Global Warming vs. Climate Change: Comparing the Bush and Kyoto Protocol Discourses

Introduction:

Global climate change is one of the most serious environmental threats facing the international community. Rising global temperatures from anthropomorphic activities has the potential to dramatically alter the world’s climate and ecosystems. Greenhouse gases, produced by the consumption of fossil fuels are the main drivers for this change. The increase of greenhouse gases in the world’s atmosphere since the industrial revolution has engendered an international debate. We will apply Dryzek’s analytic method to examine this debate from two American perspectives, the Pro-Kyoto discourse and the Bush Administration’s discourse. After highlighting the differences between the two positions, we will propose our own policy prescription, the Greenhouse Network, which moves the response to global climate change into the third epoch of environmental governance, as described by Mazmanian and Kraft.1

Background on the International Climate Change Debate:

The Kyoto Protocol is an amendment to the United Nations Framework Convention on Climate Change (UNFCCC), an international treaty on global warming.\(^2\) Ratifying countries commit to reducing their combined greenhouse gas levels by 5%, including carbon dioxide and five other emissions.\(^3\) A total of 141 countries have ratified the agreement, with the notable exceptions of the US and Australia.\(^4\) If successful, the Kyoto Protocol is expected to reduce the average global temperature between 0.02°C and 0.28°C by the year 2050.\(^5\) Opponents of the protocol feel that this improvement is too small, while supporters regard it as an important first step towards a better global environment.\(^6\)

The history of the Kyoto protocol chronicles growing international awareness of global warming. The origins of the protocol date back to the 1\(^{st}\) Earth Summit in Stockholm, Sweden, in 1972. This convention discussed current global environmental issues and decided to meet every ten years.\(^7\) The following 1982 Earth Summit in Nairobi, Kenya failed due to the Cold War.\(^8\) In 1988, the International Panel on Climate Change (IPCC) was started by the UN, bringing together scientists from around the world in order to ascertain the reality of global warming.\(^9\) Two years later, the IPCC released its first report, providing scientific evidence for global warming and linking it to human activity. However, uncertainty remained due to the limitations of available modeling and

\(^3\) Ibid.
\(^4\) Ibid.
\(^5\) Ibid.
\(^6\) Ibid.
\(^8\) Ibid.
\(^9\) Ibid.
research techniques. In 1992, there was the 2nd official Earth Summit in Rio de Janeiro, Brazil where the UNFCCC, also known as the Rio Convention, was created. The US signed this convention, which called on the world to stabilize 1990 greenhouse gas emissions by 2000. In a move towards Epoch II, former president George Bush negotiated an agreement to allow developing nations to increase emissions, a provision later included in the Kyoto Protocol. After five years of research, the IPCC released its second report finding that “the balance of evidence” pointed to a “discernable human influence on the global climate system”.

Each year, the countries that ratified the Rio Convention held a Conference of Parties (COP). The Protocol began in the third COP in Kyoto, Japan in 1997. After rejecting the original targets of the Rio Convention as too weak, the countries came up with new targets. Now, 1990 greenhouse gas emissions would be cut by 5% between 2008 and 2012, although different countries would have different goals. The US signed the Kyoto Protocol, thereby promising to cut their greenhouse gas emissions by 7%. In 1998, the 4th COP was held in Buenos Aires, Argentina where the Buenos Aires Plan of Action was developed to decide how the Kyoto Protocol (emissions trading, carbon sinks, clean development in the developing world, etc.) would be implemented. In 2000 at the 6th COP in Hague, Netherlands a consensus regarding mechanisms failed, due to a

10 Ibid.
12 Ibid.
13 Greenpeace, A Brief History of The Kyoto Protocol.
14 Ibid.
15 Ibid.
16 Ibid.
17 Ibid.
disagreement over the role of carbon sinks.\textsuperscript{18} In 2001 at the 7\textsuperscript{th} COP in Bonn, Germany, an agreement was reached concerning the method of implementation, accepted by all parties except for the US and Australia.\textsuperscript{19} In order for the Protocol to be enacted, it required that countries responsible for at least 55\% of 1990 greenhouse gas emissions ratify it. In November 2004, Russia ratified of the Kyoto Protocol, thereby meeting this criteria.\textsuperscript{20} Consequently, the Kyoto Protocol went into effect in February 2005.

\textbf{Science behind the Greenhouse effect and Global Warming}

The greenhouse effect begins when sunlight entering the atmosphere is reflected back by the Earth’s surface. Greenhouse gases, such as CO\textsubscript{2} and methane, act as a shield, preventing the reflected sunlight from returning to space. Thus, the energy is trapped, and increasing the temperatures in the lower atmosphere and affecting both weather and climate\textsuperscript{21}. In the right concentrations, greenhouses gases are beneficial, and keep our earth from losing all of the sun’s energy—without them life on earth would freeze to death. However, greenhouse gas levels have surpassed historic levels, and threaten to upset the biosphere’s balance.

Greenhouse gases include: CO\textsubscript{2}, which is produced by respiration and the burning of fossil fuels, is responsible 55\% of global warming; methane, with levels 145\% above natural concentrations, is created by deforestation, decomposition of waste, rice and cattle production, and is responsible for 15\% of global warming; nitrous oxide, with concentrations 15\% above normal levels, is currently responsible for 5\% of global

\textsuperscript{18} Ibid.
\textsuperscript{19} Ibid.
\textsuperscript{20} Mapleleafweb, \textit{History of the Kyoto Protocol}.
warming. And finally, chlorofluorocarbons, or CFCs, which are produced by refrigeration and air conditioning machinery, are 30% above normal levels and contribute to 25% of global warming 22

CO2 is clearly the largest contributor to climate change. According to geological records, CO2 levels are higher now than at any point in the last 200,000 years.23 These levels have skyrocketed since the industrial revolution—with concentrations rising from 270 parts per million by volume (ppmv) to 2001’s level of 371 ppmv.24 The impacts of higher greenhouse gas levels have already been observed. The 1990s was the warmest decade of the millennium, and the 20th century was the hottest century, with the overall temperature of the earth rising by 1.4°F during this time. At no point in the last 1,000 years has the earth’s temperature changed as rapidly as it has in the 20th century.25 Scientists have found that high altitude and high latitude areas are the first regions affected by global climate change. The world’s glaciers have been retreating for several decades.26 The available data suggests that human activity is largely responsible for these changes in global climate. The burning of fossil fuels and tropical deforestation act in synergy to increase global temperatures, as fossil fuels add copious amounts of CO2 to the atmosphere and tropical deforestation decimates the earth’s natural ‘carbon sinks’ (the forests act as CO2 sponges, taking the gas out of the atmosphere).27

Many scientists and researchers have attempted to predict the future impacts of global warming. Most agree that a human-induced warming of the atmosphere by a few

\[\text{References:}\]

22 Ibid
23 Ibid
25 Godrej, D. 2001
26 Glantz 2003
27 Glantz 2004
degrees Celsius will change regional climate regimes by altering temperature patterns, precipitation patterns, and characteristic seasons. The IPCC predicts that there will be an increase in temperature between 1.5-5.8°F by 2100, and that CO2 could double its pre-industrial levels by 2080. Warming of this magnitude could cause sea levels to rise by 0.09-0.88 meters by the end of the century. Each 1° of global warming will shift temperature zones by approximately 100 miles, and the Earth will warm 5-10 times faster than it did during the retreat of the last ice age.

Science indicates that continuance of greenhouse gas emission at current levels will have significant impacts on the globe. By the year 2100, greenhouse gases will have doubled current levels, perhaps quadrupling pre-industrial concentrations. Even under the Kyoto treaty, greenhouse gases are projected to continue increasing at least until 2010, since developing countries would still be able to emit at high levels. Additionally, greenhouse gases are long-lived, compounding the global warming effect long after they are emitted into the atmosphere.

**American Pro Kyoto Discourse**

After the rejection of the Kyoto Protocol in 2001, millions of Americans were outraged by the Bush administration’s decision to isolate the United States, with regards to the international debate on global climate change. These sentiments comprise the Pro-Kyoto discourse, which opposes the current administration’s position on global warming. One attempt to implement a top-down approach in the US was the Climate Stewardship Act, sponsored by Sen. John McCain and Sen. Joe Lieberman, which promoted a cap-and-

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28 Ibid
29 Glantz 2003
30 Zogby America Poll. October 21, 2003
trade approach to reducing emission levels. Despite support from over 44 Senators in a 2003 vote, it failed to pass due to opposition from the Bush administration. Kyoto’s proponents recognize the need for an international agreement to address the complexities of global warming. According to this position, strict governmental control “is the indispensable first step” towards reducing greenhouse gas levels.

Using a Dryzekian analysis, the Pro-Kyoto discourse is broken down into basic entities, assumptions about natural relationships, major actors and motivations, and metaphors and rhetorical devices. Among the basic entities of the Pro-Kyoto discourse are the gravity of the problem, the need for immediate action, scientific certainty, top-down control, and an intrinsic value of nature. The Pro-Kyoto’s discourse’s main assumption about natural relationships centers on humanity’s dependence on natural systems. This relationship is being destroyed by technology and industry, creating a need for state regulation. In order to successfully prevent further global warming, the government needs to implement strict controls. The major actors and motivations behind this discourse are government elites, individual states, and an enlightened self-awareness. The global community feels that the US should play a greater role in confronting global warming, as the emitter of 25% of the world’s greenhouse gases. Metaphors and rhetoric used to describe this discourse focus on international cooperation, global communities, spaceship Earth, and doomsday, images. Also, the phrase ‘global warming’ is preferred over ‘climate change,’ in denoting the impacts of increased greenhouse gas concentrations.

Upon reviewing the Pro-Kyoto discourse, one can see its connections with Dryzek’s Survivalist and administrative rationalism discourses. Like the Survivalists, Pro-Kyoto emphasizes the importance of nature and its limits, strict top-down controls, and the need for immediate action. Administrative rationalism mirrors corresponds to the positions of Sen. Lieberman and Sen. McCain, and their belief that strict top-down controls based on expert elitism must be implemented in order to make a significant change.\^35

Despite its many adherents, opponents argue that the Kyoto Protocol is a poorly designed treaty. A major criticism of the Kyoto Protocol is that it unfairly exempts developing countries, such as China and India, placing the US economy at a disadvantage. This economic disparity could create an “all-economic-pain-for-no-environmental-gain regulatory regime.”\^36 Moreover, opponents argue that the scientific evidence is not conclusive enough to warrant drastic action. Considering the treaty’s flaws, many argue that the US should abstain from ratifying it, despite the importance of the global climate change issue.

**The Bush Administration’s Discourse**

While the Pro-Kyoto discourse’s reliance on top-down regulation recalls Epoch One, the Bush Administration’s discourse represents an Epoch Two approach. Bush’s plan, proposed in February 2002, presents a market-based alternative to the Kyoto Protocol. The Clear Skies and Global Climate Change Initiatives aims to decrease the United States’ greenhouse gas intensity by 18% in ten years. Greenhouse gas intensity

\^35 Stelzer, ibid
measures the levels of greenhouse gas emissions per unit of GNP. To achieve this end, Bush proposes several financial incentives to induce industry to voluntarily reduce emission levels. Funding for climate change research was also increased, and a new cabinet level advisory committee for the integration of climate science and technology was created. Although Bush rejected the Kyoto Protocol as “fatally flawed,” he insists that he has not turned his back on the international community. As evidence of his commitment to international cooperation, the President has cited the US’s bilateral and multilateral agreements, concerning the distribution of renewable energy technologies, the conservation of tropical rainforests, and the prevention of illegal logging.

Dryzek’s discourse analysis identifies the prominent characteristics of the Bush Administration’s position. The basic entities recognized by the Bush discourse include industry, government agencies, scientific uncertainty, technology, and human ingenuity. Conspicuously absent are references to natural entities, such as biodiversity, ecosystems, or the biosphere. The discourse’s main assumption about natural relationships presents a connection between economic growth and environmental protection. As Bush states in an address to the National Oceanic and Atmospheric Administration, “affluent societies are the ones that demand, and can afford, the most environmental protection.” Other prevalent relationships promote a competitive connection between human need and human innovation. However, the discourse does not acknowledge human dependence on natural systems. In so far as major actors are concerned, industry plays a prominent role.

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The government is expected to protect the economic interests of its citizens and industries. Consequently, developing countries are expected to pursue their rational self-interest and, in the process, contribute to greenhouse gas production. Economic interests are the only motivations recognized by the Bush discourse. The rhetoric of the Bush discourse involves a militaristic tone, which describes the proposal as “bold” and “aggressive,” and repeatedly mentions the “power of the market.” Additionally, the Bush discourse appeals to “common sense,” arguing that economic growth should not be sacrificed for uncertain environmental benefits.

The Dryzek analysis reveals the Bush discourse’s similarity to that of the Prometheans and economic rationalists. Both the Bush discourse and the Prometheans emphasize the limitlessness of human ingenuity, ignore natural limits, and treat natural resources as brute matter. Economic rationalists, like Bush, rely on the market with little interference by the government, and stress the importance of competition. All three of these discourses are characteristic of the Epoch Two mentality, which relies on market incentives, cost-benefit analysis, and a movement away from state-centered regulation. However, international and domestic actors have voiced criticisms of Bush’s response to global climate change. Scientific associations, such as the IPCC and the National Academy of Science, have contested Bush’s presentation of the scientific evidence as overly inconclusive. Also, economists and the IPCC have argued that the economic impact of Kyoto on the American economy would induce only a +/- 1% change in annual GNP. Moreover, the costs would be short-lived and concentrated in a few sectors.

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Furthermore, opponents argue that the threat of global climate change demands mandatory action rather than voluntary compliance.

**Our Proposal**

While the Pro-Kyoto and the Bush Administrations discourses represent Epoch One and Two, respectively, our approach adopts an Epoch Three mentality. We will address the roles and motivations of the three main actors of environmental governance: the state; the market; and the community. Moreover, we will promote a system of checks and balances between the three actors, which will increase networking and learning across the sectors. As Mazmanian and Kraft argue, the third epoch is characterized by “collaboration and cooperation among all affected stakeholders and incentive based methods of policy implementation.”44 We hope to achieve this synergy through the Greenhouse Network.

Traditionally the state has acted as an administrator and watchdog, however this policy prescription has been both inefficient and costly. The Greenhouse Network will embrace the state’s ability to impose and enforce limits, while maintaining flexibility in implementation. Thus the state establishes objectives for emission reduction and provides positive and negative reinforcement for the market. In relation to the community, the state creates greenhouse planning organizations (GPO’s) modeled after the metropolitan planning organizations (MPO’s) discussed in the ISTEA example in Mazmanian and Kraft.45 These organizations, composed of local stakeholders, will have direct responsibility for lowering greenhouse emissions in their communities. In

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44 Mazmanian and Kraft, 30.
45 Ibid. 223.
addition, the government will provide funding for the development of green technologies. Thus, the state retains the ultimate authority for the level of reduction, but maintains a hands-off approach.

Unlike the state, the market excels in competition, ingenuity, and cost-benefit analysis. In response to state-mandated reduction levels, the market will be motivated to implement economically viable solutions, such as cap and trade regimes for greenhouse gases. For example, the state could require that all coal industries reduce emissions by 10% in 5 years. Understanding that tons in excess of the limit will be taxed, industries would implement tradable emission quotas. In addition, industries could advertise their progressive green efforts to appeal to customers. Eventually, competition would favor clean industries, and green technologies would achieve economies of scale. According to a veteran of the solar industry, the development of green technologies would have the added benefit of providing desirable job opportunities.46

Since the community embodies social values and norms, our discourse would enable the community to create legitimate and effective means of environmental governance. The state-funded GPOs provide a liaison between the state, market and other communities, encouraging a learning network. For example, GPOs would influence community transport, building, and zoning regulations, providing a testing ground for effective policy initiatives. These organizations could also serve as buying groups, making green technologies more affordable for community members.

In conclusion, the Greenhouse Network applies a coherent and cohesive approach to an issue of international environmental governance. By emphasizing learning and a distribution of decision-making authority across sectors, our discourse presents a flexible

46 Bob Nape. Phone Interview, April 24, 2005.
institution through which we can progress towards sustainability. As this discourse matures along the lines discussed by Pretty and Ward, it will be capable of tackling other environmental issues. Although the success of this discourse relies upon the participation of its actors, within the network, action will beget action, and information will inspire engagement.

References:


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