Thomas Friedman's book *Hot, Flat, and Crowded* is like a Sunday morning sermon given by a passionate preacher. It spells out our sins and ardently encourages mankind to set forth on the path of redemption. It is bubbling with passion and urgency and purpose. It is a call to arms, and you're left feeling as if you have to go out and save society from this great evil, which in this case is global warming and biodiversity loss, until you realize later that day that maybe you didn't exactly agree with everything that preacher had to say. Maybe he was being too radical; maybe he was exaggerating the problem.

As much as Thomas Friedman emphasizes the fact that if anything he is underestimating the problem, I beg to differ. Friedman claims that the vast majority of scientists, about ninety percent of them, believe that global warming is a serious problem. He even goes so far as to say, "Right now, the acute awareness of the true scale and spread of the problem remains confined largely to the expert scientific community, but soon enough it will be blindingly obvious to everyone" (Friedman 216). Friedman makes it sound as if only radical and uninformed scientists don't agree with global warming. However, Massachusetts Institute of Technology professor Richard Lindzen said in regard to the "scientific consensus" about global warming, "skepticism is essential to science; consensus is foreign" (Levin 130). By making global warming out to be a scientific fact instead of a scientific opinion, Friedman makes only his proposed solutions, instead of the existence of a problem, eligible for debate. Friedman's absolute confidence in global warming, however, does not reflect the attitude of the established scientific community. In fact, during an interview with Fox News, founder of the

Weather Channel, John Coleman, stated that 30,000 scientists, 9,000 of whom have PhDs, believe that global warming does not exist (Coleman). They believe that groups such as the IPCC are not scientific groups, but rather political groups trying to advance environmentalists interests by creating a crisis. Vaclav Klaus, president of the Czech Republic, accuses the IPCC of being "a political body, a sort of non-government organization of green flavor. It's neither a forum of neutral scientists nor a balanced group of scientists. These people are politicized scientists who arrive there with a one-sided opinion and a one-sided assignment" (Levin 133). Although Friedman suggests that Al Gore apologize to the public for underestimating the problem of global warming, these 30,000 scientists are suing Al Gore for fraud. By making the science of climate change appear to be more absolute that it is, Friedman risks losing his credibility as an author. I would assert the major flaw in this book is not recognizing that climate change is an issue still open to debate and not admitting that politics is still tainting the science of global warming.

But even if the science of global warming is questionable, the benefits of a green revolution are not. Thomas Friedman reiterates that there is no harm in preventing global warming; there is the potential for great harm by ignoring it. Even if climate change is a farce, even if global warming has been supported by a set of faulty scientific assumptions, even if "global weirding" is a ploy for the media and politicians to profit from the public's panic, a green revolution is necessary. Friedman's book is extremely persuasive because it looks at the benefits of a green revolution from copious perspectives. It appeals to environmentalists, humanitarians, politicians, businessmen, military personnel, and nationalists. By looking at global warming from environmental,

economic, and political standpoints, he appeals to nearly every American, instead of just your stereotypical "sandal-wearing, bicycle-riding, yogurt-eating flower child in Berkeley" (Friedman 317).

His first reason for a green revolution is that the environment cannot sustain mankind's behavior for the next half a century. As more people live the American lifestyle as Friedman describes it and developing countries begin to expand their energy use, our excessive use of "fuels from hell" will increasingly burden the environment. The increased severity of natural disasters such as Hurricane Katrina force mankind to question if these catastrophes are caused by God's will or mankind's carelessness. We do not have the luxury of choosing to take action. As Friedman enumerates, Mother Nature has already made the choice for us.

A green revolution is also imperative if we want to stop the advance of our enemies abroad. Everyday, the United States gives millions of dollars to oil rich nations such as Saudi Arabia and Iran that do not have our best interests at heart. Radical, traditionalist sects of Islam such as the Wahhabi and Salafi groups are using that money to impart their beliefs on a new generation by becoming involved in the Middle East's culture and education. By giving these abusive governments millions for oil, we are stagnating modern thought and development in the Middle East. Furthermore, a study done by Friedman has shown that the price of oil and degree of freedom in the oil rich nations has an inverse relationship. Therefore, if were to decrease our dependence on oil causing oil prices to fall, the citizens in these nations would be able to reclaim their voice, as they have begun to do in Iran with the election of Mahmoud Ahmadinejad.

Furthermore, a sharp decrease in the price of oil would strip these nations of their ability

to use the profits from oil sales to advance their national interests abroad. He also suggests that a green revolution may inspire the Chinese government to give more freedom to the media so that they may expose businesses and government agencies that are not energy conscious. Friedman goes so far as to assert "today, you cannot be either an effective foreign policy realist or an effective democracy promoting idealist without also being an effective energy saving environmentalist" (Friedman 110).

Friedman also argues a green revolution could drastically improve conditions in third world countries. He cites how many of the problems in the rural areas of Asia and Africa are linked to their lack of reliable energy. Everything from education, agriculture, health, and unemployment can be improved if the reliability of energy can be improved. A green revolution would help to provide these areas with "abundant, clean, reliable, and cheap electrons", giving them a chance to "compete, connect, and collaborate" in our modern flat world.

But Friedman does not only appeal to those who care about others and the Earth, he also appeals to those who care about themselves. In his book, he quotes a Stanford University professor who said, "The energy-climate challenge is a series of great opportunities disguised as insoluble problems" (Friedman 170). He also exposes the domestic benefits of a green revolution by arguing that such a revolution would secure America's superpower status in the Energy-Climate Era. He even titles a chapter "Green is the new red, white and blue" to emphasize that America is the innovation capitol of the world and if we would like to retain that status and reinstate our international moral authority, a green revolution is a good strategy. By devising an entirely new system that guarantees access to abundant, clean, reliable, and cheap electrons, we can inspire other

nations to follow our inventive lead as they have in the past and improve their society by conserving and producing clean energy. The United States can start being an example for the world again. A green revolution can help us stop building walls and start building relationships. A green revolution can help to reinstate value in the American Dream.

Friedman also asserts that there is a great deal of money to be made by this green revolution. If the government makes the necessary adjustments to secure a market for renewable energy sources, the utilities can invest and profit from these new technologies. Although he foresees an economic bubble for renewable energy sources, he argues that this bubble will be the impetus for innovation, just as it was for the internet and web technologies. Because Friedman appeals to our minds, hearts, pride, and wallets, *Hot*, *Flat*, *and Crowded* is an extremely persuasive work that encourages people with many different motives to support a green revolution.

Friedman also believes that the world must innovate its way out of the problem of climate change, instead of regulating its way out. He asserts that the "Manhattan Project" style of innovation is not the way to solve the problem of a lack of clean, abundant, cheap, and reliable electrons. Instead, he proposes that there be "a million Noahs with a million arks" so that one invention can lead to several others (Friedman 297). Friedman also argues that before this period of innovation can commence, there must be a market for renewable energy sources. It is ludicrous that people and utilities would pay more for something they already have, so the government will have to in some way manipulate the market to make renewable energy competitive. This is where I begin to become wary of Friedman's suggestions. He favors solutions such as a national renewable energy government mandate, a carbon tax, a gasoline tax, and a cap and trade system. When

critics of his plan say that such taxes will decrease exports, he counters with the option of raising tariffs. However, this manipulation of the market does not have such an easy solution. First and foremost, we must be very wary of government mandates. Although mandates that promote a cleaner environment seem both beneficial and necessary, they too frequently have unforeseen and unintended consequences. For instance, Corporate Average Fuel Economy standards passed in 1975 have forced car companies to make smaller, lighter vehicles. Although these cars are more fuel efficient, they are less durable in accidents. In 1989, analysts at the Brookings Institute and Harvard University deduced that 20,000 serious injuries and 2,000 to 3,900 of automobile related deaths are the result of smaller, lighter cars (Levin 124). Despite overwhelming evidence that increases in fuel efficiency standards have led to the unnecessary loss of thousands of lives, Congress just passed yet another government mandate that requires all passenger vehicles to have an average fuel mileage of 35 miles per gallon by 2020. This mandate, passed in 2007, is a 40 percent increase from previous standards (Levin 125). Although I am a proponent of encouraging an environmentally friendly economy, I believe that we should not put millions of lives in jeopardy to do so. The government should be encouraging companies to engage in green innovation, as Toyota has done with their Prius hybrid, instead of merely making cars lighter but more dangerous in order to meet government mandates.

Furthermore, if steep taxes on "dirty fuels" or a cap and trade system were to be put into effect, every company that uses these fuels would be at the mercy of the demands of the federal government. There would be no bureaucracy advocating the interests of the free market, so the government would think little of the economic consequences of

these stiff regulations. The cap and trade system would cause the price of fossil fuels to exponentially increase because of price competition and may force companies to decrease production, relocate overseas, or go out of business. In his bestselling book *Liberty and Tyranny*, Mark R. Levin says,

The Heritage Foundation estimates that one of the more recent cap and trade proposals would result in cumulative gross domestic product losses of at least \$1.7 trillion and could reach \$4.8 trillion by 2030, single year GDP losses of at least \$155 billion that realistically could exceed \$500 billion; annual job loses exceeding 500,000 before 2030 and that could reach 1,000,000; and the average household paying \$467 more each year for natural gas electricity, or an additional \$8,870 to purchase household energy over a period 2012 through 2030. (Levin 138)

These are just a few of the devastating effects severe taxes or a cap and trade system would have on our economy. These suggestions would give the government reign to play a revolutionary involved role in the market and potentially regulate companies into bankruptcy. However, tax incentives would have the same positive effect of securing a market for renewable energies as a gasoline tax and cap and trade system, without the unintentional economic ramifications of significant GDP loss and unemployment. The success of such monetary incentives has been proven with the recently enacted Car Allowance Rebate System, also known as the "Cash for Clunkers" program. By offering rebates to individuals who purchase qualifying fuel efficient models, you are not only helping the environment, but you are also increasing consumption, augmenting GDP, helping the automotive industry, and decreasing the United States' dependence on foreign oil imports (Official Information). This is exactly the "buy one, get four free" benefit of going green that Friedman describes in his chapter about outgreening al-Qaeda. Tax incentives encourage people to change without dangerously expanding the power of the federal government. So although I agree that we need copious innovators working to

battle the effects of pollution and biodiversity loss, I disagree with Friedman's decision to focus on "solutions" such as mandates, taxes, and a cap and trade system that will cripple the economy, and instead intend to focus on rewarding those who go green with tax incentives.

Even though I don't agree with Thomas Friedman's opinions about the absolute science of global warming and his suggestions to secure a market for renewable energy with mandates, taxes, and a cap and trade system, I certainly do applaud Friedman for having the audacity to relay the gravity of climate change and biodiversity loss to the public. The universal persuasiveness of his arguments and the plethora of examples and opinions Friedman provides make *Hot*, *Flat*, *and Crowded* a very influential book in the Energy-Climate Era. In fact, it may have even turned me into a tree hugger.

Works Cited

Coleman, John. Interview with Greg Gutfeld. Red Eye. Fox News Channel. 18 June 2008.

Friedman, Thomas L. *Hot, Flat, and Crowded*. New York: Farrar, Straus, and Giroux, 2008. Print.

Levin, Mark R. Liberty and Tyranny. New York: Threshold Editions, 2009. Print.

"Official Information." *Car Allowance Rebate System.* U.S. Department of Transportation, 09 Aug. 2009. Web. 10 Aug. 2009. www.cars.gov>.