often explicit, message that ‘individual action can change the world.’ He also critiques “the historical baggage of mainstream environmentalism, the core tenets of liberalism, the dynamic ability of capitalism to commodify dissent, and the relatively recent rise of *global* environmental threats to human prosperity” (Maniates 2001, 33). Maniates thus explains how individualization is not only a poor tool used to address climate change but also how it’s a fix that shares many of the same roots as the problem. Those roots (or “historical baggage,” as Maniates describes it) are liberalism and the commodification of dissent. Economic liberalism is a system that prioritizes an individual’s complete freedom to earn a profit over most types of government regulation or restriction, with the main exception being for the enforcement of property rights.

Both Maniates and Guthman critique messages sent about environmental problems that individualize the solution in two ways. First, it does not adequately address the issue at hand. As Cash et al. might say, that is a “scalar mismatch” between the problem and solution. Second, it shares the same foundation as the problem itself, thus cannot address the root of the issue.

Rethinking Individualization

It is with the salience of scale and the critique of individualization and consumerization of many environmental problems that I ask the overarching question guiding this thesis: In the multi-scaled context of climate governance, how might individuals mobilize to meaningfully address climate change?

To begin to answer this question, I first explore what it means for people to mobilize to address climate change. Compelled by the arguments against individualization in the context of consumerism, I aim to instead look at individuals as political actors. Jana Mittag asserted that “only democratic political systems can ensure a reliable and continuous inclusion of the interests of citizens and a commitment to addressing their needs” (Mittag 2012, 994). She does not introduce the individual as someone capable of buying the world out of its issues, nor as someone *responsible* for the problem itself. Instead, she poses the individual as a “citizen” whose “needs” should be addressed by their government.⁴ Mittag’s theory does not yolk the responsibility to solve problems on people, but on the government (who should be) looking out for the public interest. Mittag thus offers individual mobilization regarding civic engagement. She then advances several ways civic engagement might exist in climate governance, including: “community engagement in developing local adaptation measures; consultation processes between civil society and relevant government institutions, help with strengthening parliamentary committees, monitoring by civil society actors and campaigning by activists” (Mittag 2006, 996). Mittag emphasizes the necessity of engaging the public in addressing climate change as political actors.

My next step in analyzing my framing question is to call back upon Cash et al.’s work for their remedies to multi-scalar governance issues. The three primary responses they suggested were “institutional interplay,” “co-management,” and “boundary or

⁴ In the present-day context of the political demonization of non-citizens and immigrants, I want to highlight that though elected officials *should* be beholden to the interests of those who elected them (i.e., voters), the identity of a “citizen” should not be the only individual political actor who should be taken seriously and cared for by a government. To avoid the exclusion and marginalization of non-citizens living within a certain political boundary, I have chosen to use the term “individual” instead of “citizen” for my studies.

bridging organizations.” I found their theory of boundary organizations most compelling, especially given the present-day context of political polarization that prevents much work from being done towards institutions or co-management. Cash et al. assert that boundary organizations “play an intermediary role between different arenas, levels, or scales and facilitate the co-production of knowledge” (Cash et al. 2006). Their claim is that these types of organizations can help to “facilitate” interaction between multiple scales. These organizations thus fill a similar role to civil society, as defined previously by Böhmelt. Given Cash et al.’s previous argument that a lack of understanding of multiple scales can hinder progress, these organizations have the potential to be crucial actors in problem-solving.

Cash et al.’s theory of boundary organizations, therefore, helps guide me to answer my framing question by honing in on how climate groups attempt to mobilize civic engagement. Furthermore, how they may or may not be fulfilling this role as a “boundary organization” in their effort to engage the public. However, there are possibly thousands of groups around the world that might fall under this painfully broad category of a “climate organization.” To reduce this number down, I draw from Julia B. Corbett’s research on environmental communication and social change to distinguish between groups. Corbett asserts that “what most distinguishes a movement group is *how formally organized* it is, which affects how it operates and communicates” (Corbett 2006, 286). She then bisects environmental groups in two categories: informal/grassroots groups and formal/institutional groups.

Furthermore, Corbett also acknowledged that most formal groups began as grassroots organizations: “If a group experiences a certain amount of success over time--evidenced by legitimation, money, members, or media attention--the likely result is a change in the group and its structure” (Corbett 2006, 286). The title of “formal/institutional group” certainly is not an exact proxy for an organization’s current success; however, it does indicate that they have had enough success in the past to require more structure. Corbett’s framework helps me further break down my framing question by reducing the boundary organizations previously discussed into more

specific categories. Though non-formalized groups are certainly *worth* studying, I have chosen to limit my search to the institutionalized and mainstream organization in hopes of studying how they communicate to a wider audience of individuals. More specifically, I have limited my search to the Sierra Club (SC) and Greenpeace (GP) as the two of the most prominent mainstream formal boundary organizations during the Bush Administration (Kline 2011).

Situated Context

The United States during George W. Bush's Presidency

The United States is one of the biggest greenhouse gas emitters in the world and is widely considered to be a leader in shaping international norms, making it a meaningful location to situate my research (Shafie 2014). I temporally, geographically, and politically locate my thesis in the United States during President George W. Bush's Administration between January 20, 2001, and January 20, 2009. The Bush Era was an important historic moment for both the United States and climate action. It was ushered in with a dramatic and polarizing election. The 2000 US election between George W. Bush and Al Gore had significant implications for the role the national government would play in addressing climate change: Gore ran on a platform of climate action, and Bush represented the oil industry. George W. Bush ultimately won the electoral college, though Gore won the popular vote. Though Bush represented climate inaction, the year 2000 represents the year with the highest percentage of Americans who worry about global warming "a great deal/fair amount," about 72% (Saad and Jones 2016).

How Much Americans Worry About Global Warming

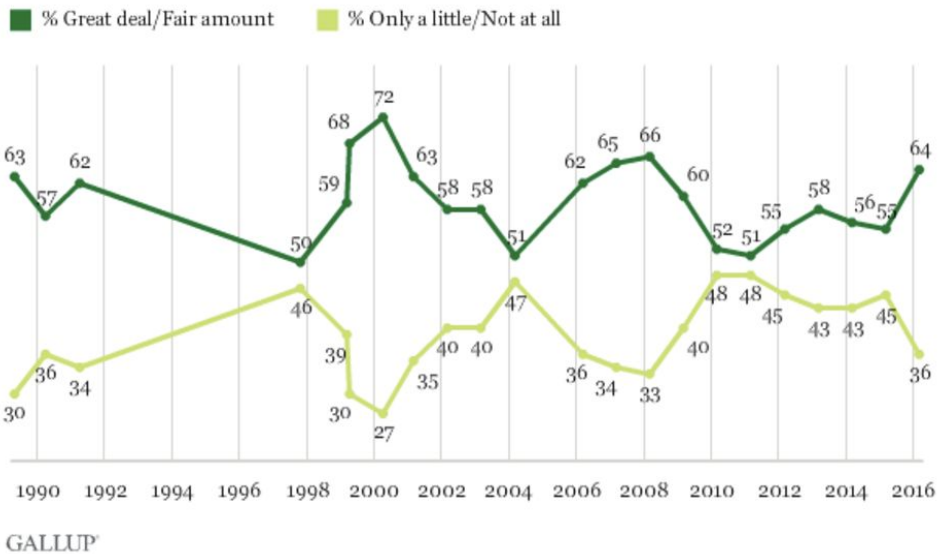


Image 2

The image above shows the past twenty-six years of American public concern over climate change, showing that the dawn of the Bush era marks a sharp transition in public opinion. His second term notably marks a second stark shift in the opposite direction. Despite popular concern about climate change, once in office, Bush acted to deregulate the environmental agencies. He consistently appointed federal officials “who had close ties with industries regulated and often at odds with government environmental agencies and who supported efforts to weaken environmental restrictions” (Kline 2011, 173).

Though he eventually admitted to the presence, and to some extent the threat, of anthropogenic climate change, he used his power in office to stagnate US national and international climate action. However, his position as President did not stop others from attempting to address climate change. Fogel asserts that “despite foot-dragging in the Presidency, the social diffusion of international climate change policy norms grew steadily in the US in the 2000s, taken up by a range of state, city, corporate and other institutional avenues and dominating national political discourse to an unprecedented degree (Fogel 2007, 99).

Therefore, George W. Bush’s presidency can provide a critical case study in modern history to observe how civil society organizations worked to renew its efforts to

mobilizing the public, with marginal success. More specifically, they operated in tension with priorities and actions of the president and his administration. Furthermore, it exemplifies the change from a government actively involved in addressing climate change to an administration actively involved in suppressing climate action.

Current President Donald Trump shares many parallels with George W. Bush on the matter of climate change. Their shared objectives include: reduce regulations, nominate oil executives to federal agencies (e.g., the EPA), systematically create doubt on scientific evidence on climate change, maintain status-quo, block international climate agreements, energy independence through drilling in the US (Kline 2011; Greshko 2017). It is in the present-day context of the Donald Trump Presidential Administration that I ask my framing question, how did the climate action organizations attempt to mobilize civic engagement during the Bush Era?

Data

The primary data informing this thesis was the mainstream publications written by Greenpeace (GP) and the Sierra Club (SC), two of the most important formal climate organizations during the Bush Era. I collected data through various types of media those groups produced within that period. The publications I analyzed were determined in large part by what was publicly available. To study Greenpeace, I analyzed their online-archived media and press releases, all between 2001-2009. The SC had a larger cache of archives accessible to the public. My data for the SC consists of articles written about climate change in their quarter-annual magazine, "Sierra," between 2001-2009 and articles in their member newsletter, "Planet," between 2001-2002 (not available online). The bulk of my data comes from their online archives; however, I got the data for the SC newsletter (Planet) by reading through their archives at the National Sierra Club Headquarters in Oakland, California.

I was also able to conduct a phone interview with Jennifer Ferenstein, the national Club President between 2001-2003. Unfortunately, no other key leaders I

contacted were available for an interview. She provided me with information about their goals in publishing the Sierra magazine.

The Sierra Club's Publications

Since 1883, the Sierra Club has published a magazine for its members, though the name has changed throughout history, the modern day iteration is "*Sierra*." In their words,

Sierra is the storytelling arm of the Sierra Club, the United States' oldest, largest, and most influential grassroots environmental group. We are a national print and digital magazine publishing award-winning journalism and cutting-edge photography, art, and video dedicated to protecting the natural world. Combining features on green living and outdoor adventure with reporting about threats to the environment, *Sierra* brings together leading journalists, photographers, and filmmakers to convey the ideals at the heart of the Sierra Club's mission.⁵

Jennifer Ferenstein described it as one of their "glossy publications" (Ferenstein 2017). She was referring to the publications they produce for their widest audience. Unlike some its more specific publications designed for their local chapters, this magazine is produced for its national members of all involvement levels. The magazine's goal seems to be to appeal to individuals who are only minimally invested in the Club and inspire them to become more involved in their activities.

The other Sierra Club publication meant for a wide audience I studied was their monthly newsletter, the Planet. The Planet is written for a slightly different, more activist-oriented audience than the magazine, though the newsletter is also distributed nationally. Regrettably, I was only able to obtain the Planet for the first two years of the Bush presidency for a total of 28 articles.

Greenpeace's Publications

I was able to study two different types of mainstream GP publications: their online Media Archive and their international press releases (unfortunately, their US press releases were not archived online for the entire Bush presidency). The

⁵ <http://www.sierraclub.org/sierra/about-us>

Greenpeace Media Archives give a visual history of the protests and projects completed by the club; each data point represents a different event/tag. GP associated each event with one or more photos; they also attached a short description of the goals/context of the action. Though they were not technically articles, I will sometimes refer to them as such for ease of comparing them with the other sources. Both the GP International Press Releases and the GP media archives targeted a broad audience, far beyond their membership base. Thus they are both relevant sources to help me better understand how they attempted to appeal to and engage a mainstream audience.

Methods

Framework for Interpreting Engagement Messages

To better categorize how the Sierra Club and Greenpeace constructed their recommendations for actions, I created a framework to examine the relationship between jurisdictional scale and type of action recommended. I have based the framework on coding every article's most basic engagement messages. I coded every article I read with an x- and a y-coordinate to express the type of message the article sent its readers regarding the question, *what should one do about climate change*. To simplify matters, I have labeled this system "Axes of Engagement."

It is important to understand that the coding does not represent a continuous scale, from little to big or least involved to most involved. Rather, the coding represents buckets in which an engagement message most closely fits. I based the coding off of patterns I recognized when I first collected the data. The Axes of Engagement allowed me to examine the underlying structure of engagement messages sent by the Sierra Club and Greenpeace in

The x-axis represents the scale of solution recommended by the article. The coding for the recommended jurisdictional scale is as follows: (1) unclear, (2) cosmopolitan, (3) individual, (4) local, (5) state, (6) national, (7) global. The y-axis

represents the type of action an individual can take, as recommended by the article. The coding for the recommended type of action is as follows: (1) unclear, (2) no action suggested, (3) consumption, (4) donation to organization, (5) elections/voting, (6) communication, (7) physical action.

This framework (“Axes of Engagement”) translates into a bubble chart, which has allowed me to visualize the diversity and similarities between the two organizations, and the different publications within those organizations. I used Google Sheets, which provide the following description of this tool: “A bubble chart visualizes data with three dimensions. It's similar to a scatter plot where the first two dimensions are the x and y coordinates, but it adds a 3rd dimension which is represented in the chart as the size of the bubble.”⁶ The size of the bubble reflects the frequency with which the source sent that particular coordinate (i.e., the larger the bubble, the more times the organization sent that specific pairing of engagement messages).

After assigning each article coordinate points based on guidelines enumerated in the previous paragraph, I went through my data to determine the frequency of each coordinate pair to create a bubble chart. The key to these graphs is that they allow the reader to see, not just where the organization’s messages lie, but also which messages the groups uses most frequently. Refer to the appendix to view the tables for these charts.

Frameworks for Qualitative Analysis

The second part of my methodology is a rhetorical analysis of my data. I specifically examine what SC and GP told the public about climate change and how they can engage to address this wicked problem. I began this process by setting up tables to help organize main points, separate salient quotes, and draw comparisons between articles, sources, and organizations. I categorized my data in this manner while I was harvesting them. I then went through these tables to observe overall

⁶ https://support.google.com/docs/answer/190718?hl=en&ref_topic=1361474

patterns. I then chose several articles (or media) from each source to conduct a close reading analysis to pick up more nuanced messages they sent their audience.

In addition to the matter of multi-scalar governance and the individualization of problems (Cash et al., Guthman, Maniates, Liboiron), I used two other theoretical frameworks to help inform my rhetorical analysis. First, I use Witte's Extended Parallel Process Model (EPPM) to understand how (and to what extent) fear appeals mobilize individuals to act. Second, I used Shellenberger and Nordhaus' demand that environment. Organizations adapt to contemporary the social values and the political economic context to be successful.

Witte's fear appeal model accomplishes three things: 1) it explains why fear appeals fail, 2) it re-incorporates fear as a central variable, and 3) specifies the relationship between threat and efficacy (Witte 1992). Overall, she claims that fear appeals have great potential for stimulating behavioral change, but only if accompanied by a reasonable solution. Witte found that high levels of threat *and* high levels of efficacy led to message acceptance, but high level of threat and low levels of efficacy led to message rejection. In other words, if I'm explaining a scary phenomenon to someone (i.e., climate change), I *must* include a response to that threat that can reasonably ameliorate the situation. The difference between providing a reasonable solution and providing a far-fetched solution (or worse, offering none at all) is the difference between success and failure in achieving your goal.

Shellenberger and Nordhaus reject the knowledge-deficit theory⁷ as a relevant factor in instigating change. It is rather the social and economic context in which knowledge is understood that matters most for change making. They explain that the root of the 1970s environmental movement was not the publication of Rachel Carson's "Silent Spring" or the Cuyahoga River in Cleveland catching fire,⁸ as the dominant

⁷ The knowledge deficit theory essentially asserts that ignorance prevents action and education will lead to change. For example, people continue to smoke cigarettes because they do not know it causes cancer.

⁸ The Cuyahoga River fire of 1969 is credited with inspiring the First Earth day and catalyzing the 1970's environmental activism and legislation. However, this was not the first, or even the biggest, fire on that river; it's estimated that about a dozen fires broke out on the river before the event in 1969. Shellenberger and Nordhaus question the validity of this credit: "if modern environmentalism was born in response to

environmental movement narrative suggests. They draw parallels with the genesis of other social movements, asserting that, “the civil rights movement no more emerged because African Americans were suddenly denied their freedom than the environmental movement emerged because Americans suddenly started polluting” (Nordhaus and Shellenberger 2007, 37).

Rather, they argue the 1970s successes in the context of American postmaterialism and prosperity experienced during the 1950s and 1960s, as explained by Maslow’s Hierarchy of Human Needs⁹. They assert that as American’s physiological, safety, and needs were satisfied, they moved to what is termed “higher order” needs (i.e., pollution). Though the images of ecological destruction portrayed in Carson’s *Silent Spring* did inspire popular concern and action, the newfound understanding of toxins and pollution was not the main factor driving change. Instead, the public was in a position to be inspired given the general American wealth during the 1970s.

Shellenberger and Nordhaus assert that the “Green Decade” (the 1970s) existed only in a specific political economy; it was preceded by about twenty years of growing anxiety about biophysical environmental degradation, prosperity, relative wealth equality, and American international hegemony.

The watershed moments that led to the environmental policy victories of the 1970s originated not in 1968, 1969, or 1970 but rather in 1933, 1945, 1960, and 1964. These dates mark, respectively, the inauguration of Franklin Roosevelt and the start of the New Deal; the end of the United States’ successful prosecution of World War II; the election of John F. Kennedy; and the devastating defeat of Barry Goldwater by President Lyndon Johnson. These particular historical moments and many others forged the extraordinary affluence and economic growth that characterized the postwar era and made possible the liberal political

dramatic visual evidence of industrial pollution, why wasn’t it born in 1868, 1912, or 1952?” (Nordhaus and Shellenberger 2007, 21). Those dates represent other major fires on the Cuyahoga.

⁹ Maslow’s Hierarchy of Human Needs explains human priorities based on a pyramid of needs. From bottom to top of the pyramid: physiological needs, safety needs, belonging needs, esteem needs, self-actualization needs (Graves 2007, 522).

consensus that largely defined both political parties until the mid-1970s (Nordhaus and Shellenberger 2007, 29).

In other words, the US came into the '70s as the top of the world, regarding their identity and their economy. Shellenberger and Nordhaus theorize that the modern environmental movement has failed to recognize a different politics than their environmentalist forefathers experienced.

Axes of Engagement Bubble Charts Results

Sierra Club Engagement Messages, 2001-2002

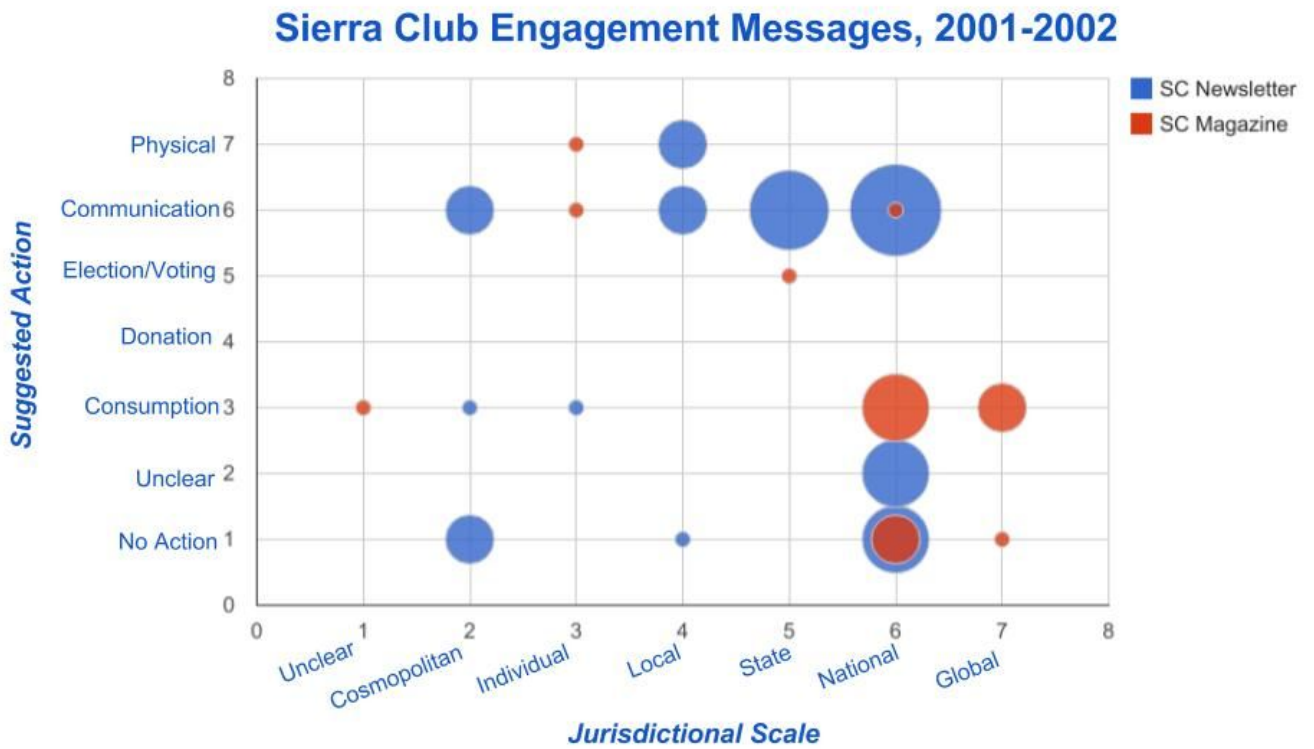


Image 3

To better understand how the Club's message changed according to its source, I created a bubble chart with two categories, one for the newsletter and one for the magazine. To avoid misleading results, I limited my data from the magazine to only

include articles written between 2001 and 2002 only to compare articles written within the same date range. The graph above represents 28 articles from the newsletter and 12 articles from the magazine. To view the coordinate table for this data, refer to Appendix 1.

During this two-year time frame, the Sierra Club seemed to be a focus on the national jurisdictional scale across multiple types of actions and a focus on communication across multiple jurisdictional scales. The magazine sent more messages about consumption, whereas the newsletter seemed to send more messages about communication. It is notable how little overlap there is between the newsletter and the magazine. The coordinate with the greatest overlap is (National, No Action). However, the only other coordinate message with overlap is (National, Communication), though it is obvious the newsletter sent more of those messages than the magazine.

Furthermore, both Sierra Club sources sent a diverse array of engagement messages. Planet (the newsletter) exhibited eleven distinct message combinations, and Sierra (the magazine) exhibited nine different message combinations.

Sierra Club Magazine Engagement Messages by Time

Sierra Club Magazine Engagement Messages by Time

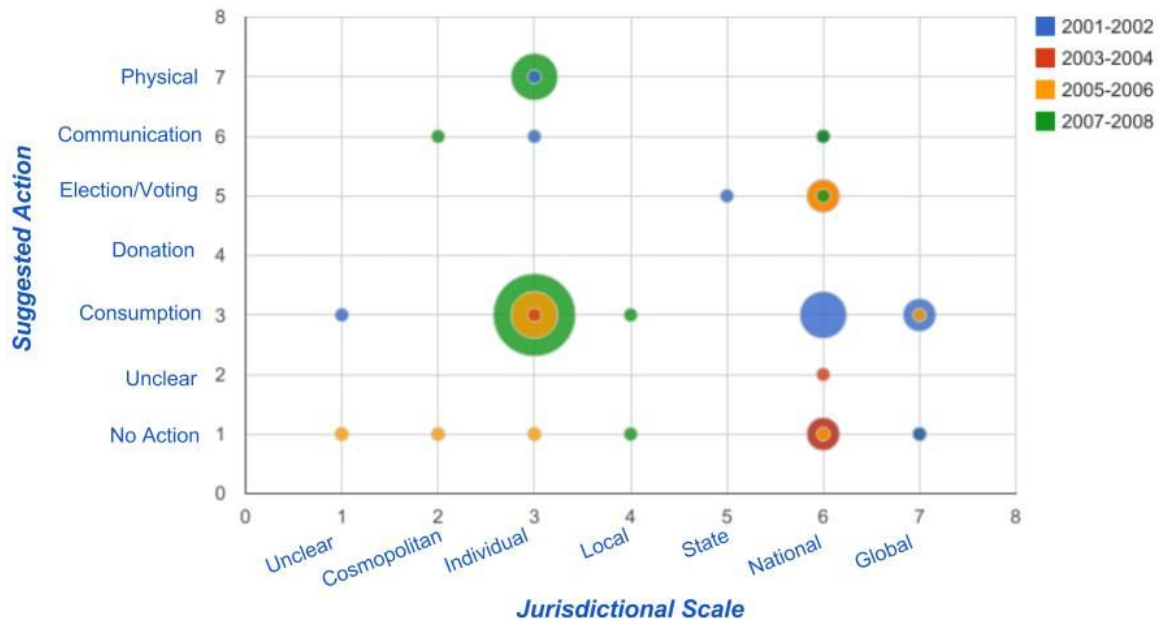


Image 4

As I previously referenced in my “Situated Context” section, the direction of public concern for climate change sharply shifted when Bush first took office and when his second term began. With that knowledge, and after distinguishing my data by source and organization, I was curious how climate engagement messaging shifted by year. I organized my data by time for both the Sierra Club and Greenpeace. However, I excluded the data from the SC newsletter in the SC bubble chart on time because it did not cover the complete time frame and would have skewed the data. To view the coordinate table for this chart, see Appendix 2.

The most significant shift over time is the growth of the Individual/Consumption message. You can see it steadily grow between ‘03/’04 (red bubbles), ‘05/’06 (yellow bubbles), and ‘07/’08 (green bubbles). It also shows that attention to Individual/Physical action took a hiatus during the two middle time periods and grew again in ‘07/’08. Another notable point is the growth of diversity of actions proposed during the final two periods. There are 7 distinct messages of the ‘07/’08 timeframe, 7

distinct messages of the '05/'06 timeframe, 3 distinct messages of the '03/'04 timeframe, and 5 distinct messages of the '01/'02 timeframe. There are no combined messages that were used during all four time periods.

Greenpeace Engagement Messages by Source

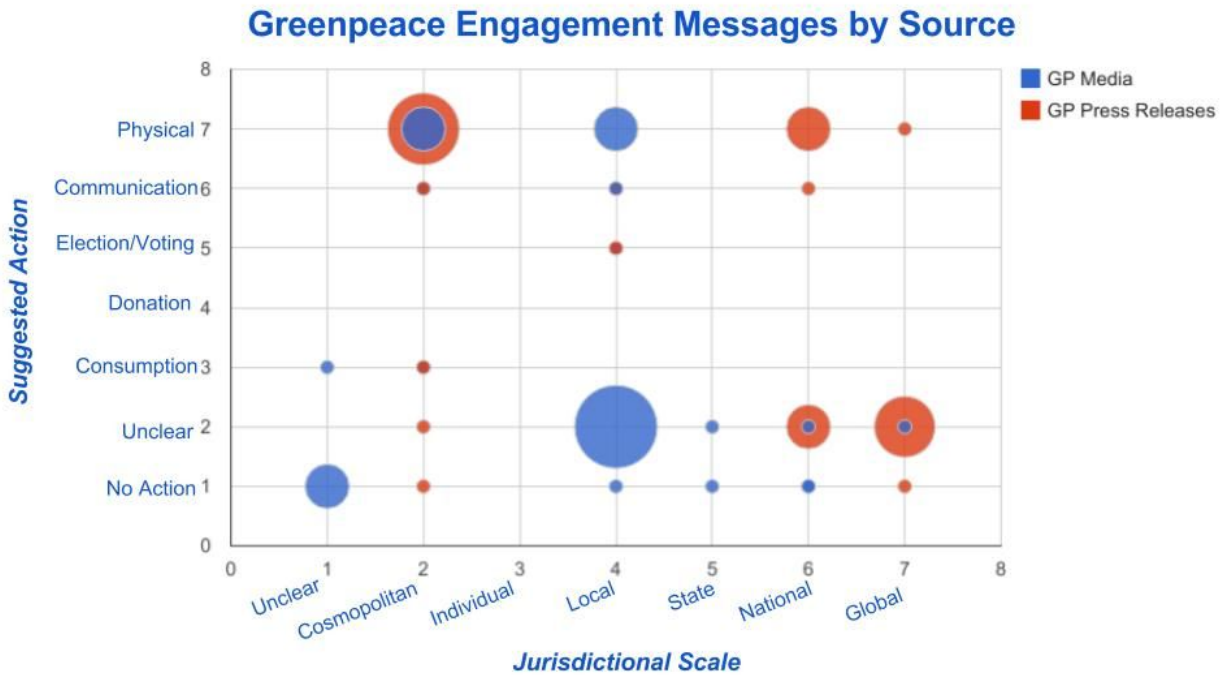


Image 5

I collected 20 relevant Greenpeace International press releases and found thirteen distinct coordinates on the axes of engagement. There were also thirteen different coordinate pairs for the Greenpeace media archives. Similar to the Sierra Club sources, the GP's Axes of Engagement chart shows they sent a diverse array of engagement messages to the public. Both GP sources sent quite a few unclear action and no action messages (on all jurisdictional scales other than individual), though they also both seemed to suggest physical actions. GP Media's most prominent engagement messages was (Local, Unclear), whereas GP's Press Releases' largest message was (Cosmopolitan, Physical).

The two most frequent engagement messages they recommended were (Cosmopolitan, Physical) and (Global, No Action Given). Their focus on the global/cosmopolitan makes sense, since they were active around the world, not just in the United States.

The greatest overlap between the two Greenpeace sources was their Cosmopolitanism/Physical action message. Much of the work the organization did over these years surrounded public shaming of fossil fuel companies (especially ExxonMobil) and politicians connected with climate inaction or the fossil fuel industry.

Greenpeace Engagement Messages by Time

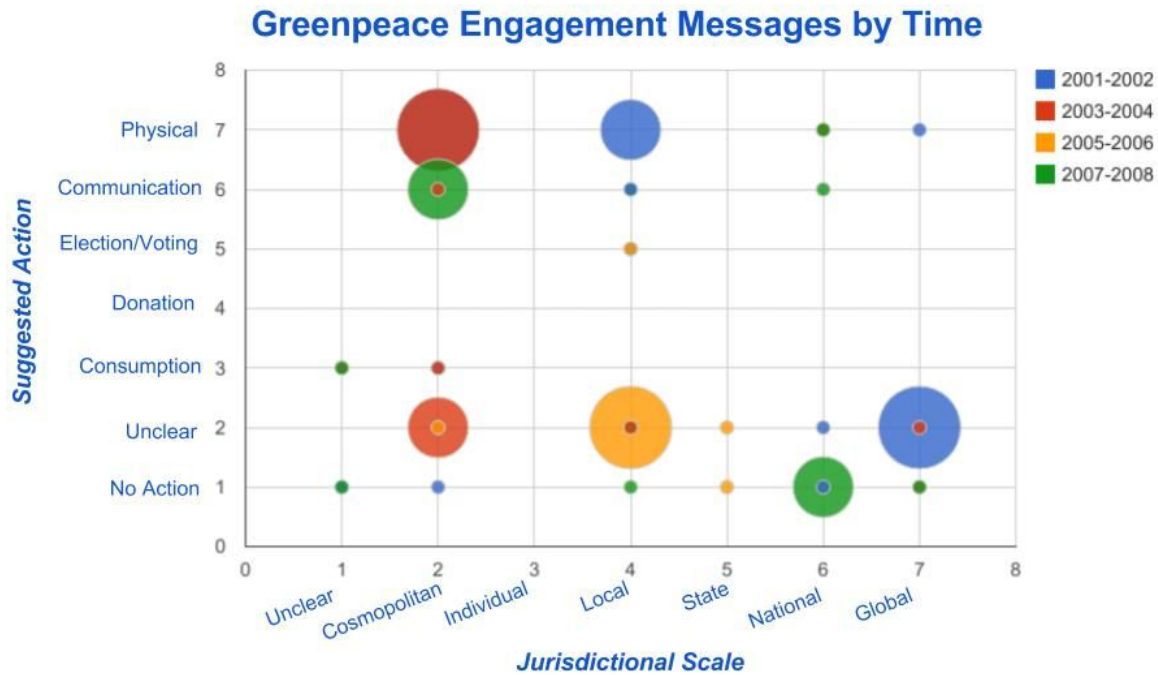


Image 6

It appears that Greenpeace slightly shifted its messages between '01/'02 and '03/'04 from the Global/No Action Suggested to National/No Action Suggested and from Local/Physical to Cosmopolitan/Physical. Like the Sierra Club, it appears that Greenpeace diversified its messages over time. The organization provided 7 unique coordinates during '01/'02 (blue bubbles), 5 during '03/'04 (red bubbles), 5 during

'05/'06 (yellow bubbles), and 8 during '07/'08 (green bubbles). Both the Sierra Club and Greenpeace shifted their messages throughout the Bush Administration, indicating that they were responding to current event, politics, and public responses to their messages.

Though GP certainly sent engagement messages on multiple scales, they consistently gave unclear suggested actions and no suggested actions throughout the time frame. They also seemed to focus on the physical action and communication as their primary two suggested actions (with the exception of their unclear messages).

Qualitative Analysis of Engagement Messages

Though the title and date of every article I analyzed are listed in several tables in the Appendix (specifically Appendices 6 through 9), I've selected several examples of articles to close read in this section of the paper. For each, I have included the title, author, date, source, key quote, and any additional info I found relevant. I will write my brief analysis of the example under each text box.

Sierra Magazine

Pick Your Poison: An Environmentalist's Guide to Gasoline
By Paul Rauber And - Sept/Oct 2001- Sierra Magazine

Basic Point: Guide to the pros/cons of major oil companies

Key Quote: "As in a charm contest between cigarette makers, there may not be a winner for Best Oil Company. If the inevitable trade-offs are too unsavory, there's a simple solution—leave the car at home. When that's impossible, the company profiles here can help you make an informed choice when you head for the gas pump."

Additional Info: Under "Bulletin" at the very bottom, there's a section 'express yourself' -- "To make your voice count on environmental issues, write or call your elected officials at: [website]"

This article conveys a consumerist message to its readers, by providing the recommendation for choosing the best worst oil company. They aim to educate consumers about oil business practices in the hopes that they change their purchasing behavior, or better yet, "leave the car at home." At the very bottom of the article,

Rauber included a short call to “write or call your elected officials.” This article highlights that nuance of the Sierra Club’s message: it does not fit neatly into one category. However, given how challenging it is to motivate individual action, I question whether a one-sentence suggestion at the end of this article led anyone to call or write a politician.

What Are They Thinking in Washington?: A majority of Americans say they care about the environment. You’d never guess it from what goes on in the nation’s capital.

By Arianna Huffington - Sept/Oct 2002 - Sierra Magazine

Basic Point: Disavows money in politics and encourages people to vote for congressional representatives that do not

Key Quote: “And isn’t it time to punish the members of Congress whose vote against CAFE standards betrayed all Americans—from asthmatic children and seniors to young soldiers fighting for a secure supply of Mideast oil? Once every few years, voters can elbow aside the lobbyists and do just that.

Additional Info: message is to vote, not other provided avenues for involvement

This article brings attention to the political and economic forces (including lobbying and the influence of money in politics) that have influenced climate change. To a certain extent, this fulfills Shellenberger and Nordhaus’ demand that climate organizations respond to the modern context. Huffington sends the message that voting matters; however, she does not include and specific avenues for involvement. She simply tells people to pay attention to their elected officials and vote in your conscience.

Year One: Climate chaos has arrived.

By Bill McKibben - Jan/Feb 2006 - Sierra Magazine

Basic Point: The world is changing, and it’s scary, and it may be too late.

Key Quote: “The solution to global warming is not a mystery. To cool the planet, we have to stop pumping carbon dioxide and other greenhouse gasses into the atmosphere. The Sierra Club is engaged in a major effort to usher in a clean-energy future, trying to raise fuel-economy standards for new cars and campaigning for an energy policy based on wind, solar, and efficiency. To learn what you can do, visit sierraclub.org/globalwarming

Additional Info: No.

This article attempts to use a fear appeal to motivate action. It also attempts to use common sense, writing that “the solution to global warming is not a mystery.”

McKibben provides simplistic versions of solution (“raise fuel economy standards,” demanding a “new energy policy”); however, he does not provide useful information about how to get there. He leaves the reader asking if climate change is so terrible and so easy to fix, why hasn’t it been solved already? He does provide a website link for more information about how to get involved but does not give great detail to how people can get involved in the text itself. McKibben is expressing a major threat without also providing a reasonable solution in which individuals can get involved. According to Witte’s fear appeal theory, McKibben’s message is likely to be rejected by the public because of its failure to provide efficacy.

The Planet Newsletter

Sea Levels Are Rising; Could Fuel Economy Standards Be Next?
John Bryne Barry | Jan/Feb 2001

“Take Action: Please write a letter to the editor bemoaning the US opposition to meaningful reductions in global warming pollution. You might mention what the Club has been saying for a decade, that the single biggest step to curbing global warming is raising fuel-economy standards for cars and trucks. ”

Their title, even, indicates both a threat and a solution in one breath. Using Witte’s theory, this article likely *did* successfully use a fear appeal. At the end of many Planet articles, the editors included a text box called “take action.” It was not on every single article but appeared on most of them. At the end of this article, they suggested to their readers to “write a letter to the editor bemoaning the US opposition to a meaningful reduction in global warming pollution.” It further indicates the successful application of a fear appeal -- the article was mostly about how to enact fuel efficiency standards concluded with a suggestion for how an individual can interact with the solution they spent the entire article discussing.

Greenpeace Press Releases

Global protest against ExxonMobil expands across the USA
October 19, 2002

Main Point: Explain the influence of the oil industry on Bush policy. Encourage a consumer boycott.
Key Quote: "It's time for concerned citizens to use the power of their wallets to force the world's number global warming villain to change its ways."
Additional Info: No

This article complicates the consumer-political actor binary I set up previously in this paper. Their call for a consumer boycott is slightly more political than telling people to buy a special to reduce their *personal* emissions. Instead, they are recommending individuals contribute to sending a message to the institutions that maintain climate inaction ("use the power of your wallets"). However, the efficacy of this proposal is questionable. It is difficult to carry out a consumer boycott of the oil industry because it is such a fundamental and intimate part of people's day -- how can they drive to work, pick up their children from school, etc.? For example, it is not as simple as using Lyft instead of Uber if you disagree with the actions of a business' leadership. This article highlights nuances of observing individuals as engaged political actors versus engaged consumers.

Oil fuels war: Greenpeace joins anti-war march at the III World Social Forum
January 23, 2003

Main Point: Protest the war in Iraq as a consequence of the desire for more oil
Key Quote: "Corporate-driven globalization is fuelling wars, environmental destruction, and social degradation, said Marcelo Furtado, of Greenpeace International."
Additional Info: No

This article shows that Greenpeace did, in fact, attempt to engage with the political economy of climate change and to the relevant present-day cultural context of the Iraq War after September 11. However, they did not provide any information about how people might get involved with this effort. It is somewhat implied that there *is* a place for the individual to engage through marching; however, there is not a direct call for people to do so, nor directions for how one might do that.

San Francisco voters back solar power measures championed by Greenpeace
November 11, 2001

Main Point: Share their successes of local organizing

Key Quote: They passed out "50,000 leaflets, left 250,000 pieces of literature on doors, distributed 1,500 signs for store and home windows and called 50,000 voters. They recruited more than 200 volunteers to work on the campaign and enlisted the aid of 25 churches and community groups.

Additional Info: No

This article highlights Greenpeace's ability to operate on multiple scales. This press release describes their local effort to change city-wide legislation on renewable energy. It also exhibits their ability to engage individuals as political actors (i.e., "recruiting more than 200 volunteers to work on the campaign...").

Greenpeace Media Archives

Action at Exxon Mobil HQ in the US¹⁰
May 27, 2003

Greenpeace activists who have chained themselves to a Greenpeace vehicle and the entrance of the ExxonMobil Headquarters are being observed by a couple of policemen and -women. The vehicle says "ExxonMobil Busted" and "Global Warming Crimes Unit" on it.



Image 7

¹⁰ <http://media.greenpeace.org/archive/Action-at-Exxon-Mobil-HQ-in-the-US-27MZIF0ZSYF.html>

This piece of media, and its accompanying text highlight how Greenpeace mixes the consumer with the political activist. In this effort, they bypassed the government and attempted to directly communicate with ExxonMobil. It was a physical action in which Greenpeace volunteers trespassed Exxon’s headquarters dressed as if they were police investigators, apart of the “Global Warming Crimes Unit.” Furthermore, it appears that the purpose of this action has more to do with directing the public’s attention to Exxon Mobile’s “crimes,” than convincing oil executives to change their course.

Project Hotseat Rally Colorado¹¹
August 18, 2006

Greenpeace activists rally to raise awareness about the threats of global warming outside the Wheat Ridge campaign office of Rick O'Donnell, the Republican candidate to represent Colorado's Congressional District 7.



Image 8

This piece showcases a less confrontational, if perhaps just as theatrical, attempt to communicate with both the public and those in power (i.e., a Congressman). They

¹¹ <http://media.greenpeace.org/archive/Project-Hotseat-Rally-Colorado-27MZIF2WV9H4.html>

indicate a threat (“don’t let our forests burn”) and attach a vague demand to “stop global warming.” Their goal here was not to push a certain piece of policy or legislation but to draw political candidates’ (and voters’) attentions to the importance of climate change. Furthermore, they subtly play with the matter of scale in this piece.

Human Banner Art Climate Action Florida¹²
November 4, 2006

Environmental group Greenpeace and Project Hot Seat activists form a "Stop Global Warming" message to call for political action to protect Florida from climate change at an International Day of Action event on the beach at John U. Llyod State Park in Dania. The designs were created by aerial artist John Quigley with Spectral Q Productions



Image 9

This piece exemplifies a vague awareness campaign, for both public official and everyday people. It is a clever way to get individuals involved in their cause; it also sends a signal to public officials the public cares enough about climate change to

¹² <http://media.greenpeace.org/archive/Human-Banner-Art-Climate-Action-27MZIF2W9GFK.html>

spend an afternoon participating in this. However, it is unclear where they how to go from there. Who is supposed to “stop global warming?” How are they supposed to “stop” it? They express two separate threats associated with climate change -- sea level rise (the human face is depicted drowning in the surf) and increased intensity and volatility of storms (the umbrella). However, the umbrella can also be seen to represent an attempt to save oneself from climate change. It is unclear, but perhaps they are critiquing the feeble attempts to address climate change through individualized band-aid solutions that are about as helpful as using an umbrella to save you from drowning in the ocean. This piece was a publicity stunt meant to draw attention quickly to a distracted viewer, making it unlikely that the average person read so deeply into this message.

Key Observations

Both the Sierra Club and Greenpeace exhibited flexibility over time and source in their messages about civic action. They mostly fulfilled the call to address multiple scales as boundary organizations. Though they focused at different scales at different times, they did address every jurisdictional scale throughout Bush’s eight years in office. Their ability to address multiple levels of jurisdiction was an asset to their movement, given Cash et al.’s claim that addressing an issue’s scalar idiosyncrasies is paramount to a movement’s success.

Furthermore, they at least partially fulfilled Shellenberger and Nordhaus’ demand that environmental organizations adapt to contemporary the social values. Both the Sierra Club and Greenpeace at attempted to address matters of political economy and current events in trying to draw attention to the importance of acting on climate change.

Perhaps their greatest challenge was fulfilling Witte’s model for fear appeals. They often included a description of the threat of climate change but did not as consistently include a reasonable and specific solution. As evidenced with the Axes of

Engagement charts, they both sent many messages with “No Action Suggested” or “Unclear Action.” Both the Sierra Club and Greenpeace sent a diverse array of messages about the issues of and solutions to climate change in their mainstream publications meant for a wide audience. However, they lacked detailed and specific actions that average individuals can take to join their movement. This lack of efficacy likely prevented individual mobilization, given Witte’s assertion that one *must* include a reasonable solution to a threat to be successful.

Conclusion

In attempting to fulfill my mission to consider how mainstream climate action organizations might mobilize civic engagement during a presidential administration system that is obstructionist to climate action, I propose the following implications.

First, we do not need to start from scratch. I argue this because of their existing support from the public and their ability to flexibly respond to current events and new topics. Both GP and SC addressed multiple scales and (to some extent) applied their topic to the modern context (i.e., the Iraq War, money in politics, etc.). Though Greenpeace and the Sierra Club (and likely the many other existing climate action organizations) certainly have their flaws and have not been fully successful, they have also not entirely failed.

Second, their greatest flaw during the Bush Era was their inconsistency in providing specific avenues through which people can engage. At this point, the public most likely to get engaged already understand climate change is a threat. Continuously discussing the many catastrophic effects of climate change, especially if it is not accompanied with a way to address it, acts to prevent people from accepting their call to act. Though both organizations did not entirely forgo such specific avenues for engagement, they must be diligent about including a method for engagement in every single message they send out about climate change in their mainstream media. Failing to do so is a waste of their platform as organizations with the ability to reach an

audience wider than those who directly contribute financially or volunteer with them.

Finally, they need to better balance their nuanced messages with overall message clarity. It is not an easy combination; however, an improved ability to communicate complex issues without simplifying them, not making them inaccessible, is a fundamental part of dealing with any wicked problem.

Appendix

Appendix 1: Axes of Engagement Coordinate Table

Sierra Club Engagement Messages, 2001-2002					
#	X	Jurisdictional Scale	Y	Type of Action	Frequency
1	4	Local	7	Physical Action	2
2	5	State	6	Communication	4
3	4	Local	6	Communication	2
4	6	National	1	Unclear	3
5	3	Individual	3	Consumption	1
6	6	National	6	Communication	5
7	2	Cosmopolitan	1	Unclear	2
8	6	National	2	No Action	3
9	2	Cosmopolitan	3	Consumption	1
10	4	Local	1	Unclear	1
11	2	Cosmopolitan	6	Communication	2
12	7	Global	1	Unclear	1
13	6	National	3	Consumption	3
14	7	Global	3	Consumption	2
15	1	Unclear	3	Consumption	1
16	6	National	1	Unclear	2
17	3	Individual	7	Physical Action	1

18	3	Individual	6	Communication	1
19	5	State	5	Election/Voting	1
20	6	National	6	Communication	1

Appendix 2: Axes of Engagement Coordinate Table

Sierra Club Magazine, 2001-2009					
#	X	Jurisdictional Scale	Y	Type of Action	Frequency
1	3	Individual	3	Consumption	12
2	6	National	5	Election/Voting	5
3	6	National	6	Communication	3
4	6	National	1	Unclear	3
5	7	Global	1	Unclear	3
6	3	Individual	7	Physical Action	3
7	5	State	5	Election/Voting	1
8	6	National	2	No Action Given	1
9	7	Global	3	Consumption	1
10	3	Individual	1	Unclear	1
11	1	Unclear	1	Unclear	1
12	2	Cosmopolitan	1	Unclear	1
13	4	Local	1	Unclear	1
14	2	Cosmopolitan	6	Communication	1
15	4	Local	3	Consumption	1

Appendix 3: Axes of Engagement Coordinate Table

Greenpeace Media Archives, 2001-2009					
#	X	Jurisdictional Scale	Y	Type of Action	Frequency

1	4	Local	2	No Action Given	5
2	2	Cosmopolitan	7	Physical Action	2
3	4	Local	7	Physical Action	2
4	1	Unclear	1	Unclear	2
5	6	National	1	Unclear	1
6	2	Cosmopolitan	3	Consumption	1
7	7	Global	2	No Action Given	1
8	1	Unclear	3	Consumption	1
9	6	National	2	No Action Given	1
10	5	State	2	No Action Given	1
11	4	Local	5	Election/Voting	1
12	5	State	1	Unclear	1
13	4	Local	1	Unclear	1
14	6	National	1	Unclear	1
15	4	Local	6	Communication	1
16	2	Cosmopolitan	6	Communication	1

Appendix 4: Axes of Engagement Coordinate Table

Greenpeace Press Releases					
#	X	Jurisdictional Scale	Y	Type of Action	Frequency
1	2	Cosmopolitan	7	Physical Action	4
2	2	Cosmopolitan	2	No Action Given	3
3	6	National	2	No Action Given	2
4	6	National	7	Physical Action	2
5	4	Local	5	Election/Voting	1
6	4	Local	6	Communication	1
7	2	Cosmopolitan	1	Unclear	1

8	7	Global	7	Physical Action	1
9	2	Cosmopolitan	3	Consumption	1
10	2	Cosmopolitan	6	Communication	1
11	7	Global	1	Unclear	1
12	2	Cosmopolitan	2	No Action Given	1
13	6	National	6	Communication	1

Appendix 6: Table of Sources

Sierra Club Magazine, Sierra	
Date	Title
May/June 2001	A MODEST PROPOSAL TO STOP GLOBAL WARMING
May/June 2001	SNAKE OIL FOR FOSSIL FOOLS
Sept/Oct 2001	Pick Your Poison: An Environmentalist's Guide to Gasoline
Jan/Feb 2002	Ode to the Bus: Riding to work isn't always pleasant, but it sure beats driving.
Jan/Feb 2002	All Aboard: Good public transportation need not be high tech or high cost. It can be as simple as a bus
July/Aug 2002	"Beyond Fossil Fuels"
July/Aug 2002	Power Lunch
July/Aug 2002	Rethinking the think tanks: how industry funded "experts" twist the environmental debate
July/Aug 2002	First Hydrogen State
July/Aug 2002	New Solar Systems
July/Aug 2002	Wind Farmers
July/Aug 2002	Green Cars
July/Aug 2002	Ready to Drive Green?
July/Aug 2002	Keeping Tabs on George W Bush
Jan/ Feb 2002	Safety in Numbers: Decentralized power sources are the new victory gardens
Sept/Oct 2002	ELECTION 2002
Sept/Oct 2002	The Big Book of Bush: Will voters connect the dots by November
Sept/Oct 2002	What Are They Thinking in Washington?: A majority of Americans say they care about the environment. You'd never guess it from what goes on in the nation's capital.
Sept/Oct 2002	Razor-Thin Wins: Close races show that every vote counts.
July/Aug 2003	Global Warming: The Melting Point
July/Aug 2003	Global Warming: Bobbing in the Big Apple
May/June 2004	Strategic Ignorance: "See no evil" as a political game plan.

July/Aug 2004	One Small Step: For this family, slow is beautiful.
Sept/Oct 2004	Who's got the Power?: Environmental voters can swing the election.
Sept/Oct 2004	Beyond the Ballot Box
Sept/Oct 2004	Our Next President: He fights global warming, foils offshore drillers, protects the Arctic! His recycling knows no bounds! And if enough environmentalists vote on November 2, John Kerry could be our next president.
May/June 2005	10 Steps to Better Elections: Our electoral system is in tatters. Here's what we can do to fix it.
July/Aug 2005	Can Technology Save the Planet?
July/Aug 2005	Earth's Innovators: Some people think outside the box. Some don't think about boxes at all.
July/Aug 2005	The Perfect Fix: Simple and sophisticated solutions for some of our most vexing problems
Jan/Feb 2006	One Small Step: Making Drilling Look Dumb
Jan/Feb 2006	Year One: Climate chaos has arrived.
Jan/Feb 2006	See No Evil: How the White House edits out global warming
May/June 2006	Miles to Go Before You Eat: Why it pays to buy locally grown food
July/Aug 2006	Let's Talk Film Selection: An Inconvenient Truth
Sept/Oct 2006	Two-Time Losers: Turns out some of the most anti-environmental members of Congress are also ethically challenged. Sierra surveys the bottom of the barrel.
Sept/Oct 2006	My Low-Carbon Diet: From gas gluttony to fuel fitness in three weeks
Sept/Oct 2006	"Start by Arming Yourself With Knowledge": Al Gore breaks through with his global-warming message
Jan/Feb 2007	Energizing America: Fossil fuels burned brightly in their day, but now it's time to make the leap to safer, cleaner, climate-friendly alternatives
Jan/Feb 2007	Can Coal Be Clean?: New ways to burn a dirty old fuel
Jan/Feb 2007	Pick Your Poison: What's the least worst oil company?
Jan/Feb 2007	Consumer Power: Want to send a message with the dollars you spend? Here's how
Jan/Feb 2007	The End of the World: Exploring Greenland, the blankest spot on the map--and not a moment too soon
May/June 2007	Climate Exchange: Cool heads tackle our hottest issue.
May/June 2007	The Power of Truth: excerpted from Al Gore's comments at Sierra's climate forum
July/Aug 2007	It Takes a Village: Efficient homes are only the start of a sustainable community
July/Aug 2007	Remodeling Right : Energy-efficient and planet-friendly solutions for every budget
July/Aug 2007	"It's Our Turn": Student activists rise to the planet's biggest challenge
Nov/Dec 2007	Hot Jobs for a Warming Planet
Jan/Feb 2008	It's Global Warming, Stupid!
Mar/April 2008	Two-Wheeled Wonder: The glory of lungs, legs, and steel
Mar/April 2008	Green My Ride
July/Aug 2008	One Small Step: Spiking Climate Change

Sept/Oct 2008	Hot Jobs to Chill the Planet
Sept/Oct 2008	Carbon Confessional: How to come clean about your greenhouse gasses

Appendix 7: Table of Sources

Sierra Club Newsletter: Planet	
Date	Title
Jan/Feb 2001	Sea Levels Are Rising; Could Fuel Economy Standards Be Next?
March 2001	Beating Back Bush
March 2001	Go Farther on a Gallon
March 2001	Give 'Em an Earful
April 2001	Why don't you write?
April 2001	Getting to the (Grass)Root of the Problem
May 2001	Welcome to W.'s America
June 2001	Support a Smart Move on Energy
June 2001	Stand up to be Counted
July/Aug 2001	Quicker, Cleaner, Cheaper, Safer
July/Aug 2001	Save Energy (and money)
July/Aug 2001	Gas Guzzlers Take Note: Fuel Economy Primed for an Upgrade
September 2001	Finding -- And Protecting -- Common Ground
September 2001	Carbon Dioxide Debuts as Pollutant
October 2001	Fierce Fight Over Arctic, Fuel Economy
November 2001	The Club After September 11
November 2001	Sleeping with the Enemy
November 2001	Club Mounts Challenge to Corporate Power
December 2001	Don't Drill the Arctic, And Pass the Pumpkin Pie
December 2001	Next Stop: Clean Air
Jan/Feb 2001	Everything is Different; Nothing has Changed
Jan/Feb 2001	More Feared by our Enemies, More Supported by our Friends'
Jan/Feb 2001	Spreading the gospel of clean energy
March 2002	Seeking Clean and Green Energy
March 2002	Improve our National Security with Clean Energy
March 2002	Reduce our Dependence on Oil
April/May 2002	Unacceptable'
June 2002	Senate Defeats Arctic Drilling, But..
June 2002	What was your first action as an activist?

July/Aug 2002	Club to Carmakers: Fewer Seat Warmers, More Miles Per Gallon
July/Aug 2002	How do you avoid burnout?

Appendix 8: Table of Sources

Sierra Club Newsletter: Planet	
Date	Title
11/11/01	San Francisco voters back solar power measures championed by Greenpeace
1/9/02	BP drops plans for controversial Liberty oil field in Alaska
2/14/02	ExxonMobil (Esso) gets what it paid for with new US climate policy
4/22/02	Tactical victory for US and the oil industry: Greenpeace calls on scientific community to rise above politics
5/14	Week of protest against Exxon
6/11/02	G8 ministers can't buy global security - they must invest in environmental security
8/7/02	Greenpeace documents disappearing glaciers
9/3/02	Greenpeace sets off Climate Alarm at Earth Summit
10/19/02	Global protest against ExxonMobil expands across USA
11/20/02	NATO members to clone US nuclear policy at Prague Summit
1/23/03	Oil fuels war: Greenpeace joins anti-war march at the III World Social Forum
2/26/03	Greenpeace activists visit Spain's governing party in body bags: Activists urge government to stop supporting Bush's march to war
3/6/03	Greenpeace sails 'no war' banner past United Nations
3/13/03	Greenpeace confronts US military escort ship leaving for the Mediterranean
3/17/03	Greenpeace launches relief oil campaign for the US in Germany
12/1/03	Kyoto Protocol to protect the climate alive and kicking
3/24/04	Exxon Valdez disaster- an ongoing history of lies
12/10/04	Rich leave poor to sink as climate costs set to rise says new briefing
7/8/05	Bush remains out in the cold on climate change at the G8 summit
5/31/07	Bush's "climate strategy" a dangerous sham
1/30/08	Greenpeace turns Washington Monument into memorial to failed Bush Climate Legacy

Appendix 9: Table of Sources

Greenpeace media archive data	
Date	Title
3/14/2001	Climate Action at the White House

3/14/2001	Climate Kyoto Protocol Action DC
3/29/2001	Underwater Banner Action in Florida
7/18/2001	Climate Kyoto Protocol Miami Beach Action
7/23/01	Climate Winter Olympics Balloon Utah
02/05/02	Climate Kyoto Barbecue Action DC
6/11/02	Action at Exxon Mobil HQ in the US
5/27/03	Climate Dead Fish Alaska
9/8/03	Climate Action Exxon Shareholder Meeting
11/10/03	Extreme Weather Background Documentation
4/25/04	La Conchita Mudslide Devastation Coastal California
5/11/04	Aftermath of Hurricane Katrina
5/11/05	Pollution in the Gulf after Hurricane Rita
9/16/05	Project Hot Seat Rally Colorado
9/27/05	Climate Impacts Documentation
8/18/06	Human Banner Art Climate Action
10/1/05	La Conchita Mudslide Devastation Coastal California
11/4/06	Gerd Leopold and Ban Ki-moon
3/16/07	Climate Banner on Lake Erie
9/19/07	Projection Action on Washington Monument in US
12/8/07	Interior Department Polar Bear Protest
1/29/08	Climate action Polar Bear in Washington
3/10/08	Strike Out Exxon from the 7th Inning Stretch in Washington

5/14/08	Climate Action Homeless Polar Bear in Washington DC
6/20/08	Climate: Flight of the Greenpeace Hot Air Balloon One World"
9/10/08	Stop Global Warming Rally San Diego Beach
10/4/08	Climate Global Day of Action

List of Images

1. Google Trends: "Klean Kanteen," "Carbon footprint," "Reusable Bags"
2. How Much Americans Worry About Global Warming
3. Sierra Club Engagement Messages, 2001-2002
4. Sierra Club Magazine Engagement Messages by Time
5. Greenpeace Engagement Messages by Source
6. Greenpeace Engagement Messages by Time
7. Action at Exxon Mobil HQ in the US
8. Project Hotseat Rally Colorado
9. Human Banner Art Climate Action Florida

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