

Global Warming

Issue introduction:

This position guide is on global warming, courtesy, again, of the Passionist Social Concerns Commission. This topic lends itself, as have previous issues, to a pro and con position with a concluding theological reflection. As with our previous issues we hope this format will serve the ultimate purpose of promoting healthy dialogues and discussions regarding difficult but important social issues.

Apparently most people agree that global warming is a problem, but disagree as to how to formulate the problem. Is it a problem with a solution, or is it a problem that has no solution? If there is a solution, what might it be? If there is no solution, what course of action, if any, can we take before it?

Global Warming refers to the rising of Earth's temperature resulting from an increase in heating of the earth's atmosphere. The atmosphere is heated because of certain heat trapping (greenhouse) gasses that are thickening the layer of the Earth's atmosphere. This process is known as the "greenhouse effect." Two of the primary gasses that contribute to this problem are carbon dioxide and methane. According to the U.S. Environmental Protection Agency:

What has changed in the last few hundred years is the additional release of carbon dioxide by human activities. Fossil fuels burned to run cars and trucks, heat homes and businesses, and power factories are responsible for about 98% of U.S. carbon dioxide emissions, 24% of methane emissions, and 18% of nitrous oxide emissions. Increased agriculture, deforestation, landfills, industrial production, and mining also contribute a significant share of emissions. In 1997, the United States emitted about one-fifth of total global greenhouse gases.¹

The following recent events have given rise to the importance and concern regarding this topic:

- During the summer the price of Gas has continued to rise up to \$3 a gallon and continues to fluctuate anywhere from \$2.50 to just under 4 dollars, a trend that concern all Americans as well as the Transportation and Energy Industry.
- On August 8th, President Bush signed into law the new energy bill which is suppose to respond to the energy and gas crisis that looms ahead of this nation.
- On August 29 Hurricane Katrina ravaged New Orleans and the Gulf Coast decimating at least 1,000 American lives and damaging our Gulf Coast oil rigs and infrastructure.
- On September 24th Hurricane Rita damaged the Texas/Louisiana border, thankfully not nearly as damaging as Katrina, but still leaving a deep concern for Americans especially when it did reach a category 5 level.

¹ U.S. Environmental Protection Agency, www.epa.gov. The exact site was under global warming-climate <http://yosemite.epa.gov/oar/globalwarming.nsf/content/climate.html>

- On October 24th Hurricane Wilma, the third category 5 hurricane which broke many hurricane season records, damaged the southwest of Florida, after having hit the Mexico.

In an effort to illustrate the pro and con positions within this paper, we have developed two pseudo characters from our Christian and American tradition. We raise two apostolic debaters as well as two early American debaters to help us carry on the noble tradition of having healthy debates in order to come to find the wisdom that exist somewhere in the middle from which we can act. In raising up St. James and St. Paul as well as Alexander Hamilton and Thomas Jefferson we are not identifying these pseudo characters to the issues that these men debated as much as the spirit from which they held their positions. For us Christian Americans the character of Paul Jefferson should resonate with us as the progressive-liberal voice while the character of James Hamilton will reflect a traditionalist-conservative approach.

In raising the debates of both James vs. Paul and Hamilton vs. Jefferson it is also probably helpful for the readers to identify themselves with another historical character that was a part of both these debates. The person in the middle who was in charge of mediating both positions and acting on the consensus that came out of these debated. From our Christian heritage we have the person of St. Peter. From our American heritage we have George Washington. In our guides you will not see the pseudo-character of Peter Washington. That is the role we hope you the readers can fill.

Before launching out into a more extensive presentation of the pro and con positions, in terms of this foursome, we might introduce St. Paul of the Cross into the picture, again, not because he a position on global warming, but because he had strong convictions about the nascent religious community he wanted to get underway. Many of these were based in his early orientation toward the hermit-life, accompanied by a supportive setting of quiet and solitude. He was a nature-lover, and was concerned about the location of his residences, which he significantly called “retreats”, wanting them in healthy climates, away from the various pollutants common in that era.

His design for the new community incorporated these features, and did not meet with the immediate approval of the Vatican. In fact, he had something of a running battle with various commissions set up to study his new way of life. This became the issue. Some of the Cardinals on these commissions had a problem with a model of religious life that seemed to depart from the practice, as it existed, in codified form, at the time; Paul’s problem was with their solution, since it did not support the ecology of religious community as he conceptualized it. Eventually a kind of hybrid, so to speak, emerged, strong on ascetical practices, but weaker on some of the monastic ones. He had to compromise.

Perhaps the conclusion of the pro-con positions on global warming will end in a compromise that applies solutions to that part of it that is a problem, and modes of adjustment to the part of it that is a misfortune. But let us get on with a presentation of each.

Issue Debate

James: Is the Earth getting warmer? Seemingly. Is human pollution at fault? Hardly.

Whether it's the Intergovernmental Panel on Climate Change, the Union of Concerned Scientist or the National Academy of Sciences it seems that there may be a general scientific consensus on the issue that the earth's temperature has risen 1 degree Fahrenheit in the last century. On the issue that human activity is partially responsible for this climate change the closest scientific consensus that exist is to accept that certain human activity like CO₂ and methane emissions may be part of the problem, although how significant the contribution of human activity may be to global warming remains a point of contention. For the sake of argument let me concede the following points:

1. Our world did get warmer by 1 degree this past century.
2. Human activity bears some small responsibility for this climate change.

The reason I am willing to concede these points is because I want to move this debate into a forum I would like to call reality by focusing on two items. How significant is our own human contribution? And based on that what should be our responsible and doable response to this problem.

So let us put a perspective on human activity's contribution to climate change. Fossil fuel emissions may play a role in the warming of the earth but there are other factors that need to be taken into consideration. There are natural greenhouse gas emission from plants and animals. The solar cycle's natural fluctuations are also contributing to this phenomenon. Increased urban development and deforestation are also contributors to the issue of climate change.

The September 2005 report by the National Center for Policy Analysis indicates "the Earth currently is experiencing a warming trend, but there is scientific evidence that human activities have little to do with it. Instead, the warming seems to be part of a 1,500-year cycle (plus or minus 500 years) of moderate temperature swings."² A similar report by the Oregon Institute of Science and Medicine states that "human use of coal, oil, and natural gas has not measurably warmed the atmosphere."³

With human activity being a small and arguably insignificant contributor to the issue of climate change, what becomes our responsibility to the issue of global warming? It becomes a responsibility that we balance along with the entire agenda of protecting freedom, maintaining security, and furthering our economic growth. One of the historical realities to keep in mind when discussing environmental solutions is that the rich developed nations are able to address environmental problems better than poorer nations because they can afford to do this. According to Bjorn Lomborg, the author of *The Skeptical Environmentalist*, "In the United States, the most important environmental indicator, particularly air pollution, has more than halved since 1955, rivers and coastal

² S. Fred Singer and Dennis T. Avery, "The Physical Evidence of Earth's Unstoppable 1,500-year Climate Cycle," National Center for Policy Analysis – Executive Summary, 2005

³ Arthur B. Robinson, Sallie L. Baliunas, Willie Soon, and Zachary W. Robinson, "Environmental Effects of Increased Atmospheric Carbon Dioxide," Oregon Institute of Science and Medicine, 1998

waters are dramatically cleaner, and forest land is increasing... Some developing countries are already following suit. In Mexico and Chile, air pollution is going down.”⁴ Global economic growth then is the indirect solution for promoting environmental issues.

For this reason I do not advocate having a global carbon tax system which will only function to curb the development potential of poor nations thus disabling them from economic growth that is a necessary first step to environmental spending. Also many of the proposed environmental technologies such as solar or wind power simply are not developed enough to be a real financial alternative energy source. I agree with promoting good voluntary codes for carbon emission but I would not want to hamstring a company with regulations that would affect its ability to maintain jobs and create economic growth, which in the case of energy and automotive industries could be used to develop better environmental technologies. As a good first step I would entertain the promotion of carbon sequestration technology.⁵ Rather than regulate and bind business, this industry would give an environmental alternative to farmers and agribusiness.

Paul: Lets separate the wheat from the weeds, or in this case the scientific community from the contrarians.

There is no unified consensus on the exact data regarding climate change. It is generally agreed that in this past century the temperature of the atmosphere has risen at least 1 degree Fahrenheit. The prediction for the next century, if everything stays the same, ranges from a 2.5 degree to a 10.4 degree Fahrenheit increase. Regarding the details of the data there is a broad range of differing opinions. However a general consensus on climate change does exist. There are national and international bodies for the scientific community to debate and develop these broad consensual decisions on the subject of climate change. The groups and individuals that my colleague likes to highlight are not part of that community.

So who are these climate skeptics like Willie Soon, Sallie Baliunas and S. Fred Singer, whose research people like James use to disqualify the scientific community? As a group they have recently been dubbed the popular nickname, the contrarians. Well let’s point out a common feature for the majority of the contrarian community. In May of 2005 Mother Jones magazine did the wonderful service of identifying of individuals and organizations that have been funded by ExxonMobil.⁶ According to this study Exxon Mobil has spent a total of \$8,678,450 on over 40 organizations that happen to adopt a contrarian approach to climate change. The three individuals that James and I have mentioned are all members of Exxon funded organizations. If you include the 8 million used to fund contrarian groups with the money that Exxon uses for political campaign

⁴ Bjorn Lomborg “The State of Nature,” an article found in the July/August 2005 edition of Foreign Policy magazine, in this article Bjorn Lomborg debates with Carl Pope over the environment.

⁵ This technology would use natural carbon “sinks” which are areas rich with good soil or an abundance of trees that act as a natural storage facility for carbon. A carbon sink must have good soil that can store more carbon than it would release. Individual farmers could tend agricultural and a forestry area as a carbon sinks. This would a very practical solution for the United States since the majority of the U.S. landscape naturally is a carbon sink.

⁶ Chris Mooney, “Some Like it Hot,” Mother Jones, May/June 2005. The chart can be found in the following website. http://www.motherjones.com/news/featurex/2005/05/exxon_chart.html

contributions, consider what could be done with that money regarding the technological innovations needed to improve alternative energy sources, and the skilled employment needed to develop them.

Now imagine if Government developed an energy bill that would give corporations financial incentives to develop these new technologies such as wind turbines and better solar technology instead of rewarding them for maintaining the status quo in the midst of a looming energy crisis and drastic weather changes. Is my scenario any more unrealistic than yours? No, the difference is that my vision is sustainable for a future that needs to go beyond fossil fuel and yours is not.

Regarding the state of scientific consensus. As I mentioned there are national and international institutions where the scientific community does get together to develop these policy recommendations. This includes the National Academy of the Sciences in the United States, the International Joint Science Academies, The World Meteorological Organization and the Intergovernmental Panel on Climate Change. At a congressional hearing in 2003 Professor John P. Holdren⁷ made the following statement.

A very large majority of the scientists who have studied climate change are in agreement that: (a) global climate has been changing over the past several decades at a rate highly unusual in climate history; (b) the observed build-up of atmospheric carbon dioxide from fossil-fuel burning has almost certainly been responsible for a substantial part of the change in climate that has been observed; (c) continuation of anything resembling “business as usual” in civilization’s carbon dioxide emissions during the 21st century will lead to much larger changes in climate than those observed so far; and (d) while the consequences of changes of the sort likely to occur under “business as usual” cannot be predicted with high confidence at the current state of the science, the kinds of consequences that are plausible and even likely, given current understanding, entail large disruptions of a wide range of environmental conditions and processes and serious adverse impacts on human well-being.⁸

The scientific consensus presented here conveys a very different reality regarding human responsibility and the consequence of CO₂ emissions. What the scientific community studied in theory through research and weather models is now becoming an observable reality for all to see in the form of the massive hurricanes, tsunamis and most troubling of all the recorded loss of the arctic ice shelf and consequent rising sea levels.⁹

⁷ John P. Holdren is a professor of environmental policy at the John F. Kennedy School of Government and Professor of Environmental Sciences and Public Policy at Harvard University.

⁸ Comments by John P. Holdren on “the Shaky Science Behind the Climate Change Sense of the Congress Resolution” US Senate Republican Policy Committee June 2, 2003

⁹ Daniel Glick, “Geo-signs: The Big Thaw” National Geographic, September 2004, pg. 12-34

This scenario begs us to take a more proactive approach to global warming than what James suggested. I am fully in agreement with exploring carbon sequestration, along with these other innovations and regulations:¹⁰

- Exploring and developing safe renewable energy technologies
 - Wind Turbines
 - Solar Photovoltaic Panels
 - Bio-Fuels
- Increase energy efficiency standards and products
- Protect the forest
- Make more fuel efficient cars and utilities
- Reducing CO2 emissions via a national and global CO2 cap and trade program¹¹

Obviously I would have to disagree with James that in recommending these initiatives I am sacrificing global or national economic growth. In fact my opinion and argument is that the opposite is true. To maintain energy economic growth via fossil fuels when the supply of fossil fuels are becoming scarce is unsustainable for future employment and even corporate economic growth. A study by the Center for Renewable Energy and Sustainable Technology shows the wind and solar photovoltaic job growth would exceed the coal industry by 40% assuming that the demand for energy stays the same.¹² It should come to no surprise that many energy companies like British Petroleum¹³ and Chevron-Texaco¹⁴ are moving towards Renewable Energies.

James: Good Plan, all it needs is a dose of reality

I cannot ascribe to Paul's doomsday scenario. It is rash and perhaps even irresponsible to ascribe the recent hurricanes to global warming. This is especially true when the Director of the National Hurricane Center, Mr. Max Mayfield, stated before a congressional committee this past September, "The increase activity since 1995 is due to natural fluctuations/cycles of hurricane activity... and not enhanced substantially by global warming." In this statement Mr. Mayfield is referring to the 20 year cycles of hurricanes whereby they are more powerful during one cycle and less so during the next. The issue of the arctic ice shelf and the rising sea levels are certainly more dramatic.

¹⁰ Union of Concerned Scientist "Common Sense on Climate Change," http://www.ucsusa.org/global_warming/solutions/common-sense-on-climate-change-practical-solutions-to-global-warming.html

¹¹ According to the U.S. Environmental Protection Agency "Cap and Trade Is a market based policy tool for protecting human health and the environment. A cap and trade program first sets an aggressive cap, or maximum limit, on emissions. Sources covered by the program then receive authorizations to emit in the form of emissions allowances, with the total amount of allowances limited by the cap. Each source can design its own compliance strategy to meet the overall reduction requirement, including sale or purchase of allowances, installation of pollution controls, implementation of efficiency measures, among other options. Individual control requirements are not specified under a cap and trade program, but each emissions source must surrender allowances equal to its actual emissions in order to comply."

¹² Renewable Energy Policy Project, "The Work that goes into Renewable Energy," Research Report, Nov. 2001

¹³ <http://www.bp.com/sectiongenericarticle.do?categoryId=9002323&contentId=3072081>

¹⁴ http://www.chevronenergy.com/renewable_energy/default.asp

However that again is part of a larger cycle, a 1,500-year warming-cooling cycle of moderate temperature swings.

It is obvious that on this point we do not agree so let's move on. If we both want to realistically deal with the CO2 emissions, then I would have to say that your plan would be wonderful if we could just go back in time and redo the industrial revolution all over again. The fact is that we live in a current reality where our global society and industrial infrastructure is built on fossil fuel energy; this is not to say we cannot change it but it suggests that the change must be a gradual development that won't wreck the current system and set us back. To establish severe public policies in place that would address all your suggestions is to hamstring the industrial structure. It would be like a moving vessel in need of a completely new engine. At first the vessel would need to slow down to a stop, then the old engine would have to be replaced by a new engine. That new engine would have to be built during the time the vessel is stopped and during that time the crew is just waiting (unemployed) on the deck until the process is complete. Do you really think in a democratic society people would stand for this, waiting in a state of unemployment for an unforeseeable amount of time?

For that reason I advocate for a public policy that put its eggs in just one or possibly two baskets in order to improve on a couple of dominant and non-crippling CO2 emissions. The recent energy bill started us on a trend to promote and increase energy efficiency standards and encourage renewable technologies while we continue to support the fossil fuel industry that we do have. Of course added to that are voluntary codes that I support and by your own admission they are working with Chevron and BP. Now maybe Exxon is not on the bandwagon but here is where the law of the market comes into play. If Chevron's initiatives become successful then the market will reward it over Exxon and the invisible hand will push Exxon to adopt the needed changes. Now along with what exist, let's work with the U.S. Environmental Protection Agency on promoting carbon sequestration. There you have a doable climate change policy for the 21st century.

Paul: Have you heard of the Precautionary Principle?

If we eliminate the special interest groups from the environmentalist on one end and the contrarians on the other then we have the consensual group in the middle whose recommendation were neatly presented by Professor Holdren in my earlier argument. I am sorry that my colleague chooses not to accept this consensus but unfortunately its potential implications are too serious for us to dismiss with gradual and voluntary alterations to the business as usual system that is responsible for this crisis. It is true that the data and degree of climate change are still debatable, but the seriousness of this issue demands that we responsibly utilize the precautionary principle.

The precautionary principle is a tool of public policy utilized by nations and the international community. What this tool does is to advocate for precautionary public policy action in the face of credible threats and harm despite residual scientific uncertainty. In this country one of the most famous struggles that utilized the precautionary principle was with the issue of tobacco and lung cancer. In the seventies when groups advocated against the tobacco companies for the physical harm of lung cancer the scientific proof was not there to back up their claims. In fact, similar to

ExxonMobil with regard to climate change, the tobacco industry backed up its own research to keep disqualifying the damning research that did link tobacco to cancer. Utilizing the precautionary principle the state governments began to regulate tobacco before waiting for the proof that finally came to be cleared in the 1990's.

With regard to global warming the scientific community has meet to formulate the precautionary principle on this issue and that was developed in the Wingspread statement of 1998 which said,

When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically.¹⁵

I am not preaching on the end of the world but the evidence does suggest that an extreme climate shift will create unfavorable living conditions for the human community including the loss of freshwater, the increase of sea levels, and rising ocean temperatures which do impact the weather patterns.

Instead of focusing on this crisis James is suggesting that my policy suggestions are the potential crisis to be wary off, that is simply not the case. My suggestions do not demand a complete or even partial shutdown of the industrial infrastructure that James seems to be suggesting. All my suggestions are for good public policy that will give the extra nudge that would help the industry take the precautionary measure that they need to. While the energy bill that was recently past offers some meager incentive for what Chevron is doing with renewable energy it ended up giving Exxon a greater reward for more oil exploration. The energy bill should have done the opposite. For a nation that believes in free market it is curious that the current administration is promoting policies that are dictating a different course from where the market is heading. People and nations throughout the world are demanding greener commodities and we are not actively supplying them. Public policy should help our industries compete with the shifting markets but instead we are rewarding them for maintaining the technologies and resources of the past. The global public support for Kyoto should have said something to the administration about this shifting demand.

All of my above mentioned suggestions are doable with the industrial infrastructure we have today. Using your analogy of the vessel we can continue to drive the ship while with new engine is being designed today and integrated as we move forward. If you look at U.S. in competition with Europe, Japan and even China revamping their own engines in the face of global warming, peak oil¹⁶, and the shifting demand our U.S. vessel may be able to stay ahead for the next few years but slowly the lack of the demand and supply for our old fossil fuel engine will slow us down and eventually stop. How do you think our crew will feel about that?

¹⁵ Wingspread Statement on the Precautionary Principle, <http://www.gdrc.org/u-gov/precaution-3.html>

¹⁶ Peak Oil, the strong scientifically held belief that as a finite commodity oil has already reached its midpoint and that its supply can only get less and less until at some point it will reach zero.

Passionist Theology Reflection **“The Wisdom of the Cross”**

We have seen the effects of hurricanes Katrina, Rita and Wilma. We have read about the people who have died, or who have left their homes and are now looking for another place to settle. We see and hear of their suffering. This moves us to discern our responsibility in caring for the globe. Although we may not be the ones who are burying the dead, or their relatives or evacuees who have had to leave their homes and get a life somewhere else, we still feel the pain and take a closer look at this reality of global warming. There is a profound sense that not only are people suffering but also the earth itself is “suffering.” We Passionist are not the only ones who are aware of this suffering. Those who do not profess our faith in God share it also. Where does that leave us?

Regarding the two opinions we have heard in the debate in truth we cannot find in the Bible direct exhortations. For progressives the Bible unfortunately does not say, “Be sure to take care of nature by not polluting the land you use, and by not cutting down unnecessary trees. Keep clean the air you breathe and the water you drink. Use natural resources sparingly to keep yourselves warm and to move about.” Likewise conservatives cannot find the following quote in scripture, “There is little need to worry about my earth and its climate. I am in control of it and I love you so much that atmospheric events will cause you no trouble. Remember, I am with you always. You have nothing to fear. All will be well.” Such quotes would help our debate. The issue of global warming as we understand it did not affect our Christian founders. What we do have is the general message of our Scripture and Christian tradition and we must look towards the spiritual meaning of our tradition and what that says to the current issues we face.

One of the fundamental tenants of our faith is our belief in the Death and Resurrection of Christ and its accomplishment in reconciling humanity to the Creator, who “was pleased . . . through Christ to reconcile to himself all things, whether on earth or in heaven, making peace by the blood of his cross” (Col. 1, 19-20). St. Paul uses the words, “all things.” Does he mean air, water, dirt, plants, trees, and animals? If so, it looks like all this “stuff” is going to return to Christ in their clean and pristine state.

Creation was thus made new (Rev. 21, 5). Once subjected to the bondage of sin and decay, it has now received new life while “we wait for new heavens and a new earth in which righteousness dwells” (2nd Peter 3, 13). Again it seems like all this “stuff” is destined for a renewed state of its original beauty and newness.

“Thus the Father has made known to us in all wisdom and insight, the mystery . . . which he set forth in Christ as a plan for the fullness of time, to unite all things in him, all things in heaven and things on earth” (Eph. 1, 9-10). Things will not only be in their original, unique, pristine state of beauty and newness, but they will also exist in mutual support and unity. This is community – sacred community in the mind of God from the beginning. It was the spirit of our tradition that drove our Passionist founder, St. Paul of the Cross, to implement environmental features to his ministry that we mentioned in the introduction.

We hope that these considerations help us to understand better the relationship between human activity and the whole of creation. We also hope that we see a little better our role as cooperators with God in taking care of God’s creation. When we turn our back

on our Creator's plan, disorder, which has inevitable repercussions on the rest of the created order, results. In terms of morality, when we are not at peace with God and God's creation – God's globe, then the earth itself cannot be at peace. "Therefore the land mourns and all who dwell in it languish, and also the beasts of the field and birds of the air and even the fish of sea are taken away" (Hosea 4, 3).