

Global Warming and Generation Y: A Case Study at the College of Charleston

Mary Lauren Ashe

American Opinion

Statistics indicate that American concern for global warming has been decreasing for years. In 2004, the percentage of Americans who claimed to worry a great deal or a fair amount about global warming declined seven points from 58% over a one-year period (Saad, "Global," par. 2). In addition, a recent poll shows that only 23% of Americans are completely convinced that global warming is a reality. This poll also indicates that 33% are mostly convinced, 24% are somewhat convinced, 16% are not convinced at all, and 2% are unsure ("Environment")

Perhaps Americans' concerns about global warming are waning because they are uneducated about the problem. Only 16% of Americans believe that they understand global warming very well, while 30% believe they understand the issue not well at all. About half of Americans, 54%, believe they understand global warming fairly well (Saad, "Are"). Accordingly, only 38% of Americans think that global warming is an urgent problem in contrast to the 58% who believe it is a longer-term problem. A very small percentage of Americans, 1%, are unsure about the urgency of global warming, and 3% think it is not a problem at all ("Environment").

Moreover, American skepticism about global warming has been increasing lately. For the first time in years, the majority of Americans believe that the news exaggerates the seriousness of this issue. A recent

Chrestomathy: Annual Review of Undergraduate Research, School of Humanities and Social Sciences, School of Languages, Cultures, and World Affairs, College of Charleston
Volume 5, 2006: pp. 1-43

© 2006 by the College of Charleston, Charleston SC 29424, USA.

All rights to be retained by the author.

poll shows that 38% of Americans have become skeptical of the news' portrayal of global warming, in contrast to the 25% who believe that the news portrays the seriousness of this problem correctly and the 33% of Americans believe that the news underestimates the seriousness of global warming (Saad, "Are").

The high percentage of skeptical and uninformed Americans is alarming considering the major role that the United States has played in contributing to global warming (Maslin 13). The United States currently releases approximately one-fourth of the world's greenhouse gas emissions, which is more than any other country expels ("U.S. Rejection" 647). China is second in producing the world's greenhouse gas emissions, but the Chinese contribute ten times less emissions than the United States does, making the gap between the United States and other countries considerable (Maslin 13). In fact, no other country emits even 6% of the world's greenhouse gases, and only nine countries emit over 2% (Blodgett and Parker 3-4).

Even though the United States emits the most greenhouse gases, Americans are more uncertain about global warming than are citizens of other developed nations. Canada ranks eighth in its greenhouse gas emission levels (Blodgett and Parker 4), but almost 20% more Canadians than Americans believe that global warming has already begun to happen (Saad "Are"). Furthermore, the United Kingdom, which follows Canada in its greenhouse gas emission levels (Blodgett and Parker 4), contains 11% more people than the United States who believe the world is already experiencing the effects of global warming (Saad "Are").

The Significance of Generation Y

Although the American public has been polled on their opinions about global warming, most studies have neglected to consider the possibly differing views of Americans belonging to separate age groups. The previously mentioned statistics refer to Americans who are eighteen years and older and therefore fail to consider if some cohorts are more informed than others about this issue. It is essential to examine how knowledgeable different age groups are about global warming in order to target what part of the population most needs to be further educated. I have decided to focus on Generation Y because this age group will

have the ability to decide what the future will bring. Actions taken by the members of Generation Y will make a long-term difference in the impact of global warming, and the members of this generation are old enough to begin combating this problem now.

Establishing the parameters of Generation Y is not a simple task, however. According to an article in *Business Week*, people born between 1979 and 1994 comprise Generation Y (Neuborne, par. 6), but other sources define the birth years of its members differently. For instance, a *USA Today* article states that the broadest definition of Generation Y includes people born between 1977 and 2002, while the narrowest definition includes those born between 1978 and 1989 (Armour, par. 1). According to David Kertzer, there exist four means of defining generations, which may or may not be mutually exclusive. He asserts that generations may exist in terms of kinship descent, cohorts, life-stages, and/or historical periods (126-7). This research conceives of Generation Y as a life-stage.

Kertzer asserts that in defining a generation as a life-stage, the research may analyze a specific group of people within one generation. It is here in this definition that Kertzer introduces the idea of “college generations.” The concept of life-stages is important to this research because it assigns precise restrictions on who may be studied (Kertzer 126-7). Hence, it is clear that a definite life-stage exists in America’s currently enrolled college students. Adopting this definition of Generation Y, this study will focus on the undergraduate students attending the College of Charleston.

This study concentrates on Generation Y specifically for three reasons. First, although members of Generation Y are some of America’s youngest citizens, they are most likely old enough to have been exposed to the issue of global warming, formed educated opinions about global warming, and consequently decided whether to take action in response to it. Secondly, due to their young age, members of Generation Y are more likely than their elders to experience the dramatic effects of global warming during their lifetime. Already, members of Generation Y are witnessing some effects of global warming such as the melting in the Arctic and the Earth’s rising temperature. The future holds many changes that may be more dramatic, however. For instance,

Chris Thomas asserts that by 2050, 37% of the world's plant and animal species may become extinct because they will not be able to adapt to a rapidly warming climate (qtd. in Spence 45). In addition, Mount Kilimanjaro has lost three-fourths of its ice cap in the past one hundred years, and scientists predict that it may lose the remaining one-fourth by 2015. Global warming may also destroy life on the coast. For example, scientists project that less than five percent of the Great Barrier Reef in Australia will be left by 2050 (Spence 49-54). Maslin summarizes it best when he writes, "We should expect sudden and dramatic surprises when greenhouse gas levels reach an as yet unknown trigger point in the future," which is exactly what Generation Y may experience in the years to come (8).

Lastly, members of Generation Y are old enough to combat global warming by taking steps to conserve energy, purchase environmentally friendly goods, and vote for elected officials who are dedicated to the fight against global warming. Members of Generation Y may also strive to restrain the nation's population growth in order to decrease America's greenhouse gas emissions. A recent United Nations demographic study projects that after Generation Y has reproduced, the global population may be as high as 10.9 billion by 2050, with the medium variant scenario being 9.3 billion (Schneider 251-6). Therefore, this study recognizes that members of Generation Y have the unique opportunity to thwart this expected population growth and consequently take major action against global warming.

The Current Role of America's College Students

Within Generation Y, college students have the potential to combat environmental problems, especially global warming. A study performed at Yale University indicates that its campus alone emits more greenhouse gases than thirty-two developing countries (Durso, par. 4). As a result, earth-friendly organizations recognize the impact that college campuses can make, and many of them have visited various colleges with the intention of rallying students to fight global warming. For instance, Greencorps toured several college campuses in Virginia in February 2006 with the hope of encouraging students to contact one of their

senators about backing legislation that would address global warming in their state (Esposito, pars. 1-2).

The Sierra Student Coalition (SSC) also seeks to encourage college students to become active in influencing their campuses to pursue renewable energy sources with the aim of helping to “stop catastrophic global warming.” For example, students at Whitman College who are involved in the SSC have influenced their school administrators to purchase 20% of the school’s energy from renewable sources and are working to convince their fellow students to add five dollars to their tuition in order to allow the school to purchase more renewable energy (“Sierra,” par. 4).

Furthermore, MTV has targeted the nation’s college students with campaigns such as the “Curb Global Warming Sweepstakes” in an effort to educate them about the phenomenon and the actions they can take individually to fight it. A spokesperson for MTV explained, “If not [the students], who? It’s their tomorrow we’re dealing with here. We’ve got to get them engaged on this issue. Students carry a lot of power” (“Larry,” par. 6).

Many colleges have taken the initiative to combat global warming without the help of national organizations, however. A survey performed by the National Wildlife Federation indicates that 80% of America’s college campuses are working to conserve energy, and half of these colleges have set energy efficiency codes for buildings and the use of electricity. Although some incentive for this change is surely motivated by a possible reduction in energy bills, the research suggests that college campuses are aware of the impact they have on global warming and are consequently holding their institutions responsible for fighting this phenomenon. For example, both Cornell and Tufts are working to cut their carbon dioxide emissions by seven percent below America’s 1990 levels by the year 2012. Their goal is to accomplish what America would have pledged to do under the Kyoto Protocol (Smithson, pars. 5-6).

Due to the efforts that that many college campuses are making, organizations such as the Clean Air-Cool Planet coalition have begun giving awards to deserving colleges each year. Middlebury College in Vermont was the most recent recipient of the Clean Air-Cool Planet

award, the Climate Champion Award, for its work in offering courses, appointing committees, and completing inventories pertaining to global warming. According to the Clean Air-Cool Planet Executive Director, Adam Markham, Middlebury has “worked to reduce greenhouse gases and educate people in every aspect of their mission” (“Middlebury,” par. 5).

Several college campuses have also begun selling environmentally friendly products, such as recycled paper and notebooks, because they believe students “are starting to realize that simple consumer choices can help resolve complex problems such as global warming, deforestation, and depletion of the Earth’s precious natural resources” (“Students”). According to the National Retail Federation, college students spend approximately \$25 billion on back-to-school items alone. Included in this total are the 3.4 million tons of paper that are sold each year during the back-to-school season. A survey performed by the Center for a New American Dream shows that 93% of college students believe that purchasing environmentally friendly products would be helpful in combating global warming, and 89% of college students would be willing to spend extra money for these products (“Students”).

The College of Charleston has taken laudable actions to fight global warming as well. According to one member of the college’s faculty, “The College of Charleston acts as a microcosm for the city of Charleston, and reducing the greenhouse gas emissions of the college could be an exemplary model for the city” (Linstroth and Neff, par. 2). It is evident that the College of Charleston may experience detrimental effects from global warming, especially since it is located near the ocean. A rise in the sea level of one meter has the potential to diminish the coastline by 1500 meters. A receding coastline would most likely expose the city and the campus to flooding and the “susceptibility of storm damage,” which could potentially cost the Charleston community and the College of Charleston billions of dollars. As a result, the College of Charleston performed an assessment of its greenhouse gas emissions in 2002. This assessment was motivated by a trip that Charleston students and faculty members took to the College Climate Response workshop in Oregon earlier that year (Linstroth and Neff 3).

Using a program created by the Clean Air-Cool Planet coalition, the College of Charleston assessed its greenhouse gas emissions in the categories of agriculture, refrigeration/chemicals, energy sources, transportation, and solid waste. The audit found that the College of Charleston emitted 38,712 metric tons of greenhouse gases in 2001, which demonstrated a 12% decline in overall emissions since 1993. Most of this decrease was caused by the zero-emissions standard that the College of Charleston's Physical Plant utilizes through its natural gas boilers (Linstroth and Neff 19-23).

Moreover, this audit found that most of the College of Charleston's emissions originate from its use of purchased electricity from South Carolina Energy and Gas (SCEG). The college purchases 86% of its electricity from SCEG, while it gains 11% of its energy from nuclear sources and 3% from hydro-powered sources. This electricity from SCEG constitutes 68% of the College of Charleston's greenhouse gas emissions. Commuting students contribute 17%, up 12% from 1993, to the college's emissions through their use of gas-powered vehicles. Furthermore, the commuting faculty comprises 3% of the total greenhouse gas emissions, as does the solid waste that the campus generates. Lastly, campus stationary sources contribute 9% of the college's emissions (Linstroth and Neff 19-23).

This audit was a significant achievement for the College of Charleston because it conveyed that, like many other colleges in the United States, the College of Charleston recognizes the impact it may have on either encouraging or deterring global warming. Although the College of Charleston relies heavily on fossil fuels in lieu of alternative energy sources, its Physical Plant's zero-emissions standard has allowed the institution to decrease its greenhouse gas emissions, even as the number of students and faculty has risen (Linstroth and Neff, par. 1).

Even though many college campuses around the nation are taking steps to combat global warming, the key question is whether the students enrolled in those institutions are involved in the fight. Unfortunately, very little has been written about how Generation Y is responding to global warming. Rather, most of the research on this topic centers on individual students rather than the generation as a whole.

For instance, studies show that some students in particular across America have become enthusiastic about exercising their opinions about global warming. These students have held demonstrations against excessive greenhouse gas emitting sources such as power plants and even their own universities. One such student pointed out that “college students have a great impact on the nation by raising environmental awareness” (Masci, par. 12). Recently, a group of students at Notre Dame University held a demonstration on campus to protest a local power plant’s contribution to global warming (Masci, par. 13). Other environmental advocates take their concerns about global warming overseas. In 2000, over two hundred American college students attended a United Nations conference in the Netherlands to address the issue of global warming. According to one student in attendance, “The U.S. is the only place where it’s still a debate as to whether or not global warming is a major problem. We hope to end this debate and start working towards results” (Fowler, par. 24).

Despite the enthusiasm of the aforementioned participants on college campuses, however, most students are not realizing their potential. Although a poll performed by Gallup shows that 80% of students believe the environment is already experiencing the negative effects of climate change, it also indicates that those who respond as such are not active in influencing their administrators to reduce greenhouse gas emissions (Smithson, par. 16). This data suggests that while many college campuses are striving to tackle global warming, students are not the driving force behind the accomplishments of these institutions.

Even though the Gallup organization found that most college students are not influencing their universities to fight global warming, there is still a lack of information about why this is the case. For this reason, the purpose of this study is to determine how members of Generation Y perceive their responsibility to combat global warming, focusing on the College of Charleston as a case study. The expectation behind the following research is that a great number of members belonging to Generation Y are not compelled to take individual action against global warming.

This study will first investigate the basic knowledge about global warming so that there will be identifiable criteria by which to evaluate

the understanding of the phenomenon that College of Charleston students possess. Next, this study will provide a research design, which involves surveying College of Charleston students in order to test their knowledge about global warming and discover their opinions about who is responsible for taking action against it. Lastly, this study will evaluate the results from the surveys and conclude how obligated students at the College of Charleston feel about combating global warming.

Basic Knowledge

A planet's climate is determined by its mass, its distance from the sun, and the composition of its atmosphere. The Earth's atmosphere consists of 78% nitrogen, 21% oxygen, and 1% other gases. The gases that comprise this 1% of the Earth's atmosphere are called greenhouse gases. Global warming is caused by the emission of greenhouse gases, which create a "blanket" over the Earth, similar to how a greenhouse traps heat within its walls. Greenhouse gases that produce this phenomenon can be naturally occurring or human generated, and they include water vapor, methane, nitrous oxide, perfluoro methane, and sulphur hexafluoride; however, carbon dioxide is by far the greenhouse gas most accountable for global warming (Maslin 4-17).

Most scientists believe that human activities, such as electricity generation, industry, and transportation have increased the amount of atmospheric carbon dioxide. The burning of fossil fuels originating from these activities is the number one source of carbon dioxide emissions. The second major source of carbon dioxide comes from land-use changes, such as deforestation and agriculture. This change occurs when rainforests are destroyed and replaced with grasslands that cannot sequester an adequate amount of carbon dioxide. As a result, the Earth's atmospheric concentration of carbon dioxide has increased every year since 1958, which is when the first measurement of atmospheric carbon dioxide was taken (Maslin 8-11). Although scientists do not unanimously agree that human activities influence this climate change, the Intergovernmental Panel on Climate Change (IPCC) concluded in its *Second Assessment* that global warming

is unlikely to be entirely natural in origin... [and that] the balance of evidence, from changes in global mean surface air temperature and from changes in geographical, seasonal, and vertical patterns of atmospheric temperature, suggests a discernible human influence on global climate. (Fletcher and Justus 3)

Greenhouse gas emissions can be beneficial because the world would be too cold and unlivable without them; however, excess emissions may result in a climate to which the world's population cannot adapt ("Climate Change" 1-2).

Already, global warming has affected the Arctic Region, melting an average of eight percent of the Arctic sea ice each decade since 1970. The Arctic Council and the International Arctic Science Committee announced recently that the Arctic region is warming at twice the rate of the rest of the world (Richards, par. 5), as shown even in America. In Alaska, average temperatures have increased between four and seven degrees Fahrenheit in the past 50 years. In addition, the Montana Glacier National Park once housed about one-hundred and fifty glaciers, but fewer than thirty glaciers remain in the park today (Handwerk 1). As a result of the melting glaciers, the IPCC projects that the world's sea level will rise approximately half a meter by 2100. This rise in sea level may cause more flooding, erosion, and the loss of wetlands, as well as severe damage to residential areas (Meyerson 252).

Furthermore, global warming has already begun to increase the entire Earth's temperature. The National Oceanic and Atmospheric Administration's (NOAA) research reveals that 1990 and 1998 were the warmest years since the beginning of historical weather records. NOAA's research also shows that the past two decades have contained the earth's twelve warmest years, with 2004 ranking fourth. As a result of the earth's rising temperature, scientists are researching the negative effects that global warming may create. Computer programs, called general circulation models, predict that over the next one-hundred years, the earth will be between three to ten degrees warmer if global warming continues on its current trend (Fletcher and Justus 2-3).

Aside from heating the Earth, global warming may also have a cooling effect on certain areas in the world. For this reason, many

scientists classify global warming in a broader sense as climate change. Scientists predict that global warming will have different effects on various parts of the Earth, perhaps even creating another ice age in some regions. Some scientists predict that a cooling effect may occur when the arctic region increases in temperature and the glaciers melt into the ocean. This theory suggests that when freshwater glaciers melt into the North Atlantic, the Gulf Stream will no longer function properly. Currently, the Gulf Stream acts as a “conveyor belt” by bringing a current of warm air to the eastern United States and Western Europe from the tropics. As the current cools, it becomes denser, sinks further into the ocean, and pulls more warm water from the tropics to complete the cycle. This current is sensitive to water density, however, which relies heavily upon the salinity of the ocean. When the glaciers melt in the arctic, they alter the ocean’s salinity, which in turn changes its density. As a result, the melting glaciers may cause the Gulf Stream to eventually cease and thereby induce another ice age in places such as the United States and the United Kingdom (Spence 40-1).

Changes in the Earth’s climate may also produce adverse effects on human health, and impacts would be greatest in the poorest areas of the world, due to the lack of available resources that could enable inhabitants to adapt to a changing climate (Bernstein 3). For example, a warmer climate may cause an increase in heat-related deaths and infectious disease transmissions. Many scientists predict that global warming will boost exposure to malaria from 45% to 60% of the world’s population. Scientists also foresee that a warmer climate will bring an increase in water-based infections, such as cholera. Perhaps the most common health problems that humans may experience from global warming are allergies and asthma because a warmer and wetter climate may produce higher air-borne concentrations of pollens (“Climate Change” 207-208).

The most dramatic health effect global warming may have on the human population, however, is limited access to fresh drinking water. Although some areas will have an abundance of water due to flooding, many other areas will lose access to fresh drinking water through droughts, evaporation, and saline invasion from rising sea levels. The IPCC reports that by 2025, global warming will cause approximately 3 billion people to experience water stress (Maslin 95).

After reviewing the possible consequences of global warming, it is clear, as Christopher Spence argues, that “global warming is probably the greatest threat facing humanity in the twenty-first century” (125). Therefore, the central question becomes how people can take action to combat the phenomenon. It is apparent that one person cannot change the fate of the world, so taking individual action may seem overwhelming. Consequently, an initial step that both college students and their elders may take in fighting global warming centers on voting for elected officials who intend to deal with the problem. Governments have the ability to make major strides in combating global warming by regulating the greenhouse gas emission levels, passing legislation to encourage renewable energy sources, and signing international treaties to lower the entire world’s greenhouse gas emission levels (Spence 126).

Aside from acting as a group by exercising voting rights, Americans can take individual actions against global warming. Although these actions may seem small, they can make a significant difference if enough people get involved. For example, by purchasing products that feature the recycling logo, individuals, particularly students buying back-to-school supplies, can work towards reducing the need for companies to manufacture more products. Even buying goods in bulk can help since there is less packaging involved than when purchasing individual items. In addition, by purchasing local goods rather than shipped goods, Americans can reduce the carbon dioxide emissions that originate from the shipping process (Spence 130-7).

Furthermore, individuals can combat global warming by monitoring how they use their cars. America’s vehicles emit over 30% of the country’s carbon dioxide emissions, which is a considerable amount. It would be unrealistic to suggest that Americans should give up their cars. Instead, individuals should focus on increasing their car’s fuel efficiency. They can do so by making sure that their cars are in good condition through getting regular check-ups for their vehicles and by driving at steadier speeds. Americans can also cut down on the carbon dioxide that their cars emit by using public transportation and carpooling when possible. These simple actions apply to college students, especially those at institutions such as the College of Charleston, who commute

on a daily basis. Americans may also use hybrid cars, which use approximately 50% less gas than other cars do (Spence 141-6).

Moreover, Americans can fight global warming individually in a number of ways by conserving energy with their appliances. The energy that household appliances require is generated from coal power stations, oil, or natural gas, all of which emit carbon dioxide into the Earth's atmosphere. One way to conserve energy in the kitchen is by using microwaves and toaster ovens instead of traditional ovens whenever possible. Turning off appliances and lights when not in use can conserve energy as well. Furthermore, individuals can become more energy efficient by changing the filters in air conditioners and using ceiling fans in lieu of air conditioners when possible. A more drastic step to take towards fighting global warming is to buy electricity from renewable energy sources such as solar, wind, and hydro power plants, which do not emit greenhouse gases into the atmosphere. Of course, this last opportunity is open only to those who have access to such energy sources within their communities (Spence 152-66).

Although most college students do not have the option of where they purchase their electricity, they do have control over how much electricity they use. If students purposefully turned off the lights, fans, televisions, computers, etc. in their dorm rooms when these electronics were not in use, the lack of superfluous energy on college campuses would greatly diminish. Not only would their institution's energy bill decrease, so would their college community's greenhouse gas emissions originating from power plants utilizing fossil fuels.

Lastly, individuals can fight global warming by considering the risk that population growth has on the climate. As the population grows, there is a greater need for the consumption of fossil fuels, which emit carbon dioxide. Consequently, carbon dioxide levels have risen 300% over the last century, while the global population has risen from 1.6 billion to 6.1 billion. In fact, studies show that "the rapid rise of atmospheric carbon dioxide levels and average global surface temperatures in the twentieth century was accompanied by the most dramatic human population increase in history" (Meyerson 251). The correlation between the world's growing population and the rising greenhouse gas emissions is undeniable.

America's current college students have the potential to play a major role in this last action to combat global warming. Most students have not yet begun to form their own families, but they are approaching the age where many Americans begin to marry and have children. In 2005, the average age for a man to wed in the United States was 27, while the average age for an American woman to marry was 26 (Jayson). Therefore, with college students generally ranging in age from 18 to 22, Generation Y has the ability to restrain America's population growth and thus decrease the nation's dependence on fossil fuels in the future. This study is not suggesting, however, that members of Generation Y should not reproduce. Rather, it is conveying how recent research may influence young people to consider the effect that population growth has on global warming so that they may make their own choices pertaining to the development of their families with this information in mind.

Research Design

The research for this essay was compiled by surveying 105 students at the College of Charleston. The surveys for this study were approved by the Institutional Review Board (IRB) at the College and conducted according to the guidelines set forth by the IRB. Each survey, which remained anonymous, included a "Consent to Act as a Human Participant" form as a cover page. (See Attachment 1.) The researcher did not pass out surveys in her classes so that her peers would not feel pressured to participate in the research. Rather, the surveys were distributed in classes in which the researcher was not enrolled. Moreover, professors did not allot class time for the students to complete the surveys since doing so might coerce people to participate. Professors passed out the surveys to their students during their classes and collected any completed surveys on subsequent class days. Participants also had the option to leave their surveys in a drop box located in the advisor's office.

Finding students who were willing to participate in this research project was quite difficult. After distributing approximately 350 surveys over the course of two months, only 105 students actually completed the surveys, indicating a 30% return rate. This modest proportion of participation may suggest that College of Charleston students lack a

sense of individual responsibility for taking action against global warming.

The survey designed for this study, consisting of 28 questions, sought to test five hypotheses. (See Attachment 2.) The first four questions on the survey are “warm-up” questions to put the participants at ease and encourage them to begin thinking about global warming. The next two questions, along with questions 12 and 13, were written with the intention of analyzing the first hypothesis, that the media tends to misinform members of Generation Y about global warming more than class lectures and private research do. As mentioned earlier, there is very limited research about anything related to Generation Y and global warming, at least in the United States. Therefore, the first hypothesis was not based on any existing literature. Rather, it was founded on the probability that no source of information, including the media, is as informative to students about global warming as collegiate level classes are. The reasoning behind this hypothesis was that while the media delivers information in brief segments, collegiate level classes inform students about subjects over the course of a semester. Therefore, it seemed that knowledge gained inside the classroom would be more thorough than what the media provides. However, this study’s results suggest that the sources of information about global warming do not make a significant difference in the overall understanding that members of Generation Y possess about the phenomenon.

Next, questions 8, 9, and 10 were intended to provide insight into the second hypothesis, that politically liberal members of Generation Y are more likely to be concerned about global warming than their conservative peers. This hypothesis was based on the fact that the Democratic Party has historically been more active in addressing global warming than the Republican Party has. For instance, former Vice President Al Gore made environmental issues a key component of his platforms when he was in the White House and then again when he ran for President in 2000 (Vega, par. 4). Under the Clinton Administration, America signed the Kyoto Protocol; however, the treaty was never sent to the Senate for ratification. On the other hand, the Bush administration rejected the Kyoto Protocol in 2001 and has since asserted that America will take its own actions to address the phenomenon. As a result, many

critics have asserted that the Republican party has traditionally rejected science in politics unless it is “sound science, i.e., science that agrees with them, or reaches no conclusions at all” (O’Hehir, par. 7). The results of this study confirm that political ideology indeed impacts how members of Generation Y view global warming.

Questions 2, 7, 11, 12, and 13 were written to evaluate the third hypothesis, that members of Generation Y who are enrolled in college classes concerning environmental issues are more knowledgeable about global warming than are peers who have never taken college classes pertaining to environmental issues. The third hypothesis reflects the supposition that college level classes are the best way to inform members of Generation Y about global warming. Yet this study’s results suggest that college level courses do not make a significant impact on educating members of Generation Y about global warming.

Next, questions 14-22 were designed to analyze the fourth hypothesis, that members of Generation Y who believe that human activity substantially affects the earth’s climate are more likely to accept responsibility for combating global warming. The fourth hypothesis was based on the theory that if students do not believe that human actions affect the earth’s climate, then they will not feel any incentive to combat the phenomenon as individuals. In other words, if people believe that human activity does not influence global warming to occur, then they will not believe that human activity will be able to discourage global warming from happening either. This research suggests, however, that even though most students believe human activity affects the earth’s climate, not all of them feel an individual obligation to fight global warming.

The last seven questions were written with the aim of evaluating the fifth hypothesis, that members of Generation Y are more concerned about global warming than are Americans as a whole. It is based on the probability that members of Generation Y have had more exposure to the issue of global warming than other Americans since America began publicly addressing global warming in the 1980s. For instance, it was during the birth of Generation Y that the first public opinion polls pertaining to this subject began surfacing in America. This decade was also a time when computer models were improving, which allowed

scientists to more accurately predict climate changes (Weart, par. 3). Since members of Generation Y, especially those currently enrolled in college, were born during the 1980's, information about global warming was available to them for their entire lives. Accordingly, the results of this essay suggest that members of Generation Y are more concerned about global warming than the rest of Americans are.

Results

The first set of questions sought to gain insight into what college students understand about global warming, which was based on the hypothesis that exposure to college-level courses produce more accurate knowledge on the issue. The results from these surveys suggest, however, that this is not the case. First of all, this study suggests that the majority of college students gather most of their information about global warming from the media. In fact, 62.86% of students participating in this study acquire most of their information on this subject from television, newspapers, magazines, and the internet.

In addition, the majority of students have never taken college classes that have focused on global warming in some way. While 60.95% of student respondents have never taken such a class, a greater percent of the participants identify the causes and consequences of global warming correctly. In fact, 72.38% of students pinpointed the possible causes of the phenomenon accurately, and 80.00% of students recognized the probable consequences of global warming correctly.

This data leaves only 3.81% of the participants who do not know any possible causes of global warming and 8.51% who lack knowledge about any possible future consequences of global warming. In addition, a fairly large percentage of students indicated that they know some of the possible causes and consequences of global warming; however, there are areas where they are also misinformed on these topics. The main reason for the confusion among College of Charleston students about the possible causes and consequences of global warming relate to the depletion of the ozone layer. Most of the students who failed to differentiate between the effects of global warming and the depletion of the ozone layer have never enrolled in a college class focusing on global warming. Therefore, while the results suggest that the media

and other sources of information generally provide correct information about global warming to members of Generation Y, college classes may be superior in eliminating specific misconceptions such as those pertaining to the ozone layer that college students may possess about the phenomenon.

Based on the hypothesis that conservative students are more likely to dismiss the notion of global warming, the second set of questions attempted to uncover how political ideology influences the views of Generation Y. Accordingly, the data collected to analyze the second hypothesis suggests that political ideology does play a role how students view global warming in terms of current political issues. Students who indicated that their political ideology is conservative rated the importance of global warming as 5.55 on a scale from one to ten (with ten being the most important) in relation to current political issues. On the other hand, students who describe themselves as liberal rated global warming as 6.92 on the same scale. Although the two political ideological groups do not convey a drastic disparity, the data suggests that liberal students do in fact show more concern for global warming than conservative students.

Furthermore, students with more liberal political ideologies indicated that they feel global warming is a serious problem rather than somewhat of a problem. Only 32.08% of these participants responded that global warming is the latter, while the remaining 67.92% of them indicated that it is a very serious problem. Not one single student with liberal ideology answered that global warming is not a problem at all. In contrast, only 27.78% of students with conservative political ideology indicated that global warming is a very serious problem. In addition, 11.11% of them responded that the phenomenon is not a problem at all, and the remaining 61.11% of them answered that global warming is somewhat of a problem. These results further convey that political ideology most likely influences the members of Generation Y about their views on global warming.

Interestingly, however, another group of participants ranks the importance of global warming in current political issues higher than both the liberal or conservative students do. This group of students was comprised of 15.24% of the studied population, and they indicated

that they do not consider themselves to have conservative or liberal political ideology. Rather, these students answered that they belong to another political category, which they described themselves on the survey. The largest percentage of students in this group, 31.25%, reported that they have “moderate” political ideology. Others in this category responded that they are Libertarian, Independent, Socialist, or apathetic.

The purpose of the third set of questions was to reveal how college-level courses impact the knowledge about global warming belonging to Generation Y, the hypothesis being that only this level of education is sufficient to accurately inform students about the phenomenon. The results prove otherwise, however. For instance, the surveys suggest that members of Generation Y are acquiring their information about global warming earlier in life. Only 2.86% of students indicated that they first learned about global warming in college, while 30.48% of them responded that they began their education about global warming in elementary school. In addition, 33.33% of them indicated that they learned about global warming in middle school, and the same amount answered that they began learning about the phenomenon in high school.

Additionally, most of the students at the College of Charleston have not enrolled in classes that have focused on global warming. In fact, as previously mentioned, 60.95% of them have not taken any classes dealing with this subject. Furthermore, 25.71% have only taken one class concerning global warming, and 8.57% of students have taken two or more such classes. Only 4.76% have taken three or more courses about global warming. However, as mentioned earlier, 72.38% of students answered correctly when asked what the possible causes of global warming are, and 80.00% answered correctly when asked what the possible future consequences of this phenomenon are. Therefore, although a majority of students have not taken classes at the College of Charleston that have dealt with global warming, most of the participants are educated about the basic information pertaining to this phenomenon.

Moreover, students who have taken collegiate level classes focusing on global warming do not feel that they are much more informed than those who have not taken such classes. Overall, 24.76% of students feel that they understand the subject very well, 65.71% feel they understand the subject fairly well, and 9.52% feel that they understand the subject

not well at all. Students who have taken classes at the College of Charleston pertaining to global warming respond in similar ways. In fact, 65.66% of them feel they understand the issue fairly well, and 34.34% feel that they understand global warming very well. However, not one student who has taken a college class pertaining to global warming feels that he/she does not understand this issue at all. Therefore, this data suggests that while college-level courses have not made a significant impact on educating members of Generation Y about global warming, they have increased the confidence of college students about their knowledge of the subject.

The fourth set of questions sought to gain insight into how students believe their actions may impact global warming, which was based on the assumption that members of Generation Y will feel responsible to combat the phenomenon if they think their actions contribute to global warming. The results from this study show that this is not always the case, however. While 85.71% feel that human actions influence global warming, a lesser amount of 77.14% feel that they are responsible to combat the phenomenon. Therefore, there is a missing link in this study between what creates a sense of efficacy among those students who believe that human actions influence global warming. Of the 22.86% who do not feel an individual obligation to fight global warming, 73.68% believe that it is the government's responsibility to address the issue. In addition, 21.05% believe that America's industries have the responsibility to combat global warming, 26.31% cite other groups who are responsible, and 5.26% feel that no one should be responsible to combat global warming.

When asked to rank different groups according to which is the most responsible for fighting global warming, only 25.71% indicated that the most responsibility falls on individuals. The largest percentage of students, 45.71%, responded that the international community has the responsibility to fight global warming, and 24.76% indicated that individual nations have the obligation to do so. The remaining 5.71% and 4.76% answered that communities and regions have the most responsibility to fight global warming. Therefore, this data suggests that members of Generation Y mostly look to groups to actually take

action against global warming despite the fact that many of them feel they should monitor their own contribution of greenhouse gas emissions.

Perhaps students do not feel that they have an individual obligation to combat global warming because they do not think their actions will make a difference. Only 7.62% of them responded that their individual actions could make a substantial difference in fighting the phenomenon, while 56.19% of students responded that these actions could make a minor difference. In addition, 20.95% of students indicated that their individual actions could make somewhat of a difference, 11.43% responded that their actions would be inconsequential, and 2.86% were unsure.

After reviewing the aforementioned data, it is not surprising that most students do not believe that the most effective action can be taken at the individual level to address global warming. Only 20% of students believe that they have the power as individuals to fight global warming best, while 40% of students indicated that the international level has the potential to be the most effective. In addition, 23.81% of students think the national level can be the most successful in addressing global warming, 13.33% believe the community level has the most potential to fight global warming effectively, and 6.67% believe the state level has the most power to address this issue. Lastly, 1.90% think that the regional level can be the most effective in combating global warming.

In terms of how students view the community as being able to address global warming, only 14.28% of participants believe that the Charleston community can make a substantial difference, while 33.33% of them feel that the community can make only a minor difference. Almost half of students, 43.80%, believe that the Charleston community can make something of a difference, and 6.67% think that the Charleston community's actions would be inconsequential.

Whether or not students believe that the Charleston community's actions can make a difference, most of them do not know what the city is actually doing to fight global warming. In fact, 91.43% of them indicated that they have never heard of the Cities for Climate Protection Program, as opposed to the mere 8.57% who responded that they are familiar with this organization. Charleston is a part of the Cities for Climate Protection Program, which was founded in 1993 when municipal

leaders from all over America established a declaration for local governments throughout the world “to reduce greenhouse gas emissions, improve air quality, and enhance urban sustainability” (ICLEI, par. 2). The purpose of the Cities for Climate Protection Program is

to educate and empower local governments worldwide to take action on climate change. CCP is a performance-oriented campaign that offers a framework for local governments to reduce greenhouse gas emissions and improve livability within their municipalities. (ICLEI, par. 1)

Its partners include the Clean Air- Cool Planet coalition and the US Environmental Protection Agency.

Lastly, the fifth set of questions intended to uncover how the opinions of members belonging to Generation Y differ from those that the rest of Americans possess about global warming, based on the assumption that college students are more concerned about global warming than Americans in general. The results from this study suggest that this hypothesis is correct. In order to evaluate this theory, this study compared answers to survey questions from a national audience found in the Polling Report to answers that students at the College of Charleston provided when asked the same questions. The Polling Report is an “an independent, nonpartisan resource on trends in American public opinion” that compiles various polls conducted throughout the country on specific subjects. The information for this study originates from the Polling Report’s data on the environment, specifically global warming, and consists of polls given to Americans aged eighteen and older. These nation-wide polls were conducted by reputable organizations such as the *New York Times*, CBS News, the Gallup Organization, Stanford University, *TIME Magazine*, and the *Washington Post* (“Polling Report,” par. 1).

The research gathered from the surveys and compared to the data from the Polling Report suggests that more college students than Americans in general think that global warming is an urgent problem. In fact, while most college students who participated in this study believe in the immediacy of global warming, most Americans polled about this

question think that the phenomenon is a longer-term problem (“Environment”). Specific percentages pertaining to this assertion and the survey question itself are located in Table 1.

Table 1

Do you think global warming is an urgent problem that requires immediate government action, or a longer-term problem that requires more study before government action is taken?

	Urgent Problem	Longer-term Problem	Not a Problem	Unsure
Students	47.62%	39.05%	1.00%	11.43%
Americans	38%	58%	3%	1%

In addition, more students are certain that global warming is happening than are Americans as a whole. Most College of Charleston students in this study indicated that they are completely convinced that global warming is occurring. On the other hand, most Americans claim that they are mostly convinced that the phenomenon is happening. Moreover, more Americans in general expressed that they are “not so” or “not at all” convinced that global warming is a reality. In fact, no single student in this study responded that he/she is “not at all” convinced that global warming is happening (“Environment”). The percentages pertaining to this data and the survey question used to analyze the opinions of the participants are included in Table 2.

Table 2

How convinced are that global warming or the greenhouse effect is actually happening: completely convinced, mostly convinced, not so convinced, not at all convinced, or unsure?

	Completely	Mostly	Not So	Not at All	Unsure
Students	47.62%	40.00%	9.52%	0%	1.90%
Americans	23%	36%	24%	16%	2%

In terms of how the United States government is addressing the issue of global warming, Americans as a whole and college students agree that the government is doing too little. However, the discrepancy between the percentages of people in both groups who believe the American government is not fulfilling its duty to combat global warming is considerable. Twice as many college students than Americans in general feel that the government is doing too little, while many more Americans as a whole are satisfied with how the government is dealing with global warming (“Environment”). For percentages of this information and the appropriate survey question, refer to Table 3.

Table 3

Do you think there is too much, too little, or about the right amount of government regulation and involvement in the area of environmental protection?

	Too Much	Too Little	About Right	Unsure
Students	0%	84.76%	3.81%	11.43%
Americans	1%	47%	32%	2%

Furthermore, college students expressed more concern than the rest of Americans about how the news portrays the seriousness of global warming. While most College of Charleston students indicated that the news underestimates the gravity of the phenomenon, most Americans ages eighteen and older believe that the news exaggerates the seriousness of global warming (“Environment”). This assertion implies that both groups of participants are dissatisfied with the type of coverage that global warming receives from the media. However, while college students would like to see more news focusing on global warming, Americans as a whole feel that there is too much coverage on this issue already. Percentages and the survey question pertaining to this difference in opinion can be found in Table 4.

Table 4

Thinking about what is said in the news, in your view is the seriousness of global warming generally exaggerated, generally correct, or generally underestimated?

	Exaggerated	Correct	Underestimated
Students	14.29%	39.05%	42.86%
Americans	38%	25%	33%

Although the participants in this study and the rest of Americans have conflicting attitudes about various aspects of global warming, the two groups have similar opinions about who is and is not fulfilling their duties to combat global warming. For instance, about half of college students and Americans in general agree that environmental groups have done more than their share to help reduce environmental problems. They also agree that groups in every other category have done less than their share to fight global warming. Although more college students than Americans as a whole consistently indicated that they are dissatisfied with these organizations, the two groups of participants concurred that the media, state and local governments, the general public, local businesses, the President, Congress, and large corporations have neglected to do their share in combating global warming (“Environment”). The precise percentages referring to this information and the survey question used to analyze this data are listed in Table 5.

Despite the fact that college students and Americans in general agree about several aspects of global warming, the students in this research show much more confidence that the effects of this phenomenon are an immediate threat to the world. Though most people in both groups indicated that the effects of global warming have already begun to happen, many more students than Americans in general believe this is the case. In contrast, more Americans as a whole than college students consistently indicated that the effects of global warming will begin occurring in a few years, during their lifetime, during future generations,

Table 5

For each of the following, indicate if you feel they've done more than their share, just about right, or less than their share to help reduce environmental problems: environmental groups; the media, state/local government; the general public; local businesses; the President, Congress; and large corporations.

	Env. Groups	Media	Gov.	Gen. Public	Local Bus.	Pres.	Cong.	Large Corps.
Students-More	50.48%	3.81%	1.00%	1.00%	0%	0%	0%	1.00%
Students-Right	20.52%	26.67%	11.43%	5.71%	15.24%	10.48%	17.14%	4.76%
Students-Less	12.38%	61.90%	80.95%	87.62%	75.24%	84.76%	71.42%	85.71%
Americans-More	42%	18%	10%	10%	9%	8%	8%	6%
Americans-Right	39%	37%	43%	26%	38%	36%	31%	21%
Americans-Less	16%	44%	46%	63%	50%	53%	57%	71%

or that they will never happen (“Environment”) The specific percentages and survey question prompting these responses are located in Table 6.

Table 6

Which of the following statements reflects your view of when the effects of global warming will begin to happen: they have already begun to happen; they will start happening within a few years; they will start happening within my lifetime; they will not happen within my lifetime but will affect future generations; or they will never happen?

	Already Begun	Few Years	My Lifetime	Future Gens.	Never Happen
Students	81.90%	2.86%	4.76%	5.71%	8.57%
Americans	54%	5%	10%	19%	9%

Analysis and Applications

During the beginning stages of this research, the expectation of this study was to find a strong correlation between the participants' knowledge about global warming and their sense of efficacy to address the issue on an individual level. On the contrary, however, the results from this study suggest that this connection may be invalid. Rather, the reason for the neglect of college students to take action against global warming cannot be generalized in such a manner that relates their actions solely to their scientific understanding of the subject.

For instance, students actually proved through open-ended questions on the surveys that they know more about global warming than this research supposed they would, but many of them indicated that they are not compelled to take individual action against global warming. At the same time, many College of Charleston students also revealed that they gain most of their understanding about the phenomenon from the media, which this study expected. However, this essay originally suggested that college students would not possess an accurate comprehension of global warming if they relied on the media to inform them about the phenomenon.

Therefore, although the media may play a significant role in educating members of Generation Y about the science of global warming, there is a need for this outlet to convey to college students how important individual actions are in fighting the phenomenon. MTV, a popular network among college students, has already begun to address what students can do to combat global warming. During Earth Day, the network included suggestions during their regularly scheduled programs that conveyed what people across America can do in their own homes to reduce their output of greenhouse gas emissions. If other media outlets would also emphasize individual actions that Americans, especially members of Generation Y, can take to reduce their own greenhouse gas emissions, then perhaps college students would realize the impact they can have on the world's future and consequently feel more responsible to take action against global warming.

While this research was accurate in assuming that most students are not acquiring their information about global warming from college classes, I did not expect to find that college students began learning

about the phenomenon earlier in life. As previously mentioned, I was initially concerned that most of my peers would not have a basic knowledge of global warming because I acquired mine at the college level through intensive independent studies. This is not the case for most of the students at the College of Charleston, however, since many of them expressed that they started learning about global warming as early as elementary school. Still, however, many of them have not learned through the years that their individual actions can help deter the effects of global warming.

For this reason, college-level courses have the need to serve a specific purpose, which should focus on emphasizing to students the importance of taking individual action against global warming. Currently at the College of Charleston, there are no classes pertaining specifically to global warming. Rather, the majority of the students who participated in this study reveal that the only college classes they have had which focused on the phenomenon are science courses such as biology and geology. While these classes play an important role in educating students about the science of global warming, the College of Charleston should consider incorporating classes similar to those that Middlebury College offers, which concentrate on global warming as the core material instead of a chapter within a broader subject. These proactive classes could be linked to the Science Department by focusing on the ways in which individuals can deter the scientific effects of global warming. They could also belong to the Political Science Department, which could offer classes pertaining to how students may influence various organizations through individual actions and grassroots efforts to reduce their greenhouse gas emissions.

It would also be beneficial for the College of Charleston to begin again to track its progress of the greenhouse gases it emits so that students are aware of the impact that their own campus makes on the environment. Although the surveys did not ask students about their knowledge pertaining to the consumption patterns belonging to universities around the nation, it is possible that many college students do not understand the extent to which their campuses contribute to global warming. Perhaps the College of Charleston could publish and distribute pamphlets on its greenhouse gas emissions annually or bi-

annually. Students may feel a sense of efficacy to take individual actions against global warming if they realize the impact that their own college has on contributing to global warming.

This study also correctly assumed that political ideology influences the thinking of members of Generation Y about the issue of global warming; however, the results were not as strong as this research expected. While liberal students ranked global warming higher on a scale concerning current political issues, the discrepancy between the views of liberal and conservative students is small. In fact, liberal students expressed approximately 10% more concern for the significance of global warming in today's world, which does not indicate a monumental difference. Overall, members of Generation Y are considerably concerned with the phenomenon, regardless of whether they are willing to take the individual responsibility to fight it.

Therefore, one of the most effective approaches to take in encouraging college students to fight global warming on an individual level revolves around the United States government. After all, most students indicated that their government is one of the most responsible and capable organizations for fighting global warming. However, politicians are not responding to the Generation Y constituency. As this research suggested, college students are generally very concerned about global warming, regardless of their political ideology. Therefore, elected officials may use this group of Americans aged eighteen to twenty-two as support for revolutionizing the way in which the government moderates the nation's level of greenhouse gas emissions.

However, in my experience as an intern with Senator Lindsey Graham in Washington, D.C., I observed that most politicians are more concerned with the opinions of senior citizens rather than college students because the former are more likely to vote in elections. If politicians recognized the distress that members of Generation Y feel about global warming, however, they could use this issue as a platform during elections to acquire support from college students. In doing so, college students might feel encouraged to become politically active and vote in the politicians who are committed to combating the phenomenon. Not only would this allow college students to take individual actions by voting for elected officials who value the urgency of global warming, it

may also generate more interest in the phenomenon and create a feeling of accomplishment among college students, which may encourage members of Generation Y to take further action against the phenomenon.

Lastly, this study found that, as expected, most students do not realize the impact that the Charleston community is having on global warming. I had not heard of the Climate for Cities Protection Program before enrolling in this essay, and I assumed that most of my peers would be unaware of this program as well. Accordingly, this study confirms that an overwhelming majority of college students here in Charleston are unfamiliar with the Cities for Climate Protection Program. If the residents of Charleston involved in the Cities for Climate Protection Program reached out to College of Charleston students about what Charleston is accomplishing as a city, then more students might be inspired to help the community achieve its goals by taking individual actions against global warming. By publishing an annual pamphlet about the city of Charleston's progress, similar to what this study suggests the College of Charleston can do for itself, members of Generation Y may be able to realize the impact that even a small community can have on changing the world.

Conclusion

This essay sought to analyze how responsible members of Generation Y feel to combat global warming on an individual level. After completing the literature review and learning more about the various factors that influence College of Charleston students about global warming, however, it is evident that an answer to such a research question cannot be easily generalized. For instance, this paper previously mentioned that college students across the nation dramatically vary in terms of how they view their personal obligation to combat global warming, even though most universities have decreased their greenhouse gas emissions. Rather, while some students are protesting their institution's superfluous uses of electricity and are encouraging their administrators to tackle the issue, many more are remaining silent about their opinions pertaining to global warming.

In addition, this study recognizes the inherent limitation of its respondent pool: the only students surveyed about their views on global

warming reside in Charleston, South Carolina. They attend one college, the College of Charleston, and only 105 of them actually participated in this study. In order to better grasp how members of Generation Y feel about their individual responsibility to fight global warming, it is essential that this research be expanded to include members of Generation Y drawn from a more geographically and socio-economically diverse pool. In other words, this essay is only one small step in evaluating the responsibility that members of Generation Y perceive that they have in combating global warming. Nevertheless, it is a step in the right direction.

Likewise, the respondent pool is too restricted because it only focuses on one life-stage among members of Generation Y. This study sought to uncover how an entire generation views global warming; however, only college students within this large group of Americans were considered for this project. For this reason, the opinions of many members of Generation Y are not included in this essay, which could quite possibly alter the results. On the other hand, the results could remain the same. Either way, the result cannot be determined without a broader base of respondents.

Despite the inability to answer the central research question, this essay does convey significant information about students at the College of Charleston. It indicates that most of these students rely on large groups to address the phenomenon and thus overlook their individual obligation to fight global warming. Unfortunately, even though College of Charleston students demonstrated on the surveys that they possess a solid understanding of the science of global warming, many of them do not feel that they have an individual responsibility to fight it. Although these results are disheartening since all members of Generation Y have such potential to take effective action against global warming, this research is also motivating because it provides a particular problem to address and a specific audience to target.

As a result of the aforementioned findings, it is likely that the students at the College of Charleston are unconsciously embodying a “tragedy of the commons” mentality. Coined by William Foster Lloyd in 1832 and studied further by Garrett Hardin in 1968, the “tragedy of the commons” relates specifically to pollution:

Here it is not a question of taking something out of the commons, but of putting something in — sewage, or chemical, radioactive, and heat wastes into water; noxious and dangerous fumes into the air; and distracting and unpleasant advertising signs into the line of sight. The calculations of utility are much the same as before. The rational man finds that his share of the cost of the wastes he discharges into the commons is less than the cost of purifying his wastes before releasing them. Since this is true for everyone, we are locked into a system of ‘fouling our own nest,’ so long as we behave only as independent, rational, free enterprisers. (Hardin, par. 30)

This theory relates well to the students at the College of Charleston who participated in this study since most of these students indicated that they do not believe their individual actions will make a substantial difference when fighting global warming; therefore, they rely on large groups, such as America’s government, to address the problem. Placing the responsibility of combating global warming on other people allows students at the College of Charleston to maximize their own use of resources that contribute to global warming. As “independent, rational, free enterprisers” (Hardin, par. 30), College of Charleston students are self-concerned, not conscious of the small effect they are having on global warming as individuals or the large effect they are having as an entire generation on encouraging the phenomenon to progress. For example, although students suggested in the surveys that individual actions such as carpooling might lower America’s greenhouse gas emissions, the number of commuting students at the College of Charleston has increased by 12% according to the audit performed at the college in 2001.

After writing this paper, I recognize that this essay could have further analyzed how College of Charleston students view global warming; however, time did not allow for all areas of this subject to be examined. For instance, having focus group discussions with participants from the surveys could be beneficial in order to study their opinions and experiences more in depth. Furthermore, using regression analysis to

evaluate the surveys may reveal more correlations between various answers that are not included in this essay. In addition, since the surveys consisted of 28 questions, there are most likely countless associations between many answers that this essay does not address.

Moreover, this study could be greatly improved by adding one more crucial question to the survey. Even though the study asked students if they feel an individual obligation to fight global warming and if they know of any steps they can take to combat this phenomenon, it failed to ask them if they have already started taking action. In order to fully evaluate the mentalities belonging to students at the College of Charleston, and even to determine if in fact they are demonstrating a “tragedy of the commons” state of mind, this question must be considered.

In conclusion, although this essay suggests certain results among students at the College of Charleston, it cannot advance any firm conclusions about Generation Y as a whole. However, it is my hope that this study will spawn more interest about how Generation Y views global warming in every aspect of the subject, especially in terms of how active college students are in taking individual actions to address the phenomenon. The world needs to begin assessing its greatest resources for the monumental fight against global warming, and there is no better place to start than by considering the influence that members of Generation Y can have in securing a better future.

Attachment 1
Consent to Act as a Human Participant

Please read this form before participating in this experiment.

You are invited to participate in this research study. The following information is provided to help you make an informed decision on whether or not you choose to participate. If you have any questions, please do not hesitate to ask. As a volunteer for this study, you must be provided a copy of this consent form. This form will briefly explain the purpose of the experiment and the associated procedures so that you understand the nature of the experiment before you may begin.

This study seeks to learn how much College of Charleston students understand about the problem of global warming, where they acquire their information about the problem, and what they feel they can do about the problem. Results of this survey will be aggregated and compared with survey findings from other cohorts of Americans.

If you decide to participate in this research project, you will be given a survey to fill out with 28 questions. The entire experiment will take approximately 20 minutes. The process will not cause you any harm or discomfort.

By completing this survey, you agree that you understand the procedures and any risks and benefits involved in this research. You are free to participate or withdraw your consent to participate in this research at any time without penalty or prejudice. Your participation is entirely voluntary. Your privacy will be protected because you will not be identified by name as a participant in this project. The data and information collected in this study will be kept for five years after completion. After the expiration of this time limit, the data and information collected in this study will be destroyed via paper shredder.

This research study and consent form have been approved by the College of Charleston Institutional Review Board, which ensures that research involving human participants follows federal regulations. Questions regarding your rights as a participant in this project can be answered by calling (843) 953-5623. Questions regarding this research itself can be answered by Mary Lauren Ashe by calling (803) 493-5661.

Attachment 2
Survey

The identity of the participants to this survey will be kept private. Answers to the questions on this survey will be aggregated when the results are discussed.

1. How many years have you completed at the College of Charleston?
2. How many classes, if any, have you taken at the College of Charleston that have focused on global warming?
3. In your opinion, what are some of the most significant political problems that America currently faces?
4. From what source do you receive the most information about global warming?
5. Mark the following sources of information if you gain knowledge from them about global warming, and list the specific program, website, title, etc.:
 - Movies
 - Television
 - Magazines
 - Newspapers
 - Internet
 - Books
 - Class
 - Other
6. Rank your answers from the previous question in terms of how much knowledge you gain from each source about global warming (1 being the least informative source, 2 being a more informative source than the first, and so on):
 - Movies

- Television
- Magazines
- Newspapers
- Internet
- Books
- Class
- Other

7. When did you begin learning about global warming?

- Elementary school
- Middle school
- High school
- College
- Have never learned much about global warming

8. Do you consider your political ideology to be:

- Very Conservative
- Conservative
- Somewhat Conservative
- Somewhat Liberal
- Liberal
- Very Liberal
- Other (please name)
- Apathetic or Unsure

9. On a scale from 1 to 10 (1 being the least important and 10 being the most important), how do you rank global warming in terms of its importance compared to other current political issues?

10. Do you think that the possibility of global warming should be treated as a:

- Very serious problem
- Somewhat serious problem
- Not a serious problem

11. Thinking about the issue of global warming, sometimes called the “greenhouse effect,” how well do you feel you understand this issue?

- Very well
- Fairly well
- Not at all

12. From what you know, what are some of the possible causes of global warming?

13. From what you know, what are some of the possible future consequences of global warming?

14. Do you believe that human activity substantially affects the earth’s climate?

- Yes
- No
- Not sure

15. What actions, if any, do you believe you can take individually to fight global warming?

16. Do you believe you have an individual obligation to do what you can to combat global warming?

- Yes
- No
- Not sure

17. If you answered “No” or “Not sure” to number 16, then who, if anyone, is responsible for taking action to combat global warming?

18. Rank 1 to 5 (1 being the most responsible and 5 being the least responsible) the level of responsibility that the following bear in addressing global warming:

- Individuals
- Communities
- Nations, States, or Provinces

- Regions (collections of states or provinces)
- International community

19. Overall, how great an impact do you believe you can have as an individual combating global warming?

- I can make a substantial difference.
- I can make something of a difference.
- I can make a minor difference.
- My actions are inconsequential.
- Not sure

20. Overall, how great an impact do you believe the Charleston community collectively can have in fighting global warming?

- We can make a substantial difference.
- We can make something of a difference.
- We can make a minor difference.
- Our actions are inconsequential.
- Not sure

21. Have you ever heard of the Cities for Climate Protection Program?

- Yes
- No

22. Rank 1 to 6 (1 being the most effective and 6 being the least) where you believe the most effective action can be taken to address global warming:

- Individual level
- Community level
- State level
- Regional level
- National level
- International level

23. Do you think global warming is an urgent problem that requires immediate

government action, or a longer-term problem that requires more study before government action is taken?

- Urgent problem that requires immediate government action
- Longer-term problem that requires more study
- Not a problem
- Unsure

24. How convinced are you that global warming or the greenhouse effect is actually happening?

- Completely convinced
- Mostly convinced
- Not so convinced
- Not at all convinced
- Unsure

25. Do you think there is too much, too little, or about the right amount of government regulation and involvement in the area of environmental protection?

- Too much
- Too little
- About right
- Unsure

26. Thinking about what is said in the news, in your view is the seriousness of global warming:

- Generally exaggerated
- Generally correct
- Generally underestimated

27. For each of the following, indicate if you feel they've done more than their share, just about right, or less than their share to help reduce environmental problems:

- Environmental groups
- The media
- State or local government

- General public
- Local businesses
- The President
- The Congress
- Large corporations

28. Which of the following statements reflects your view of when the effects of global warming will begin to happen:

- They have already begun to happen.
- They will start happening within a few years.
- They will start happening within my lifetime.
- They will not happen within my lifetime, but they will affect future generations.
- They will never happen.

Works Cited

- Armour, Stephanie. "Generation Y: They've Arrived at Work with a New Attitude." *USA Today* 6 Nov. 2005. 19 Jan. 2006 <http://www.usatoday.com/money/workplace/2005-11-06-gen-y_x.htm>.
- Bernstein, Larry. "Climate Change and Ecosystems." *The George C. Marshall Institute*. Aug. 2002. 19 Jan. 2006 <<http://www.marshall.org/article.php?id=89>>.
- Blodgett, John, and Larry Parker. "Greenhouse Gas Emissions: Conflicting Situations, Conflicting Perspectives." United States Congress. 4 Feb. 2005 <<http://www.congress.gov>>.
- "Climate Change and Human Health." *Population and Development Review* 23 (2005): 205-8. JSTOR. College of Charleston. 19 Jan. 2006. <<http://www.jstor.org/search>>.
- Durso, Fred Jr. "Clean Energy Goes to College." *E: The Environmental Magazine*. July/Aug. 2004. 21 Feb. 2006 <<http://www.looksmartscience.com/p/articles>>.
- "Environment." Polling Report. 19 Jan. 2006. 19 Jan. 2005 <<http://www.pollingreport.com/enviro.htm>>.

- Esposito, Greg. "Global Warming Groups Come to Local Challenges." *The Roanoke Times* 7 Feb. 2006. 16 Feb. 2006
http://blogs.roanoke.com/campuswatch/archives/2006/02/global_warming_groups_come_to_local_colleges.html.
- "Fact for Features." Mar. 2006. *U.S. Census Bureau*. 16 Apr. 2006
http://www.census.gov/PressRelease/www/releases/archives/facts_for_features_special_editions/006560.html.
- Fletcher, Susan, and John Justus. "Global Climate Change." United States Congress. 8 Feb. 2005 <<http://www.congress.gov>>.
- Fowler, Nathan. "UW Students Join International Discussion on Global Warming." *The Daily* 17 Nov. 2000. 21 Feb. 2006
<http://archives.thedaily.washington.edu/2000/111700/N6.GlobalWarm.html>.
- Handwerk, Brian. "Global Warming Fast Facts." *National Geographic Magazine* 6 Dec. 2004. 19 Jan. 2006 <<http://news.nationalgeographic.com/news>>.
- Hardin, Garrett. "The Tragedy of the Commons." *Die Off*. 18 Apr. 2006
<http://dieoff.org/page95.htm>.
- Jayson, Sharon. "Early to Wed may Make Marriage Happy, Survey Says." *USA Today* 11 Nov. 2005. 5 Apr. 2006 <http://www.usatoday.com/news/health/2005-11-16-young-wed_x.htm>.
- Kertzer, David. "Generation as a Sociological Problem." *Annual Review of Sociology* 9 (1983): 135-149. JSTOR. Addlestone Lib., College of Charleston, Charleston, SC. 22 Feb. 2006. <<http://www.jstor.org/search>>.
- "Larry David Tries to 'Curb Global Warming.'" *USA Today* 13 Sep. 2005. 21 Feb. 2006 <http://www.usatoday.com/life/people/2005-09-13-larry-david_x.htm?POE=LIFISVA>.
- Linstroth, Tommy and Neff, James. "College of Charleston Greenhouse Gas Audit: 1993-2001." College of Charleston Discussion Paper, Master of Environmental Studies Program, College of Charleston, 2003.
- Linstroth, Tommy and Neff, James. *Greenhouse Gas Assessment of the College of Charleston*. 15 Mar. 2006 <<http://www.cofc.edu/ghgas/home.htm>>.

- Masci, David. "Student Activism." 2006. *CQ Press*. 21 Feb. 2006
<<http://library.cqpress.com/cqresearcher/ppv.php?id=cqresrre1998082800>>.
- Maslin, Mark. *Global Warming: A Very Short Introduction*. Oxford: Oxford UP, 2004.
- "Middlebury Receives 2005 Climate Champion Award." 2005. *Clean Air-Cool Planet*. 16 February 2005 <<http://www.cleanair-coolplanet.org/GlobalWarmingSolutions>>
- "Mission Statement." *College of Charleston*. 17 January 2006
<<http://www.cofc.edu/about/mission.html>>.
- Neuborne, Ellen and Kathleen Kerwin. "Generation Y." *Business Week Online* 15 Feb. 1999. 19 Jan. 2006 <http://www.businessweek.com/1999/99_07/b3616001.htm>.
- O'Herir, Andrew. "The Know-nothings." 2006. *Salon.com*. 5 Apr. 2006
<<http://dir.salon.com/story/books/review/2005/09/14/mooney/index.html>>.
- "Programs." 2006. *ICLEI*. 5 Apr. 2006
<<http://www.iclei.org/index.php?id=1118>>.
- Richards, Scott . *The State of Global Warming. The Heartland Institute* 1 Feb. 2005. 19 Jan. 2006. <<http://www.heartland.org/Article.cfm?artId=16644>>.
- Saad, Lydia. "Are Americans Cool to the Kyoto?" *The Gallup Poll*. 21 June 2005. 19 Jan. 2006 <<http://poll.gallup.com/content/default.aspx?ci=16999>>.
- Saad, Lydia. "Global Warming on Public's Back Burner." *The Gallup Poll*. 20 Apr. 2004. 19 Jan. 2006 <<http://poll.gallup.com/content/default.aspx?ci-11398&pg=1>>.
- Schneider, Stephen H., Rosencranz, Armin, and John O. Niles, eds. *Climate Change Policy: A Survey*. Washington: Island Press, 2002.
- Smithson, Shelley. "Big Plan on Campus." *Grist Magazine* 31 July 2002. 16 Feb. 2006 <<http://www.grist.org/news/maindish/2002/07/31/smithson-campus/>>.
- Spence, Christopher. *Global Warming: Personal Solutions for a Healthy Planet*. New York: Palgrave MacMillan, 2005.

“Students Purchasing More Green & Organic Products for Back to School Needs.” *Center for a New American Dream*. 16 Aug. 2005. 21 Feb. 2006

<<http://www.organicconsumers.org/BTC/students081705.cfm>>.

“U.S. Rejection of Kyoto Protocol Process.” *The American Journal of International Law* 95 (2001): 647-650. JSTOR. Addlestone Lib., College of Charleston, Charleston, SC. 22 Feb. 2006. <<http://www.jstor.org/search>>.

Vega, Cecilia M. “Warning from Gore on Future, Global Warming Called an Emergency.” *San Francisco Chronicle* 5 June 2005. 5 Apr. 2006 <<http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2005/06/05/GORE.TMP>>.

Weart, Spencer. “The Public and Climate Change.” *The Discovery of Global Warming*. 17 Jan. 2006 <<http://www.aip.org/history/climate/Public.htm>>.

“Whitman College to Purchase Renewable Energy.” Sierra Student Coalition. 16 Feb. 2006

<<http://www.ssc.org/index.php?page=states/mi.php>>.