

The Elephant in the Room

Population and Immigration in the United States and Their Impact on Climate Change

BY ALEXANDER KRUEGER-WYMAN

SYNOPSIS

Given recent developments in the study of climate change, we are at a loss for a solution to what appears to be a significant global threat. How can we ensure that we are protected from this risk without incurring extravagant expenditures and sacrifices? Does climate change really have the potential for disaster that researchers claim? Or, alternatively, is it simply a hyped-up scare that is reason for moderate concern, but that may stabilize in the future, making any significant efforts to stop it a waste of time and money? This paper seeks to answer these questions and discuss the often disregarded factor of population.

After investigating the threat that climate change poses, I will discuss the unique role of the United States in contributing to climate change. By highlighting the nation's high consumption patterns, energy inefficiency, and large and growing population, I will establish both the moral responsibility of

the United States to address these concerns and the unparalleled potential we possess to make a difference in global abatement efforts. While most efforts in this regard by the United States are currently being directed toward reducing consumption and improving energy efficiency, my argument will stress the importance of addressing population.

To encompass the full scope of lowering population, I will discuss the only two means of reducing a nation's population: fertility reduction and immigration control. I will attempt to weigh ethical concerns regarding these practices against any alternative scenario's implications for climate change and consider the applicability of restrictive policies in the United States. With regard to immigration, a common response will undoubtedly be that the United States, as a main contributor to past and present climate change, should not fix a problem it created by denying potential immigrants the opportunities available to Americans. I dispute this contention by discussing the conflict between two opposing desires. We want both to assist impoverished foreign nations by allowing immigration and to arrest global climate change. Given the immediate nature of climate change risks, their potential disastrous effects for the entire world, and the significant contribution of increases in the American population to those consequences, I argue that the United States ought to restrict immigration at this point in time to address the climate change concern, in spite of the disadvantages this imposes on impoverished potential immigrants.

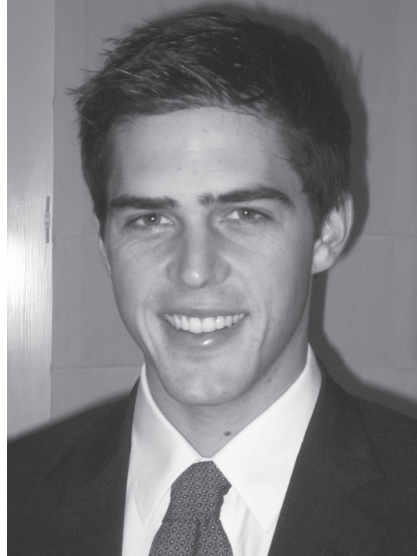
Finally, I will conclude by arguing for national and international action that must be taken to alter current climate trends. I will discuss the duty of the United States in developing policies to lower its contribution and the need for establishing a communal global effort against climate change. Primarily, I will stress the need to acknowledge population as a necessary and overlooked factor to be addressed in climate change mitigation efforts.

Alexander Krueger-Wyman, a graduate of Princeton University, researched the effect of population growth on climate change with Bob Gillespie of Population Communication in 2008. His research on these two topics led to research on the effect of immigration on global climate change for his senior thesis under the supervision of Stephen Macedo, Chairman of the Princeton University Center for Human Values. Since graduating from Princeton in June, he has assisted Professor Jefferey Sellers of the University of Southern California in compiling a comparative study of national climate change policies.

I. An Introduction to the Threat of Climate Change

In the past half-century, a significant global threat has surfaced that is growing with our planet's continued population and technology expansion. The problem is climate change, and there is no easy solution. On many levels, climate change has positive effects, but experts have concluded for several reasons that the dangers of climate change greatly outweigh the benefits. This threat poses severe short-term and long-term consequences on a global level. Climate change is a general term that is commonly used to represent a varied and highly complex set of physical conditions, such as variance in average global temperature, changes in amounts of precipitation, and altered wind patterns. While it is unclear what exactly will happen if these factors continue to change at the current rate, recent research has made it undisputable that they will create significant and often adverse consequences for the global community.

Perhaps the most common concern regarding climate change is that of global warming. In essence, global warming is the observed increase in average global temperature over the past few centuries. What really brings global warming into the spotlight, however, is that much of the observed change has been caused by mankind. The fourth and most recent report from the Intergovernmental Panel on Climate Change (IPCC), the most authoritative body in climate change evaluation, asserts that there is "*very high confidence* that the global average net effect of human activities since 1750 has been one of warming."¹ This evidence of human involvement in global warming implies that we have changed our behaviors in recent centuries in a way that materially affects the environment.² Such changes can probably best be explained by widespread use and developments in the field of technology and by exponential increases in population.



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The chief causes of human-induced climate change are greenhouse gas (GHG) emissions from fossil fuel combustion, aerosols, and other significant global warming compounds (e.g., methane). Many of these gases are abundant in our environment due to the recent dramatic increase in technology deployment and consumption (e.g., increases in vehicle miles traveled and in electric power generation and use). This growth in greenhouse gas emissions has only increased with time, and consequently, "the linear warming trend over the last 50 years (0.13°C [0.10°C to 0.16°C] per decade) is nearly twice that for the last 100 years."³ Given such rapid expansion in recent years, it is evident that global warming is a problem that must be addressed sooner rather than later.

A future of continued and even increased global warming would have many consequences. First, its impact on global weather conditions could be considerable. Growing evidence suggests that global warming has led and will lead to more frequent instances of extreme weather, such as hurricanes, cyclones, heat waves, or droughts. Second, global warming will likely sustain the rising trend in average sea levels and ocean acidity. A rising sea level will have disastrous effects for coastal regions (and particularly small islands), while increases in ocean acidity and temperature affect not only the ocean's ability to accommodate a number of sea-dwelling species, but also its capacity to absorb carbon dioxide emissions, leaving a larger percentage of anthropogenic emissions to be soaked up by the atmosphere.⁴

Third, global warming could have drastic effects on social and economic conditions. Former Chief Economist of the World Bank Sir Nicholas Stern argued in October 2006 that "if we do nothing to stem climate change, there could be a permanent reduction in consumption per head of 20 percent."⁵ Stern maintains that the price of taking the necessary measures to mitigate climate

change is greatly eclipsed by the potential losses from continued global warming.⁶ Finally, climate change poses a significant threat to species across the globe. For many of the reasons that humans will experience increased health risks, global warming will likely cause many animal and plant species to face extinction. The number and magnitude of the probable consequences of global warming thus are staggering. From a global perspective, climate change threatens to harm much of what we know and love about our planet. To avoid the risk of such a disastrous outcome, it has become unequivocal that global warming must be addressed, and soon.

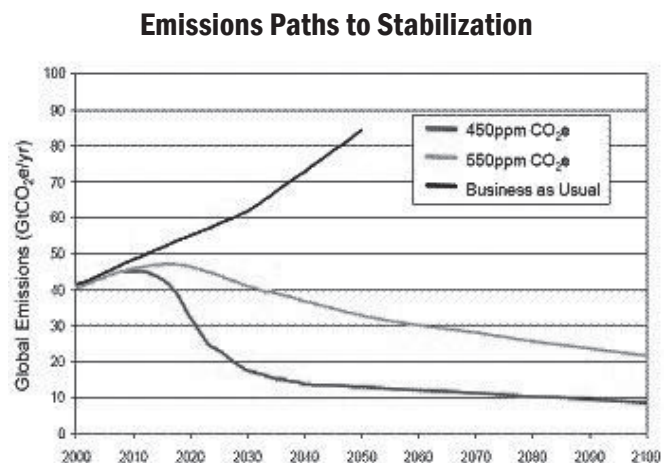
The problem with such a monumental threat as the one global warming presents is that it is exceedingly difficult to implement changes on a global level. In 1992, developed nations met in Rio de Janeiro for an “Earth Summit” and formed the United Nations Framework Convention on Climate Change (UNFCCC), an international treaty with the purpose of effectively reducing and stabilizing global greenhouse gas emissions. The third “Conference of Parties” meeting (COP-3) of the UNFCCC in 1997 produced perhaps the most prominent international climate treaty to date: the Kyoto Protocol, a set of limits for participating nations to control and reduce their greenhouse gas emissions and their contributions to global climate change. Even nations that did not ratify the Kyoto Protocol and are therefore not subject to its regulations, such as the United States of America, are now making serious efforts to combat climate change.

Reducing the threat of global warming requires a clear understanding of its human causes. In order for us to reduce global emissions to a “safe” level, we must first know what are those emissions. The main contributors to climate change are what are known as greenhouse gases (GHGs), the most common of which is carbon dioxide. These gases trap radiation in our atmosphere, leading to global warming and changes in our climate: “Changes in atmospheric abundance of greenhouse gases and aerosols, in solar radiation and in land surface properties alter the energy balance of the climate system.”⁷ There are many classified “greenhouse gases,” but there are six that are most commonly discussed in reducing the “greenhouse effect:” carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). While efforts are mainly directed at stabilizing the concentration of these gases in our atmosphere (measured in parts-per-million), overall emissions of these gases are measured in metric tons of CO₂,⁸ and it is largely these measurements that are targeted for reduction. The 2007 atmospheric CO₂ concentration was 383 ppm, which is approximately 37 percent above the atmospheric concentration during the preindustrial era.⁹ Far from being able to reduce or even maintain this measurement, however, drastic action will be needed to keep atmospheric concentration levels down to 450 ppm or even 550 ppm in the next half-century (see Figure 1¹⁰):

To date the majority of international, state, and

Figure 1: Emissions Paths to Stabilization

“Even if the annual flow of emissions did not increase beyond today’s rate, the stock of greenhouse gases in the atmosphere would reach double pre-industrial levels by 2050 — that is 550ppm CO₂e — and would continue growing thereafter. But the annual flow of emissions is accelerating, as fast-growing economies invest in high-carbon infrastructure and as demand for energy and transport increases around the world. The level of 550ppm CO₂e could be reached as early as 2035.”



regional efforts to reduce greenhouse gas emissions are focused on a combination of strategies to lower per capita emissions. On the “supply” side,¹¹ these strategies include efforts to convert to less carbon-intensive fuels (e.g., switching from coal to natural gas combustion for electric power generation or to low-carbon renewable power sources such as wind and solar) and to improve the energy-efficiency of motor vehicles and buildings.¹² There are also significant national and international efforts to develop natural carbon sinks, through protection and expansion of forests and agricultural strategies.¹³ The United States and European nations, for example, are improving their efforts to accomplish large-scale sequestration of carbon dioxide in underground aquifers, particularly as a means of controlling emissions from coal-fired power plants. On the “demand” side,¹⁴ we are also witnessing a resurgence of efforts to encourage individuals to conserve energy.

These ongoing efforts are absolutely essential elements of any long-term climate stabilization strategy; reducing emissions will require that we materially improve technology usage and behavior patterns and thereby lower our per-capita emissions. Developing nations are a notable exception in efforts to decrease per capita emissions ratings. There is a contingency in climate change discussion to allow per capita emissions of some people, particularly those in the developing world, to increase in order to lift them out of poverty.¹⁵ Many advocates of this exemption for developing nations feel justified by the high percentage of emissions currently in the atmosphere caused by developed nations. Chinese officials in particular have pointed to this fact, arguing that they should not be held accountable for a problem caused mainly by developed Western nations. Unfortunately, given the acute rise in the impact of developing nations on climate change, we cannot afford to tolerate their emissions trends. All contributing nations must find a way to lower their

emissions to reasonable levels, and part of doing so will entail lowering per capita emissions.

Not all observers agree, however, that the costs of the technology and other changes under consideration are worth the benefits that such an effort would yield. Bjorn Lomborg, widely known for his book *The Skeptical Environmentalist*, argues that the cost of such large-scale efforts to stabilize the climate would far outweigh the benefits. In 2008, José Manuel Barroso, president of the European Commission, vowed to reduce the CO₂ emissions of the European Union by 20 percent by the year 2020. Such a reduction would imply a large cut in GDP,¹⁶ but Barroso claimed that the cost is minimal compared to the cost of inaction.¹⁷ In a September 2008 editorial, Lomborg condemned Barroso for this proclamation, arguing the same position he is famous for holding in *The Skeptical Environmentalist*. Lomborg argues that the significant economic



Bjorn Lomborg

sacrifice that the EU is making in cutting its carbon emissions eclipses the minimal impact that such actions will have on reducing global warming, claiming that “the EU’s immensely ambitious programme will not stop or even significantly impact global warming.”¹⁸ This editorial expresses a concern that Lomborg has repeatedly voiced in regard to climate change mitigation. Lomborg maintains that focusing on reducing emissions of greenhouse gases is extremely costly and only marginally beneficial, and that these efforts discourage nations from investing in long-term strategies and energy research.

While Lomborg raises an important concern over climate change mitigation, his cynical view of emission-reduction policies fails to account for the full value to be gained from the marginal differences made by the actions of the European Union. The IPCC has developed goals for mankind to meet in the upcoming century. These goals cannot be met by individual nations, but must be acknowledged

by a global effort, a communal agreement to reduce emissions in the manner that the Kyoto Protocol suggested. Individual contributions such as the promise made by the EU affect this global effort and encourage other nations to contribute as well. This is not a statewide or a national threat; this is a global threat, and in viewing the world as a “global commons,”¹⁹ the benefits greatly outweigh the costs. We must therefore take the measures necessary to reduce emissions in the short term as well as provide for the longer term, as the danger of continuing with the status quo is staggering. The McKinsey Global Institute estimates that global emissions must be reduced by 76 percent by 2050 in order to stabilize our environment.²⁰ While the projected emissions reduction target may vary in different studies, it is generally agreed to be extremely high and on the rise. Action must be taken now if we are effectively to reduce emissions and meet these important goals.

Unfortunately, even though the ambitious technology, behavioral, and consumption changes currently advocated are essential and worthwhile, they are not likely to prove sufficient. There is another fundamental aspect to reducing global emissions that is often overlooked during regional, national, and international dialogue: the aspect of population. The global level of emissions can be deduced by the rate of emissions (global average per capita emissions) multiplied by the rate of activity (global population). Many analysts choose not to discuss this unpleasant yet obvious factor in climate change, but it is of the utmost importance. We can lower our per-capita emissions rate down to next to nil, but if we continue to add more and more people to our planet, we will always have an excess of greenhouse gas emissions.²¹ In fact, because per capita emissions have remained relatively constant during recent years, much of the high increase in greenhouse gas emissions since 1970 (over 70 percent) can be attributed to the growth in population. Carbon dioxide accounted for 77 percent of greenhouse gas emissions in 2004²² and is consistently the main contributor to global warming,²³ yet per capita carbon emissions have stayed almost constant during the largest increase in

global greenhouse gas emissions in recorded history. The reason for this anomaly is population. In 1970, the world population was roughly 3.7 billion people. Since then, we have added 3 billion more. That is roughly an 81 percent increase in population and a 70 percent increase in greenhouse gas emissions. In the expanding forum of global climate change, this fact is all but completely ignored.²⁴ Global population has continued to increase on a planet with limited space and resources, and whether we choose to acknowledge population as a factor in the near or distant future, it will eventually enter the spotlight.

II. Climate Change Mitigation Method I: The Supply Side

Many national and international efforts to reduce greenhouse gas emissions have tended to focus on what we can call the “supply side” of climate change mitigation. Attempts to reduce emissions are primarily aimed at improving energy efficiency and reducing the carbon intensity of energy and transportation technologies. This focus allows us to improve the tools with which we build our societies, and to reduce the harmful effect they have on the environment. The complement to this effort is the “demand side” of climate change mitigation, which focuses instead on the amount that these tools are used. Demand encompasses both the number of people there are to access these tools and the frequency with which they do so.

The supply side of climate change mitigation has produced a number of policy ideas to improve practices and technologies commonly used by people around the globe. These practices include transportation, industry, agriculture, waste disposal, energy supply, and others. Studies of these practices and the ways in which we use them have allowed for a clearer understanding of the harmful effects they can have on the environment and the possibilities for improvements. The IPCC lists a number of sectors in which improvements must be made to stabilize greenhouse gas emissions, making it clear that “no one sector or technology can address the entire mitigation challenge.”²⁵

Perhaps the largest concern for the future of

such a productive and high-consuming world is the source of energy. Energy supply as a sector encompasses a number of industries involved with different sources of energy used for various practices and technologies. These sources include gas, coal, petroleum, nuclear power, electrical power, and a growing number of alternative fuels. Some of these sources are more harmful than others, and by switching to more efficient options we can make a large impact on reducing global emissions. James Connaughton, former Chairman of the Council on Environmental Quality (CEQ)²⁶ under President George W. Bush, stated specifically in a speech in September 2008 that improving energy supply resources is half the battle: “50 percent of the current and future problem is the use of coal to produce energy.”²⁷ By substituting more efficient sources of energy for high-emitting substances like coal, we would be able to decrease drastically the amount of carbon intensity found in our atmosphere.



A second area that could benefit greatly from improved efficiency is transportation. Transportation-related fuel combustion accounts for the majority of the world's petroleum use, which is a large factor in pollution and CO₂ emissions. Motor vehicles and airplanes, for instance, rely heavily on oil for fuel, a costly commodity both environmentally and economically due to its scarcity in many developed countries such as the United States. The United States now consumes more oil than any other nation. This demand is primarily due to the transportation industry, which relies 95 percent on oil, almost 70 percent of which is imported from

foreign resources.²⁸ Forty years ago, however, the United States only imported 21 percent of its oil.²⁹ An emphasis on fuel-efficient motor technology and alternative fuels (e.g., hybrid and electric cars, cleaner diesel vehicles, and vehicles fueled by biofuels) could not only reduce carbon emissions from transportation, but also diminish an economic threat and a security threat from reduced dependence on foreign goods. Similarly, a shift back to public transportation or even non-motorized transport such as walking or bicycling³⁰ could drastically decrease American dependency not only on oil but on road transport in general, which in turn would decrease traffic and pollution. Possible methods to encourage this transition include proposals for gas and carbon taxes. These taxes would provide a disincentive for fuel use, as well as a source of investment for more efficient public transportation. If we take these steps to improve transportation, we will make a considerable impact on the harmful effect that transportation has on our environment.

Several other sectors have been targeted for reduction by the IPCC in their effect on climate change. Buildings and industry are two sectors that are especially pertinent to developed, high-income nations such as the United States. In countries such as these, industry is widely spread and buildings use large amounts of electricity. Similar improvements can be made in both sectors to increase their energy efficiency. By using improved electrical and lighting equipment, as well as combining heat and power and introducing solar power as a means of heating and cooling, we could reduce the warming effect caused by both sectors.

Other sectors such as agriculture, waste, and forestry are also being addressed in their effect on climate change.³¹ These seven sectors are the primary areas in which recent improvements in energy efficient technologies can make the biggest impact. The potential impact of each sector varies, but each has significant enough potential to warrant attention.³² If these changes are implemented and observed, there will undoubtedly be a reduction in the overwhelming increase of harmful greenhouse gas emissions. These changes, however, are not sufficient to cure the global epidemic that has been

named the “Greenhouse Effect.” Technology will aid us on our way to stemming the growth of global warming, but it is only one step. It cannot be relied upon to bring about all the changes that are necessary.

Recent discussion over energy efficiency research has included a growing concern that the substantial costs required to implement these innovative strategies are imprudent given the state of our economy. A shift to a low carbon economy would be extremely expensive even if the global economy were thriving. It is clear that climate change is both a current and future threat, and many wonder whether it would suffice simply to curb future dangers by focusing on new technology research and implementing changes in behavioral patterns. The George C. Marshall Institute, a conservative Washington, D.C. think tank, has often taken this position. With the economy in its current state, they argue that now is not the time for expensive control of climate change: “The global economy is in tatters... Any actions that would impose additional costs on energy use and constrain its use would make the economic situation even worse.”³³ Opponents of this view argue that climate investment programs could actually be a basis for economic growth in the future, rather than simply a drain on the economy. Given the need for short-term economic stability, however, the Marshall Institute argues instead that our resources and time should be directed toward developing new technologies and stabilizing our economy, which would allow us to take more aggressive measures in the future.³⁴ They further maintain that the IPCC and other environmental groups have been exaggerating the dangers of climate change. We can afford, therefore, to ignore their forecasts of impending doom and not to invest in every climate control strategy available.

In several respects, the Marshall Institute is right. We can afford not to invest in every emission reduction strategy thrown at us and we certainly should not devote significant sums of money to any as of yet unsubstantiated policies in a time of economic crisis. They are also right to advocate participation in relatively low-cost research and technological changes that could benefit us in the

long run. Where they are mistaken, however, is in thinking that this alone will suffice. Yes, we should be prudent with our economy, and yes, we should continue to place faith in technological advances in energy efficiency, but we cannot afford to rely on these advances to save our planet. Climate change is the result of a number of factors, and the efficiency of the tools we use is only the supply side of the equation. We could have the most efficient tools imaginable, but if we have billions of people using them every second of every day, our emissions will continue to grow and climate change will continue to pose a threat to the health and future of our planet. The demand side of climate change must therefore also be addressed if we are to make the progress necessary to stabilize our environment.

III. Climate Change Mitigation Method II: The Demand Side I

Within the scope of the “demand side” of climate change mitigation, there are two important aspects. First, there is the behavior of people. Behavior encompasses simply how often they use the tools that contribute to climate change in everyday life. This depends primarily on how often they drive, how many refrigerators they have running, the amount of air conditioning and heating they use, and their use of other high-energy appliances such as lights or plasma televisions. The other aspect of the demand side is population. Demand is here defined by the overall activity of these tools that impact global climate change. Overall activity is obviously a combination of how many people there are and how often people use these tools.

The first aspect of demand is fairly straightforward. If we want to survive climate change, we need to change our behavior. This means driving hybrid cars, turning off the lights when we leave the house, relying more on mass public transit, and generally conserving energy. All of the great technology and research being done to transform the world into a low carbon economy is going to be of little use if we do not use the methods designed for us. These methods actually have the potential to be very effective. The McKinsey Global Institute calculated that these energy-efficiency opportunities could

“yield approximately 4.7 gigatons of abatement.”³⁵ The problem is that in order for them to make any significant impact there must be a widespread effort across the globe. Convincing almost seven billion people to drive less and stop consuming so much is no easy task.³⁶

It is no surprise that the nations with the three largest populations (China, India, and the United States) are three of the largest contributors to global emissions.³⁷ Population alone, however, is not entirely responsible for how much energy a nation consumes. Behavioral and consumption patterns dictate how much energy a given population will consume. While energy consumed in nations with efficient energy resources will emit a lower amount of greenhouse gases per unit of energy consumed, there is a positive correlation between the amount of energy consumed and the amount of greenhouse gases emitted. Nations with high consumption rates will naturally emit more greenhouse gases than others unless they have exceptionally efficient energy resources. It is therefore important for nations with high consumption rates and large populations to have lower consumption patterns. Nations with large populations, high consumption rates, and inefficient energy resources will obviously be the largest contributors to greenhouse gas emissions and overall climate change.

The best example of such a nation is the United States.³⁸ Despite having the world’s third largest population (behind China and India), the United States has disproportionately high ratios of carbon emissions and energy consumption to population: “While the U.S. represents about 5 percent of the global population, it consumes about 25 percent of the world’s energy, and generates 5 times the world average of CO₂ emissions.”³⁹ It comes as no surprise that until China recently surpassed the United States for the first time, Americans also had the highest carbon emissions in the world.⁴⁰ The conclusion one should reach from these figures is that the population of the United States has a great potential for impacting climate change, either positively or negatively. Those with the highest consumption patterns in a relatively energy-inefficient nation⁴¹ will obviously cause high emissions, but they will

also have the most potential for improvement and abatement of emissions.

IV. Climate Change Mitigation Method III: The Demand Side II

In the recent frenzy over climate change mitigation, much of the focus has been directed toward reducing emissions due to inefficient technologies and high consumption patterns. Environmentalists today are greatly concerned with driving hybrid cars, turning off lights when they leave rooms, and finding alternative energy resources to replace our harmful fossil fuels; but they are not at all disposed to discuss population growth. This is understandable, partly because nobody wants to talk about population control. It is difficult enough to convince people to take action against climate change without incorporating one of the least popular topics in the world. Yet we also have a lot to gain from large populations and high growth rates: “A high fertility rate is important to industrialized nations for social and economic reasons such as social security and job replacement. ‘Be fruitful and multiply’ also plays well in churches and corporate boardrooms.”⁴² Unfortunately, our global population has grown at such alarmingly high rates that these benefits need to be viewed in a larger context. The sad truth is that if we are serious about climate change, indeed, if we are serious about *surviving* climate change, we will need to address population in the near future.

Technology will continue to improve with research and innovative experiments, and hopefully people will begin to consume less. Overall emissions, however, will not decrease substantially if we continue to add more and more people to the high-consuming nations of our world. In fact, over the past twenty-five years, significant progress has been made in the “greenness” of global energy. Carbon intensity, which typically determines “clean” energy (“energy that does not produce carbon dioxide when generated”⁴³), has actually decreased over that time. Unfortunately, “the effect on global emissions of the decrease in global energy intensity (–33 percent) during 1970 to 2004 has been smaller than the combined effect of global per-capita income growth

(77 percent) and global population growth (69 percent); both drivers of increasing energy-related CO₂ emissions⁷⁴⁴ (see Figure 2).

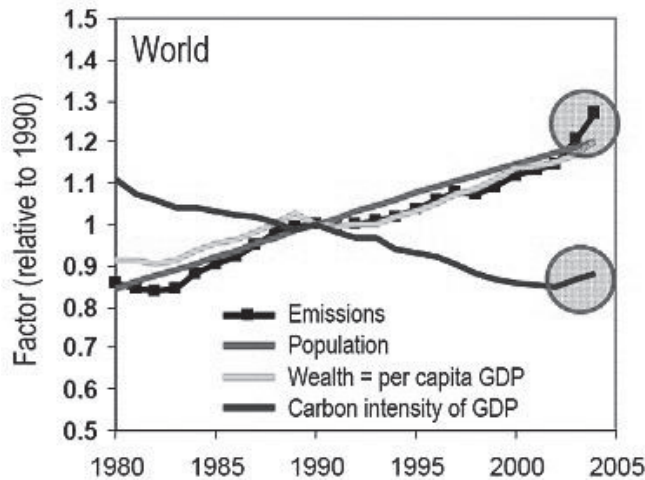


Figure 2: Population as a Driving Factor of Emissions⁴⁵

Despite our progress in lowering carbon intensity over the past several decades, global emissions have continued to grow. As this graph suggests, two of the most important contributors to this increase have been population and per capita GDP. While these are both good trends, population will eventually have to decline rather significantly if we are to maintain a high per capita GDP and stabilize global emissions.

Population is thus the second and perhaps more important part of the “demand side” of climate change. Yet there is no easy way to stem population. First, it is important to determine which populations need to be reduced. As we have already established, certain nations have populations that make greater impacts on climate change and therefore must be addressed as a priority. Foremost among these nations is the United States, which has easily the largest population of any industrialized and developed nation.⁴⁶ Because of the high marginal impact each American citizen has on global emissions, it is the United States that should first address population control. There are two ways to control a nation’s population. A country can either limit its fertility rate or it can limit its immigration rate; it can either address the number of people being born in a country or stem the flow of people entering from elsewhere.

For obvious reasons, neither option is particularly attractive. There are a number of sound ethical arguments against both immigration control and population control. Do we have a right to exclude others from our country or do people have a fundamental right to free movement that overrides this nationalistic right? And how can we justly tell people that they cannot have another child, or even ten other children? Both topics are extremely controversial, and it is easy to see why people have avoided them in discussing climate change. Unfortunately, they are extremely pertinent to climate change, especially in the United States.⁴⁷

Population growth is causing emissions to grow at such an alarming rate that projected necessary mitigation estimates have continued to grow,⁴⁸ making the cost of mitigation even greater and the chances of succeeding smaller: “Just stabilizing total emissions at current levels, while keeping pace with population growth, would require reducing global per-capita emissions by 1.2 percent each year. We haven’t managed to decrease per-capita emissions by 2 percent in the last 38 years *combined*.”⁴⁹ Higher population rates will increase the cost of mitigation programs and decrease the feasibility of reaching the goals set by these programs. If all other factors remain unchanged, a higher population will always translate to more emissions. Greater emissions will necessitate higher reduction goals, which will require more action and higher economic costs to the point at which success will be both significantly delayed and harder to achieve. Population increases hereby shift our project “cost curves”⁵⁰ to the right and lengthen the time required to stabilize our atmosphere.

Poor education and varying religious beliefs, coupled with the short-term benefits from having a large and productive global population, have inhibited people from seeing the long-term effects of a continuously increasing global population. Increases in income and productivity have transformed much of the world’s population into highly productive, technologically advanced consumers who are generally happy with these recent changes. In light of all these benefits, individuals are reluctant to change their consumption patterns to ad-

dress this long-term problem of climate change, let alone think about controlling and limiting their own population. As a result, it is extremely difficult to coordinate a global effort to address this concern. The truth is, however, that it is this fruitful and large population that is causing climate change.

Despite all of the benefits gained from a large, productive global population, the problem of climate change will erase those benefits in the long-term unless something is done to stem population growth in the short term. Eventually, “efforts to curb climate change will have to address both the consumption patterns that contribute to high per capita emissions as well as the growing number of consumers worldwide.”⁵¹ Until then, the incremental cost of climate change, in terms of program cost and overall climate damage, will continue to grow and our chances of stabilizing our environment will decrease. If we are willing to acknowledge this danger, we must now ask what must be done to avoid it. Efforts have been made by the UNFCCC to form an international effort to abate climate change. These efforts must be redoubled with an added perspective of population’s effect.

V. United States Population and Climate Change

Regardless of whether a global treaty emerges in the near future that includes developing nations, the United States must set a standard for itself and take the necessary measures to meet this standard. Upon being elected, President Barack Obama promised to impose further restraints upon the United States’ emissions, saying in a November 18, 2008 speech that “the stakes are too high, the consequences too serious.” President Obama is advocating a system to charge companies for the right to emit carbon dioxide and use the revenue to invest in alternative energy. The stimulus programs that Mr. Obama has implemented include loan guarantees, tax credits, and outright grants for clean and alternative energy projects, energy efficiency, advanced batteries, and electric vehicles. The American Clean Energy and Security Act (ACES), which is currently awaiting Senate review and approval, would impose the United States’ first ever manda-

tory reduction targets to be met on a national level. Proponents of ACES and other mitigation programs implemented by the Obama administration are hoping that a stringent program in the United States will encourage nations like China, who have thus far shown reluctance to curb emissions,⁵² to adopt a mitigation program of its own.



Given the high levels of consumption, population, and emissions relative to the rest of the world, the United States is clearly pivotal in the fight to stem climate change. This statement means that the United States has a serious political and ethical, while not yet legal, obligation to address its impact on climate change. It also indicates, however, that marginal growth in the American population is different in its effect on climate change than an identical growth in the population of another country. Americans have enormously high consumption rates and the fourth highest per capita carbon emissions rate in the world,⁵³ so from a climate change perspective, adding another American to the world is different than adding someone from France or Sweden: “the U.S. has a much bigger ‘per-person’ impact on global climate change than any other nation.”⁵⁴ Until it can either drastically lower its consumption rate or improve its energy efficiency, the United States must address not only its behavioral patterns and energy efficiency, but the second part of the “demand side” to climate change as well: its population growth.

The United States holds the distinctive position of being one of the few countries that can make a significant impact on climate change on an indi-

vidual level. Changes made to the American population can reduce global emissions in a way that is unique to the United States.⁵⁵ Currently, the United States is one of the only developed nations with at least a replacement birth rate with a 2008 fertility rate of 2.05 children per woman.⁵⁶ In addition to a replacement birth rate, the United States has one of the highest immigration rates in the world. The majority of both legal and illegal immigration into the United States today comes from Mexico, although other nations such as China, India, and the Philippines also contribute to the ever-growing immigrant population in America. As a result, the American population continues to grow and is expected to double in just fifty years.⁵⁷ Given its impact on global emissions, it is clear that something must be done to curb the United States' dangerously high population growth.

The United States thus has a population issue on its hands and must accept it. Action must be taken now to stem this population growth in order to avoid such an alarming future scenario. There are only two ways that the United States can limit its population. As Paul Ehrlich states, "a population's size is basically the result of an input-output system. The inputs are births and immigrants; outputs are deaths and emigrants."⁵⁸ The United States can either lower its birth rate, which is currently slightly above the replacement rate, or it can further restrict immigration, which is currently one of the most highly contested issues in the nation. The problem of population growth in America unfortunately presents us with such a monumental threat that addressing either birth control or immigration control (or, more realistically, both) is now an absolute necessity for future stability.

VI. Population Control

While population control is irrevocably controversial across cultures, support for it has grown substantially in recent years. Population control as an idea surfaced centuries ago from ancient thinkers such as Plato, Confucius, and Aristotle, and as populations began to spread and grow across the continents, it became more widely discussed. Beginning with Thomas R. Malthus' dire (although

grossly inaccurate) warnings of overpopulation in 1798, the study of population regulation developed as a common field of interest in moral philosophy. Utilitarians such as John Stuart Mill discussed the issue at length during the 19th century, and today Peter Singer employs utilitarianism to provide sup-



Thomas Malthus

port for population control. While a more rudimentary interpretation of utilitarianism may seem to support unfettered population growth (i.e., the more people there are the more utility there is to be gained), Singer argues that a utilitarian account should lead one to achieve the op-

timal population increasing individual welfare.⁵⁹

In addition to moral philosophers, there have been many advocates of population control in the twentieth century that have contributed to the "population control movement." Due in large part to the work of these political and moral philosophers, the twentieth century saw a significant transformation in environmental and population studies. In 1994, the United Nations Population Information Network (POPIN) formed the "Statement on Population Stabilization By World Leaders," an international compact to begin addressing the effects of population. The statement has been signed by over seventy nations, including China, India, Indonesia, and other nations with significant overpopulation concerns.⁶⁰ Over the past century, birth control and population policies have been experimented with and implemented across the world, most notably in already overpopulated nations such as China and India. Although China has had notable success in lowering its fertility rate, its population control policies have been widely criticized since their introduction and remain a controversial topic inside and outside the nation's political realm: "Critics term the policy practice 'Orwellian' and 'Gestapo-like' and focus on its toll on human rights."⁶¹

Beginning in the early 1970s, China began to

set targets for its population trends, aiming for a “later, longer, fewer’ policy (later marriage, longer spacing between births, and fewer births) to guide marriage and childbearing.”⁶² Perhaps the most famous population control policy is the “one-child policy,” a Chinese policy introduced in 1979 that limits the number of children a married couple can have to one. At the introduction of this policy, Chinese officials set a population goal of 1.2 billion by the year 2000.⁶³ While the instituted population policies proved slightly insufficient to reach this goal, they did have a significant impact. The 2000 world census recorded a Chinese population of 1.27 billion,⁶⁴ and China’s TFR (total fertility rate) decreased from a staggeringly high 2.9 children per woman in 1979 to 1.7 in 2004.⁶⁵ China’s population policies have proven to be an important step in the development of population control policies, though perhaps not as an example to be employed by other nations. China’s chosen means of enforcement and implementation have often been condemned as a coercive infringement upon human rights.⁶⁶ Particularly heinous state-enforced violations of human rights include forced abortions and compulsory sterilization.⁶⁷ Whether China’s coercive means provide us with an example of what to avoid in population policy or a case against population control, its implementation has been pivotal in the development of the population control movement.

As a nation poised to overtake China as the world’s most populous nation by the year 2050,⁶⁸ India has an urgent need to stabilize its population, and soon. Indian policy in the late twentieth century flirted with population control, but was widely criticized for its inability to achieve popular participation.⁶⁹ The family planning program in India was forced to resort to incentives in order to recruit the support it needed: “The major motivational tool taken up by the Indian family planning program to attract new users is the payment of incentives, in cash and in kind.”⁷⁰ In recent years, efforts directed at reducing population have relied on the Panchayati Raj Institution. The Panchayat is a local government system established in 2000 to offer greater socioeconomic stability. In an effort to encourage

lower fertility, elected officials of the Panchayat system must have two or fewer children.⁷¹ Because India is such a large country, population stability has been difficult to achieve,⁷² due in large part to the lack of widespread education.⁷³ For India to address population control effectively, it must provide a greater distribution of education and resources, including the availability of contraceptive devices and family planning centers.

“ The problem of population growth in America unfortunately presents us with such a monumental threat that addressing either birth control or immigration control (or, more realistically, both) is now an absolute necessity for future stability. ”

In the United States, a number of organizations have begun to help in this effort to curb population growth on both a national and international level. Perhaps most prominent among these organizations is the Sierra Club, an environmentally focused grassroots organization that strives to improve climate conditions through a number of methods. Its aim for population control is to establish “non-coercive, culturally sensitive policies that will help lower birthrates, stabilize global population, and make a smaller population a realistic possibility.”⁷⁴ The Sierra Club specifically does not address immigration. One of its primary goals is to lower global fertility rates to below replacement rate (2 children per woman) in order to reduce the global population before it reaches a projected 9 billion by the year 2050.⁷⁵ Its focus is centered upon providing increased accessibility to family planning services, which enables people to make informed decisions regarding pregnancy and lowers the risk of unwanted pregnancies.

Even in the most developed nations, unwanted pregnancies remain a significant contributor to population growth. In the United States, for example, the unwanted pregnancy rate is nearly 50 percent,⁷⁶ an embarrassing statistic that could easily be lowered through improved education about pregnancy. Improved health care services would lower the infant mortality rate and enable healthier births, and widespread education and socioeconomic opportunities and empowerment for women would allow women to make better educated and smarter decisions regarding pregnancy. The program is designed to allow for healthier and more successful, albeit fewer births.



On an international level, the United States leads the world in organizational population control efforts. One such organization is Population Communication, a California-based group led by family planning specialist Robert Gillespie. Gillespie, who has been in the forefront of global population control efforts for over fifty years, has dedicated his life to lessening the dangerous flow of population growth around the world. Over several interviews, Gillespie discussed the difficulties, frustrations, and rewards of advocating population control.⁷⁷ Gillespie's quest for global population control is chronicled in his documentary entitled *No Vacancy*, which features interviews with national leaders from their targeted countries. These nations include Iran, India, Indonesia, Mexico, Ghana, the European Union, and the United States.⁷⁸ Gillespie and Population Communication encourage family planning and population stabilization in these nations by "develop[ing]

and test[ing] cradle-to-grave child survival, adolescent health, birth spacing and small family policies and programs."⁷⁹ All of their work is done with the hopes of supporting the United Nations POPIN Statement on Population Stabilization. This task entails educating not only rural populations in developing countries like India, but also much of the American population.

In the United States, we are in dire need of population reform, due not only to our significant impact on the environment but also to the surprisingly high level of accidental pregnancies and the consequences of a continuously rising population. Yet instituting an effective population control policy into our society does not mean forcibly limiting births or forcing abortions per the Chinese example. There are many ways to stabilize our population as well as its effect on global emissions: "Future changes of population age structure — the comparative size of specific age groups relative to the population as a whole — under a scenario of low fertility, will drive U.S. carbon emissions down by 40 percent by the end of the century."⁸⁰ These changes can be made simply by education and improved resource availability, without any need for policy implementation regarding birth itself. Similarly, considerable progress could be made simply by concentrating on population focal points, such as big cities or urban regions. Urbanization leads to a number of consequences, which concern land use change, the "heat island effect," greater demand for vehicles, and other harmful changes.⁸¹ The growing transformations in recent years of rural areas into urban regions have converted lands that were once carbon sinks into harmful carbon sources and led to increased vehicle and energy use.⁸² By addressing the problem of population *concentrations*, we can further avoid any unpopular policies regarding population control.

In densely populated states, population control efforts are essential in managing climate concerns. In California, for instance, the population is growing so rapidly that drastic change is needed to stabilize the already monumental climate threat posed to the state. For California to contain its expanding population from a climate perspective, it must reduce per

capita emissions from a current level of 13.3 MT/person/year to 1.4 by 2050 (see Figure 3).⁸³

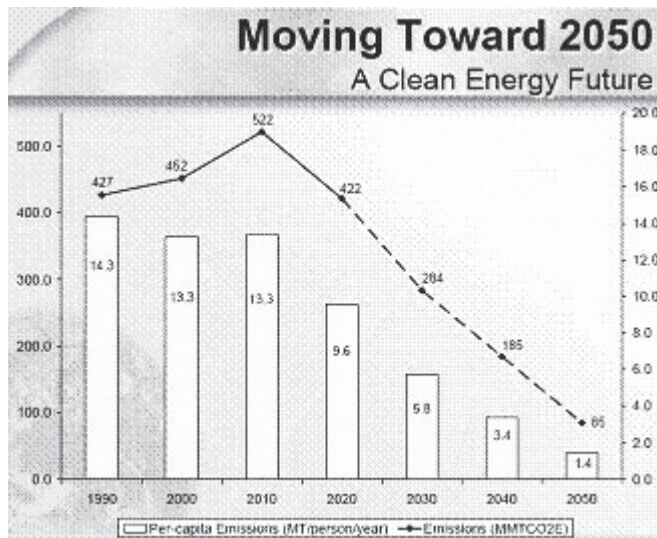


Figure 3: Moving Toward 2050

To accommodate our growing population, the California per capita emissions (measured in MT/person/year) must decrease from a current level of 13.3 to 1.4 by 2050.

If instead California focused on reducing its population, this unrealistic reduction goal for per capita emissions could become far more attainable. With a smaller population, the acceptable level of per capita emissions increases significantly, which can be achieved through population control methods (although in the case of California, immigration control will play an essential role, as we will see in the following section). Population control in the United States is therefore more than simply an escape from a disastrously high national population, but also problem-solving on a state or even regional level.

Despite its various potential benefits, population control has countless outspoken opponents. Most prominent among these adversaries are religious and anti-birth control advocates who often feel that even a discussion over the ethics of population control is reprehensible. Because the implementation of population control inescapably involves access to birth control or even abortion, its discussion has naturally led to ethically charged debates over the permissibility of these acts. Similarly, many

human rights activists argue that any population control policies inevitably lead to racism or state coercion. These objections are primarily due to the concerns that policies will be targeted toward minorities or immigrants, or that any policy adopted by the state will necessitate coercion because of the majority who oppose it.

Any hint of policy is therefore generally greeted with public outcry, causing politicians to be understandably hesitant about even addressing the issue. Such reluctance must be overcome. As we have seen, the United States has a colossal population dilemma, both in its impact on the American socioeconomic conditions and on the global environment. In order to make any progress at all, population must at least enter political forums and dialogues. There is simply no way to stem the dangerously growing American population without lowering both fertility rates and immigration rates. As lowering the total fertility rate alone will almost certainly be insufficient to meet population reduction goals when so many people are opposed to it, we must now turn to immigration control, not as a viable alternative but as a necessary complement to population control.

VII. Immigration Control

It may be counterintuitive for some to think that immigration should be a major factor for a global problem such as climate change. After all, immigration is the movement of people across borders and not an expansion of the world population. As we have established, however, certain populations have a greater effect on global climate change than others. The United States has an obligation to reduce its population in order to lower its activity rate of emissions and stabilize its sizeable impact on global climate change. Before the United States can even begin to rely on population reduction as a means of emissions stabilization, it must first stem the current significant growth in population. In the last section, we found that “there are only two ways of stopping population growth: lower immigration, lower fertility, or more realistically, both.”⁸⁴ While lowering fertility will prove a necessary step in stemming population growth in the United States, it is essential that we also address immigration.

Regardless of its effect on world population, a decrease in or even a stagnation of the American population would be highly beneficial in assuaging world climate change concerns. It would also, however, prove essential in preserving the many natural benefits that are derived from being an American citizen. From an economic perspective, the United States remains a symbol of opportunity and hope to people throughout the world, despite the current economic crisis. Immigrants from around the world have for decades sought work in America because of the job opportunities available there. Immigrants also seek freedoms denied to them in their home country and the security that the most powerful country in the world can offer. Yet how many of these benefits would still be attainable if America's population, currently slightly over the 300 million mark, doubled, or even tripled? With current immigration and fertility trends, the United States may host a billion people before the end of this century. The possible imminent threat of overpopulation raises a number of concerns on international and national levels, the most worrisome of which is that so few people choose to acknowledge these concerns as legitimate threats: Because of the increasing technological success reflected by enormous agricultural output, our understanding of the perils of rapid population growth has been somewhat muted by many enthusiasts who would argue that technology and human ingenuity will always come to the rescue.⁸⁵

The first step to avoiding this future of poverty and resource deficiency is thus acknowledging that overpopulation poses a major threat not simply to the world but to individual nations.

The United States currently represents a land of such promise and opportunity mainly because of its high quality of life and the social and economic freedoms it offers.⁸⁶ As the United States has approached and surpassed the 300 million person mark, we have reached a level of population that was unforeseen fifteen years ago.⁸⁷ This population continues to grow, and the question remains whether this growth in population will seriously threaten the American quality of life or if "technology and human ingenuity" really will accommodate such a large population. It seems likely to most that they

will not, and that the United States will need to find a way to curb its population for its own sake as well as that of the world's climate. It is therefore not only a duty to the world's climate control efforts, but also in the interest of preserving that which makes the United States great to reduce our population, and we must do so in part by limiting our staggering rate of immigration.

Despite having one of the highest fertility rates of any developed nation, the United States currently has roughly only a replacement fertility rate. While this rate needs to be lowered in order to decrease the American population, it is clearly not responsible for the majority of population *growth*. In the past several decades, the chief reason for the United States' staggering population growth has been immigration: "Immigration contributed at least a third to the total population increase between 1990 and 2000, as the number of foreign-born U.S. residents rose from almost 20 million to over 31 million."⁸⁸ In the past decade, immigration has continued to be the dominant contributor to the increase in the American population, and will continue to do so at an alarming rate if immigration trends continue: "Under current law and enforcement assumptions, *mass immigration will generate more than 90 percent of the total U.S. population growth in the 21st century.*"⁸⁹ The effect of such growth is overwhelming: it suggests that the growth rate of the American population is increasing, and that the United States could reach unbelievably high levels of population in the near future.

Immigration could thus cause enormous population growth in the United States, diminishing any chance of stabilizing the American population without the "help" of Mother Nature. It follows that immigration control has profound potential in effecting population stabilization in the United States. As we have discussed, the American population emits more greenhouse gases and consumes more energy than almost any nation in the world. Mexico, the nation predominantly responsible for the American immigration population, has a per capita energy consumption rate of roughly one-fifth of that of the United States.⁹⁰ It is often the case that an immigrant population will assimilate to both the cultural and socioeconomic norms of the host nation.⁹¹

If immigration causes a shift in income and consumption patterns, then a conversion of almost any non-American people into Americans will therefore lead to an increase in global emissions and energy consumption. On the other hand, it is possible that a group of immigrants will retain enough of its cultural norms that the immigrants will not conform

to the high-consuming and high-polluting lifestyles of Americans. Statistics show, however, that immigrants into the United States do experience a change in their consumption patterns.⁹² Indeed, “by becoming Americans they adopt the consumption and pollution patterns of the world’s most environmentally destructive lifestyle”⁹³ (see Figure 4). While many immigrants still consume less than the average native-born American, the increase in consumption from their previous lifestyles is significant in producing greater carbon emissions.⁹⁴

Figure 4: Factor of Increase in CO₂ Emissions

Estimated Per Capita CO₂ Emissions of Immigrants in the United States/per Capita CO₂

Country	Emissions of Countries of Origin
Mexico	2.9x
China	3.7x
India	27.1x
Philippines	2.9x
Vietnam	20.9x
El Salvador	12.x
Cuba	5.5x
Former USSR	2.2x
Korea	2.0x
Dominican Republic	5.5x
Canada	1.6x
Guatemala	11.6x
Colombia	11.5x
United Kingdom	3.1x
Jamaica	4.4x
Germany	2.2x
Haiti	85.6x
Honduras	11.5x
Poland	2.3x
Italy	2.1x
Ecuador	8.8x
Iran	4.0x
Peru	16.0x
Brazil	9.1x
Japan	2.5x
All other countries	5.1x
All immigrants	4.1x

The American immigrant population, and particularly the Hispanic portion, has also grown considerably faster than the native-born American population due to higher fertility rates in the Hispanic population.⁹⁵ Death rates among immigrants are also lower than those of native-born Americans because they have a lower average age.⁹⁶ As a result, the immigrant population is skyrocketing and is occupying an increasingly prominent role in the United States’ contribution to global climate change. If the United States managed to reduce its energy consumption patterns sufficiently, immigration would make less of a difference with respect to climate change. Until then, however, the United States is in need of stronger immigration control policies in order to help stabilize our deteriorating environment.

The effect immigrants have on climate change is particularly worrisome from a moral standpoint. Primarily, immigrants consume more when they come to the United States because their income levels rise. Mexican laborers in America, for example, earn on average roughly seven times what they earned in Mexico.⁹⁷ Many will view the argument for restricting immigration to address climate change as an extortion of potential immigrants, who are denied access to social and economic opportunities to help fix a problem we helped to create. Yet the concern over immigration levels is not an attempt to keep people impoverished and out of our way so that we may continue to lead our high-consuming American lifestyles; it is a necessary response to a global threat that demands drastic measures. In order to consolidate a global effort against climate change, each nation must set a reasonable target for lowering its emissions and take measures to meet those targets. In the United States, we are advocat-

“Immigration to the United States significantly increases world-wide CO₂ emissions because it transfers population from lower-polluting parts of the world to the United States, which is a higher-polluting country. On average immigrants increase their emissions four-fold by coming to America.”

ing cleaner energy sources, lower consumption, and lower fertility. Any emission reduction goal will be unattainable, however, if we continue to add people to our already substantial population.

The act of immigration restriction itself begs another question of ethics that cannot be ignored: does a nation have the right to deny others entry? A common answer is no, which, given the practicality of this answer's implications, causes a significant international dilemma. There is simply no

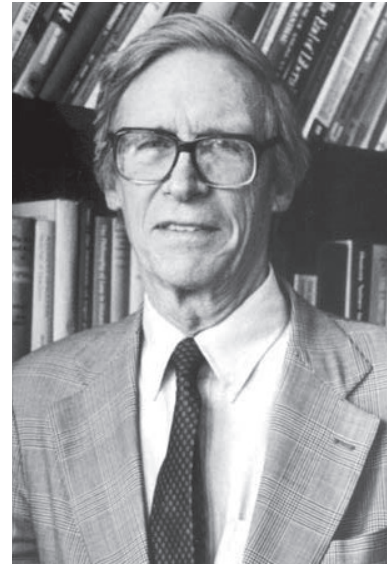


Michael Walzer

avoiding that certain nations are generally more desirable than others; there will always be people who wish they could live elsewhere. Various political philosophers have provided moral justification for appropriate levels of immigration control, yet there continues to be debate. A distinction is commonly drawn between what a nation owes to its members and what it may owe (if anything) to its non-members.⁹⁸ Each side to the debate presents a number of socioeconomic and political problems, none of which have easy solutions.

Michael Walzer defends immigration control, stating that the closure of a state secured by its borders protects cultures and groups as an important part of life.⁹⁹ He attempts to underscore the importance of maintaining a closed state that has the right to retain its identity and control its membership. Walzer argues against the idea of free movement and a cosmopolitan world in his argument for a protective state: "To tear down the walls of the state is not...to create a world without walls, but rather to create a thousand petty fortresses."¹⁰⁰ Acknowledging the inevitability of immigration due to the greater appeal of certain nations,¹⁰¹ Walzer argues both that we must establish immigration control and that there must be limits to this control. For

example, this right to control immigration does not denote a right to control emigration; Walzer states firmly that any just state must not restrict emigration.¹⁰² It is furthermore the moral duty of nations, he



John Rawls

claims, to welcome refugees provided that their numbers will not significantly impair the host nation. There are, however, "limits on our collective liability."¹⁰³

In *The Law of Peoples*, John Rawls further justifies immigration limitations. Rawls discusses the moral responsibilities that we have to one another

and what he calls the "duty of assistance" of decent and liberal people to assist those in "burdened societies."¹⁰⁴ Yet Rawls also, like Walzer, stresses the importance of the communality of a bordered state. Distinct boundaries for a state provide for sufficient communal responsibility of its members, as well as allow for a strong administration: "In the absence of a world-state, there *must* be boundaries of some kind, which when viewed in isolation will seem arbitrary, and depend to some degree on historical circumstances."¹⁰⁵ National boundaries thus are a necessity as there will always be the need for distinctive territories, whether, as Walzer claims, to save us from a world of small 'village politics' or, as Rawls suggests, to instill a sense of collective responsibility and management.¹⁰⁶

Few would suggest that all borders be closed or that international immigration be banned. Given the importance of maintaining these boundaries, however, the question remains as to how strongly they should be enforced. Despite the fact that the United States now adds more than a million people a year due to immigration,¹⁰⁷ many still condemn American immigration policies as being too constrictive. These critics are often the same people who are advocating greater attention to climate

change and environmental controls believing that they are taking the moral high ground, yet they propose no solution to the threat of population. In reality, “if those critics of limited immigration or a fertility policy accept the argument that U.S. population growth is destroying the environment, they become caught in a moral dilemma.”¹⁰⁸ Immigration control in this regard is not a snub against other nations, but a collective effort to aid other nations in lowering global emissions. The United States is a popular destination because it offers brighter futures and socioeconomic opportunities for individuals from impoverished or undeveloped nations. If we accept Rawls’ idea that we have at least some duty to assist political non-members in need, then we are morally obligated to help those from burdened nations up to a certain point, but this point is short of sacrificing our ability to stabilize our own population. All arguments for ‘protecting the national identity’ aside, the United States has the duty simply to reduce its *numbers*; otherwise it will no longer offer the bright future with which it is associated.

Lant Pritchett has opposed this view in much of his writing by arguing that allowing immigration into the United States is essential in fighting the war on international poverty. As a former economist for the World Bank, Pritchett focuses primarily on the economic aspect of immigration. Addressing mainly the affluent nations of the Organization for Economic Cooperation and Development (OECD), he discusses the extent of economic relief attainable for impoverished nations by allowing marginal increases in immigrant populations.¹⁰⁹ Pritchett argues in response to similar concerns over American economic inequalities that global inequalities are of much greater importance:

Being against migration to the United States is wrong for two reasons. One, I don’t think it gets the scale of the poverty in the United States vs. poverty in the rest of the world right. Second, if you are really concerned about inequality in the United States, there are many things you can do that would be better than blocking other people from coming into our country.¹¹⁰

In discussing this “scale of poverty,” Pritchett

highlights what he argues to be the overwhelming discrepancy between the impoverished American and the impoverished third-world inhabitant. The moral concerns over the potential harm from mass migration on a host nation are outweighed by the benefits that can be gained by allowing these immigrants a place in a wealthier nation. Pritchett acknowledges the right to ownership that citizens maintain over their nation, but claims we should “figure out ways of protecting the concerns people have about their country while at the same time allowing for more migration.”¹¹¹

David Miller defends immigration restriction from a perspective similar to Walzer’s that illustrates a deficiency in Pritchett’s view. Miller provides an argument for immigration control contingent upon the importance of maintaining the culture of a political community by outlining the threats that immigration poses to the identity and the population growth of a nation. For Miller, the cultural identity of a nation is particularly important to its stability and growth. While many have countered this argument by postulating that change can often be for the better,¹¹² Miller maintains that this view overlooks an important aspect of national communities: “The public culture of their country is something that people have an interest in controlling: they want to be able to shape the way that their nation develops, including the values that are contained in the public culture.”¹¹³ The ability to control more than merely the traditions and practices, but also the values of one’s culture, is, according to Miller, an entitlement to any legitimate political community. Without this authority, without a *shared public culture*, a state loses much of what makes it an independent community. Miller also emphasizes the divisive power that a difference in culture or speech can have. A state without a shared public culture has a divided membership, he argues, which has devastating effects on the stability of a democratic state.¹¹⁴

Apart from posing a threat to the cultural stability of a nation, Miller claims that immigration has a profound effect on host nations’ population growth. To Miller, overpopulation is a primary source of much of the world’s poverty. He even ventures to propose the widely controversial idea

that population and birth control policies akin to those used in China or India are necessary in much of the world.¹¹⁵ The problem, however, is that these nations use immigration as a favorable and discrete means of limiting their national population: “Such states have little or no incentive to adopt such [population control] policies if they can ‘export’ their surplus population through international migration, and since the policies in question are often unpopular, they have a positive incentive not to pursue them.”¹¹⁶ The obvious dilemma with this scheme is that it is not a population control method, but a redistribution of population; eventually, this overpopulation may lead to poverty in the host nations as well. If we limit immigration, these nations will

European Union, Canada, and particularly the United States has dragged immigration into the international political spotlight. Figure 5 depicts the proportion of recent immigration into nations, resizing each based on net immigration.¹¹⁹

Unrestricted migration may seem to be a fair and appealing principle, but it functions only in a world that experiences generally stable migration across borders without any nation receiving significantly more immigrants than others. Realistically, however, there will always be certain nations that are more desirable than others. As this map shows, people do not uniformly migrate across borders but congregate in the nations that offer the best opportunities for them, and understandably so.

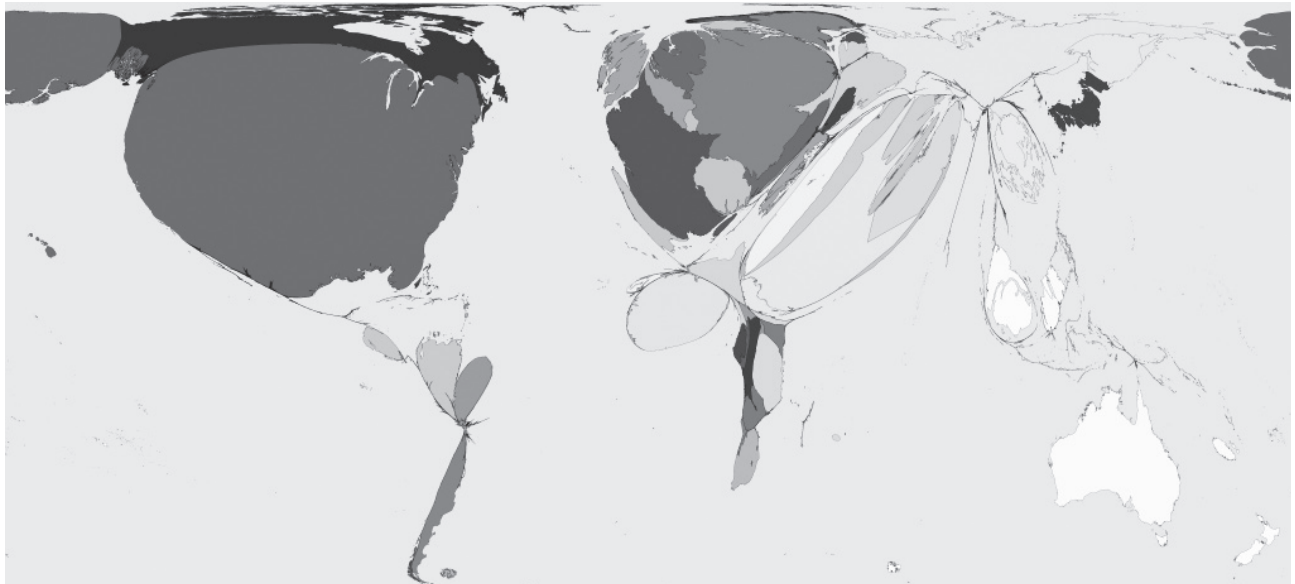


Figure 5: Immigration Map

“The US, Western Europe, and the Arabian Peninsula are dramatically larger... But of course, this map does not tell everything. It only shows legal immigration, not the illegal part.”

be forced to address their own population problems without simply “exporting” them.

Despite the obvious importance of these reasons for restricting immigration, there are still those who feel that free migration is a natural right that ought to be protected.¹¹⁷ Today, these moral concerns are particularly relevant, as international migration continues to grow due to globalization and improved means of transportation. As Walzer notes, however, immigration inevitably affects certain nations more than others due to their superior natural appeal.¹¹⁸ In recent years, immigration to the Eu-

Currently, the United States offers more civil rights and socioeconomic opportunities than almost any other nation, and so it is carrying the burden of world migration. If borders were opened or if immigrants continue to enter the United States at the projected rate, the United States would become an overpopulated nation no longer capable of providing sufficient jobs for its citizens or of maintaining a stable economy.¹²⁰ Yes, the United States has a “duty of assistance” as an affluent nation to assist those nations in need. This does not mean, however, that it is an American obligation to accept as many

immigrants as possible until the United States itself is in need of assistance: “The United States cannot solve the third world population problem by absorbing it, even if we were to accept the prospect of becoming as crowded as India.”¹²¹

Due to growing concern over the increasing immigrant population in the United States, recent administrations have introduced a number of policies that offer opportunities for immigrants while still restricting immigration. During his tenure, former President George W. Bush advocated stronger protection at the U.S.-Mexico border, while introducing a “temporary guest-worker program” that allowed illegal immigrants to continue work in the United States. President Obama has continued this guest-worker program, and has discussed plans to implement widespread immigration reform in the coming year. President Obama adamantly supports a path to citizenship for the roughly twelve million immigrants residing illegally in the United States and plans to grant amnesty to these immigrants. Further immigration reforms are directed toward increasing the number of visas and citizenship opportunities for immigrants while continuing to tighten border control in order to minimize illegal immigration.¹²² While such reform may be ideal for a long-term plan for immigration, this agenda is somewhat at odds with President Obama’s pledge to address growing climate change concerns.

Despite the moral complexities of immigration regulation, a more stringent immigration control policy must be adopted to address these concerns. With a population showing enormous growth and a substantial marginal impact on climate change, the United States has no choice but to address the only possible means of lowering its population: reducing birth rates and immigration levels. It cannot be denied that there are valid and important ethical arguments against immigration restrictions. In an ideal world, where migration is a result of preference rather than need, it seems free migration would be an exceedingly plausible policy. In a more realistic world, however, one nation cannot absorb all of the people in need. Doing so endangers not only the nation involved but an entire world order that relies on migration to solve its problems. The United States thus has a right to control immigration from

an ethical perspective, and an obligation to do so under the threat of climate change.

VIII. Conclusion: Looking Ahead to a Greener Future

As the most powerful, high-consuming, and outspoken people in the world, Americans have an unprecedented capacity to change the world. Whether these changes are for better or worse for our global community depends upon the direction we choose to take. Significant increases in the American population will undoubtedly expand our



already colossal carbon footprint. Continued immigration not only risks endangering the socioeconomic land of opportunity that is the United States, but it will transform millions of people into higher-consuming and thus higher-polluting, albeit higher-income members of a country already on the brink of overpopulation. The climate change threat presents sufficiently disastrous consequences to overshadow the considerable benefits large and diverse populations otherwise offer. Our focus therefore must shift from accommodating our growing population to managing and restricting it.

The obligations of the United States are four-fold. First, the United States must continue its cur-

rent work to reduce its per capita rate of emissions. Programs that encourage alternative fuel use, mass transportation, and other lower-emission possibilities for Americans will undoubtedly play a significant role in lowering global emissions. Second, the United States needs to acknowledge the potential for overpopulation in the near future. Greater attention must be paid to unintended pregnancies, birth control, and widespread education to decrease our fertility rate to below replacement rate. Third, the United States must overcome its reluctance to restrict immigration. There can be no hope of stabilizing the American population without significant immigration restriction in the near future. Finally, we must push for a global compact to address population growth as a legitimate contributor to climate change that can and must be better managed. The United States cannot shoulder the responsibility of a global emergency by itself. By taking immediate action, however, we can fulfill our duty to the global effort against climate change and significantly reduce our risk of undergoing global catastrophe.

Lower Per Capita Emissions: Advocating Technology and Behavioral Changes

To lower per capita emissions, we must address both the supply side and the first part of the demand side of climate change. The supply side covers the “greenness” of the tools we use on an everyday basis. Efforts have been exerted in this area to improve several fields that contribute heavily to per-capita emissions ratings. These sectors include energy supply, transportation, buildings, industry, agriculture, forestry, and waste management.¹²³ Further advancements can be made in each field to ensure the lowest possible per capita emissions for a country as large and high-consuming as the United States. Energy supply and transportation concerns warrant our greatest attention, as they account for the bulk of our current problem. Our continued dependency on oil is particularly worrisome, as such dependence threatens our national security and economic independence, among other concerns. We may be forced to consider potential policy options such as proposals for carbon taxes or indirect price signals and budgets from a “cap and trade” program. Any disincentive to use gas or carbon would decrease vehicle

use and popularize mass transit.

The other factor of per capita emissions that must be addressed is the first part of the demand side of climate change. Behavioral and consumption patterns account for much of the United States’ high per capita rating. This aspect is fairly straightforward, although perhaps the most difficult to change. Any limitation on energy consumption would detract from labor incentives and deny citizens their entitlement to enjoy the fruits of their labor. Higher incomes allow for higher energy consumption, which is regarded as one of the benefits of income. Restricting consumption not only would thwart a citizen’s reasonable expectation to enjoy labor benefits, but also would contradict our capitalist values by reducing the incentive to earn higher incomes. It may therefore prove difficult to levy taxes in this area. Yet the need for lowering energy consumption in the United States is urgent and real. The challenge is to find the proper balance — one that links reduced energy consumption to emerging, more highly efficient (i.e., lower-carbon) energy and transportation systems so that the benefits of higher income are not materially impaired and individual choice is to a significant extent preserved.

Reduce the Population: Population Control Methods

The United States will soon be presented with a sizeable population problem. Much of this problem will be due to immigration. Until we can restrict the number of people entering the country to safe and desirable levels, we must do what we can to stabilize population growth via population control. Currently, the United States has a fertility rate slightly above replacement rate. This rate must be reduced below replacement rate (Total Fertility Rate < 2 children per woman) for the United States to begin to stabilize its population.

As discussed in Section V, population policies have been widely criticized because of their application in history, such as the One-Child Family Policy in China. It is clear that we should not resort to coercion or forced birth control as a means of controlling our population because such methods infringe upon human rights. What we can and must do, however, is improve education and resources

so that we can lower our embarrassingly high rate of unintended pregnancies and infant mortality. Through organizations such as Planned Parenthood or Population Communication, we can ensure that pregnancies are not due to a lack of either knowledge regarding reproduction or access to contraceptive devices.

Restrict Immigration into the United States to Reduce Population

The third responsibility of the United States is to limit its immigration. Under the new administration, this possibility may seem unlikely. President Obama has vowed to put the twelve million immigrants living illegally in the United States on a path to citizenship and grant them amnesty. He further plans to increase the number of visas available to immigrants, thereby increasing the current rate of legal immigration. To stem the amount of illegal entry, President Obama has also ordered stricter border enforcement.¹²⁴ The intended result is to eliminate illegal entry while welcoming a larger number of legal immigrants. Ideally, this would be the perfect solution. If we could completely control the number of immigrants entering the United States, we could afford to allow many more legal immigrants. Increasing border enforcement is inadequate, however, when we grant amnesty and citizenship to anyone who can successfully avoid our detection. Immigration policies are ineffective if we reward people for breaking them without getting caught. The United States has been increasing border control for years, yet we continue to have half a million people on average enter our country illegally each year.¹²⁵ Until we can lower this number *substantially*, we cannot agree to grant amnesty and citizenship to everyone who fools the United States Government by slipping past its border control. Granting amnesty to our illegal immigrants sends the message that any violation against border restrictions will be forgiven.

In a perfect world, the United States would be able to open its borders to anyone who wanted entry. Unfortunately, we have an obligation for the sake of global security to lower our impact on global warming by decreasing our population. Doing so requires limiting the number of immigrants we allow and

particularly taking a hard stance against illegal immigration. President Obama's approach fails to do this to the extent it would both grant amnesty and citizenship for illegal immigrants and increase the number of visas given.¹²⁶ As a nation that has transformed into a dangerously high-consuming and polluting society, we are not in a position to increase our population. Immigration control in this regard is no longer a question of ethics. The United States has a *moral obligation* to lower its carbon emissions, which it cannot do without lowering its population and particularly its rapidly growing immigrant population. Despite the cost imposed upon potential immigrants from denying them entry, the amount of progress we can make against climate change in the short term is sufficient to suggest that we ought to restrict immigration. If we can successfully stabilize our population and lower our greenhouse gas emissions, the United States can and should adopt a more welcoming policy on immigration. But until then, we have no choice but to decrease both legal and illegal immigration levels.

The United States also should be prepared to address the impact that such restrictive policies would have on a nation such as Mexico. Because immigration control policies will have significant effects on nations with high levels of immigration to the United States, these nations must be acknowledged in such proposals. Through international cooperation between these nations and the United States we can ensure that affected nations receive sufficient assistance in the short term. In the long term, restrictive population policies have the potential to encourage international development and to improve socioeconomic conditions for all nations involved.

Looking Ahead: A Global Compact

As the United States is but one nation, it cannot bear the burden of climate change mitigation on its own. The world must mount a collective effort against this global crisis. In spite of the greater culpability of developed nations for the greenhouse gases currently in our atmosphere, the result of these emissions is a problem for the entire world, not just the nations historically responsible for it. Climate change will affect everybody on Earth; it will not discriminate on the basis of who is to blame. De-

veloping nations now emit more greenhouse gases than developed nations, and the responsibility falls on all contributing parties to do their part.

The United States therefore has an urgent obligation to push for a global compact to address climate change. Given the conflicting interests of different nations, there will inevitably be a need for compromise. Current proposals call for a global standard of emissions on a variety of bases, such as population or past levels of emissions. Each nation has its own agenda in proposing global standards for emissions, but unless we can arrive at a compromise soon, it will be very difficult to make an impact on climate change. The United States may have to compromise with the stubborn whims of Chinese proposals, while the increasingly high-polluting developing nations must agree to regulate their own emissions as well.

An effective global compact, however, must consider and address population issues. Regardless of how “green” we make the world, a world population of almost seven billion people will inevitably pollute heavily and endanger our climate. Population has been the driving factor for global emissions during the past several decades and it will continue to have a material impact unless we choose to address it directly in upcoming international discussions.

The United Nations Framework Convention on Climate Change (UNFCCC) meets at the end of this year (December 7-18, 2009) in Copenhagen to discuss and hopefully develop a global framework that would succeed the Kyoto Protocol. This meeting must be regarded as an opportunity to address all contributing factors for the first time. Nations must be prepared to compromise and work together and to acknowledge the unique position that population holds in the fight against climate change.

Preliminary indications, however, suggest that UN delegates will once again shy away from the dangerous topic of population control. Many share the concern that suggesting population policies in conjunction with a proposal for climate change would make it too unpopular to succeed. Developing nations may feel targeted and forced to solve a problem they did not create, while Catholic, Muslim, or like-minded nations may fear that any policy

restricting population would support birth control or abortion rights.¹²⁷ Consequently, the issue of population may once again be left out of international climate negotiations. This anticipated omission threatens to undermine the success of any future global compact. Any agreement in this century that fails adequately to incorporate population policy will be useless because it would have failed to confront the single main contributor to climate change today. Unless we acknowledge this elephant in the room and soon, we may never get another chance to slow climate change and avoid global catastrophe. ■

ENDNOTES

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10. Ibid.
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efficiency or “greenness” of those tools we use that emit greenhouse gases. For a complete discussion, see Section II.

12. California Air Resources Board. *Climate Change Proposed Scoping Plan: A Framework for Change*. California: October 23, 2008.

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14. The “demand” side of climate change concerns the demand for greenhouse gas emissions, i.e., how much we need to pollute to accommodate our lifestyles. This includes behavioral patterns and population. For a complete discussion, see Sections III-IV.

15. For further discussion of this argument, see “Greenhouse Development Rights” at <<http://www.ecoequity.org/GDRs/>>.

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26. The CEQ is a division of the White House that organizes federal efforts for the environment. It coordinates with other White House agencies to develop policies regarding the environment and energy.

See <<http://www.whitehouse.gov/administration/eop/ceq/>>.

27. Connaughton, 2.

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29. Ibid, 7.

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33. O’Keefe, William. “The Future of Climate Policy: Reality Versus Lessons Not Learned.” George C. Marshall Institute. Washington, DC: December, 2008, 1.

34. Ibid.

35. Beinhooker, Eric et.al., 20.

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