Lecture: "The Anthropology of Climate Change"
Swarthmore College
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United Nations Framework Convention on Climate Change

Dear students, distinguished faculty, friends:

I would first like to thank President Chopp for inviting me to return to Swarthmore. But let me be honest with you: I've been waiting a long time to be invited back. So let me tell you what happens on the Swarthmore campus when you wait for an invitation.

Madeline Barillo '78 is my freshman roommate and best friend. Madeline is here with me today, and we can both tell you this story. When we were Swarthmore students, we watched fellow students being invited to the President's home for various functions – everyone but us. So we decided to take matters into our own hands.

One early Easter morning before sunrise a group of us dressed up as bunnies and hopped up to President Friend's door with a basket of chocolate eggs. The poor man opened the door in his striped pyjamas and stared at this rabbit invasion in disbelief. He was shocked, but I guarantee he never forgot us.

I was thinking about this episode when I met a couple of Swarthmore students last year at the Climate Change Conference in Durban, South Africa. They invited me back to the campus, and I wondered if they were acting on President Chopp's behalf – perhaps she had received a warning call from her predecessor and wanted to avoid a bunny invasion of her garden. What is more suspicious is that she has even invited us for dinner tonight….

You may think this was just a campus prank, but I would like to impress upon you, that on the very critical issue of climate change, the world can no longer afford for any of you to wait for an invitation to put your knowledge to purpose, or your passion to action.

President Chopp said it best in her inaugural address:

"We must educate to set anew and set aright our relationship to the Earth, to our climate, to the web of all existence. Under this canopy of trees can there be any doubt that we must do all we can to sustain the beauty of this good Earth."

In the idyllic setting of the Swarthmore campus it is indeed very tempting to ponder global challenges from an intellectual perspective, to write a brilliant paper, to participate in a

stimulating Honors seminar in your professor's living room, and leave it at that. But, as I'm sure President Chopp would agree, doing "all we can" means taking action. Not tomorrow, but today. When it comes to climate change, thought without action is not only empty, it is profoundly irresponsible. Let me tell you how I come to that conclusion.

It all started when I decided to become a Sociology and Anthropology major. Anybody here in the room wondering how an anthropologist ended up working on climate change issues?

I must admit that way back then I did not dream about one day becoming the head of the UN Climate Change Secretariat. In fact, I was lucky if I had time for any dream at all in those very short sleeping hours! The honest truth is, when I graduated from Swarthmore in 1979, the global environmental movement was still in its infancy, and I was not much concerned about the environment, with one exception. I was a committed solar energy activist, getting a good tan on the lawn in front of Parrish Hall as often as I could.

If there are any Anthropology majors here, you may have heard of Steve Piker, my thesis advisor and inspiration on campus, to whom I would like to pay tribute. He opened my eyes to a simple yet powerful truth that still resonates with me today: that the direction, scale and speed of change in society is determined by man.

Since I know that the science of climate change may be a forbidden topic elsewhere but not at Swarthmore, I trust we all agree that the unprecedented atmospheric concentration of greenhouse gases that is at the root of climate change is due to the activities of man (and yes, I deliberately say man here, not man and woman – but we will leave that part of the discussion aside for the time being).

I trust we can also quickly agree on why addressing climate change is so urgent. In August, the U.S. National Snow and Ice Data Center reported that the extent of ice cover on the Arctic had shrunk by 186,000 square miles compared to only five years ago: that's an area four times the size of the state of Pennsylvania. You can imagine how this disrupts the lives of those living in the Arctic region, with alarming potential consequences on ocean currents circulating the globe.

In January I had the opportunity to see the effect of warming temperature at the opposite pole–Antarctica. Huge pieces of sea ice breaking off, triggering a shrinking of land-based ice faster than had been anticipated by glaciologists. Antarctica may seem distant, but what happens in Antarctica doesn't stay in Antarctica. There is a direct and proven correlation between ice melt on that continent and sea levels around the world.

Just ask some of the 50 million people who live in low – lying island states, whose survival is directly threatened: not tomorrow, but now. On the island of Fiji, where I once travelled as a young anthropologist, the families of the village of Vunidogoloa are today, as we speak, relocating to drier and higher land because of sea level rise and flooding. And they're lucky they have higher land at all. During his term, the former President of the Maldives was unsuccessful in finding another country that would accept the entire population of the Maldives as climate immigrants or refugees.

"Climate refugees" – now there's a term that wasn't around in 1979. But get used to it. Current projections estimate that we could reach anywhere between 100 and 200 million

climate refugees over the next 20 – 30 years. This tragic situation is made even worse knowing that the islands are the ones least responsible for climate change.

And we don't have to go so far away. I trust you understand the urgency right here in the United States. January through August were the warmest eight months of any year on record in the US. This country just experienced one of the worst droughts on record, a heat wave extending from the Rocky Mountains to the Ohio Valley, with devastating effects on the farmers of the entire region.

Furthermore, the U.S is the world's largest exporter of corn, soybeans and wheat, but because of the drought, the Department of Agriculture estimates global food prices of these staples will jump two to three per cent in 2013. A few cents on the dollar can often determine whether a poor family eats or starves.

It doesn't take a scientist to connect the dots. While none of these events can be exclusively linked to climate change, taken together they indicate we're already in the midst of climate unpredictability, of a profound disruption of the Earth's hydrological cycle the effect of which is still unknown.

Yes, Steve Piker, the direction of this global change has been determined by man, but the speed may now be out of our control, and I am sure even YOU did not know the potential scale of the change we may have already caused.

In the face of this calamity, is anything being done? The good news is that there is progress, both from governments and the private sector.

At the intergovernmental level, in the last round of negotiations in Durban, all countries agreed to not let temperature rise go beyond two degrees centigrade, and are considering limiting it to 1.5 degrees–the only target that would give us some chance to protect small island states from the worst effects of climate change.

Additionally, in Durban most industrialized countries agreed to continue leading in their emission reduction efforts via a second commitment period of the Kyoto Protocol.

And for the first time, all governments have agreed that they will negotiate a legally – based, universal agreement by 2015 to be implemented starting in 2020.

At the national level, we see a number of countries with serious climate initiatives:

- All industrialized countries have made voluntary pledges to reduce their own emissions by 2020;
- Even more impressive, 49 developing countries have announced nationally appropriate mitigation actions to 2020 and beyond; and some of these countries have passed domestically binding climate change legislation, such as Mexico, Korea and yesterday Pakistan.
- China is working on a first draft of its national climate legislation, with a view to enacting it over the next few years; and
- 119 countries have renewable energy policy targets and nearly all countries have some type of energy efficiency initiative.

This is progress, but let me be perfectly clear: it's not enough. In fact, if fully implemented, all of the above actions would account for only 60 per cent of the effort required to keep average global temperature rise below 2 degrees Celsius. Reaching the temperature target requires decisive national action, but also collective commitment in the context of an agreed global framework.

This is where Steve Piker's lesson is to be applied again: there is no doubt that we need to change the way we generate, transmit and use energy, and only man, and let me rephrase here and say: man and woman, can determine the direction, scale and speed of that change.

As things currently stand, time is not on our side, nor is the math in our favor. Given population growth and economic development in emerging countries, global demand for energy will more than double in the next two decades, according to the International Energy Agency. To meet that demand, approximately $26 trillion needs to be invested in infrastructure globally, and over half of that needs to be spent in developing countries.

We stand at a fork in the road. We can take the path of least resistance, the business – as – usual route, the path of high carbon, and high emissions. If we do, we stand a great chance that in 40 years emissions will have risen by 50 per cent instead of falling by 50 per cent as science requires.

But if we choose the other path, the green path, if these investments are focused on renewable energy, energy efficiency and we improve access to sustainable energy, we will achieve something truly different, something truly remarkable. We will finally delink economic growth from greenhouse gas emissions. We will increase growth where it's most needed, and reduce emissions where they're the highest. We'll create new jobs, new opportunities, new directions.

This is the path many businesses are beginning to take. They're recognizing the opportunities offered by green growth. Just a few months ago, the trillionth dollar was invested in renewable energy. Companies across the world have seen the light. One example is in Qatar, where the next round of climate negotiations will take place. The Qatar Solar Technologies company recently invested more than a billion dollars in a world class polysilicon facility. Their goal is to produce 1,800 megawatts of solar power by 2024.

And right here in Pennsylvania we're seeing how renewable energy provides an economic boost. In 2010, the wind energy industry supported, directly and indirectly, up to 4,000 jobs in the state.

Institutions such as Swarthmore College have also chosen the path of growth, and I applaud Swarthmore's efforts to make the College more sustainable and green.

I especially want to note the efforts of President Chopp who, in 2010, signed the American College and University Presidents' Climate Change Commitment.

Swarthmore has also:

- committed to develop a Climate Action Plan by January 2013;
- attracted widespread attention for concrete climate actions, such as its pioneering work on green roofs (I was just up there with my high heels and all!); and
- strengthened the environmental studies program and increased research and internship opportunities.

That's the direction government, institutions and private companies are moving. Now the question is: is this enough? Can we leave the responsibility of the transformation to governments, institutions and to the private sector? Absolutely not for a simple reason: what is urgently needed is the creation of a new norm: the low carbon norm, and this requires nothing short of a consumer rebellion against high carbon living.

Let me explain what this means for you, both as today's students as well as tomorrow's leaders.

Dear students, it is easy to fall into the trap of exporting responsibility. But this is about your behavior, your choices, here and today. It's not about others–those you think aren't doing enough or whom you judge to be irresponsible–it's about you: your lifestyle, your consumer choices, your energy consumption. Yours…and mine.

I understand on a personal level how this is easier said than done. My husband still has to remind me to turn off the lights in the house when they're not being used. In fact, he's resorted to installing motion sensors. When I take an airplane to go short distances my daughters ask: "why didn't you take the train?"

Being responsible means being honest with ourselves. So, let's try a little honesty: how many here in the room DO NOT OWN a car? How many DO USE a car? How many of you know your car's CO2 emissions or mileage? To those who own a car: were low CO2 emissions a factor when you bought it?

My point is this: Your purchasing power is your strongest voice. Through your choices in everyday products, your generation will determine how quickly we shift to low carbon. Companies are finally realizing that sustainability is more than an advertising campaign, it's what informed consumers want. So join others who are letting companies know that your dollars only follow sustainable growth.

Now as tomorrow's leaders, let's look at some basic facts that you will have to address.

By raise of hand: What is the average annual per capita CO2 emission in 2050 which is compatible with our stated goal of keeping global temperature increase below 2 degrees? Is it 100 t or 2 ton or half a ton? It is 2.

What do you estimate is the average annual per capita emission for an Indian citizen? one ton, 10 tons, or 20 tons of CO2? You guessed right – it's 1 ton!

Do you know the average annual per capita CO2 emission today of a US Citizen?

Is it one ton, 10 tons, or 20 tons? It's 20 tons! So to be in line with responsible global citizenship you would have to reduce your personal average emissions by 90 per cent from 20 to 2 tons – in your lifetime!

Think about where you're currently causing emissions: maybe it's transporting yourself from one place to the other with some gas consuming vehicle. Perhaps you're using electricity to cool your room, to run your overhead lights and laptop. Where can you reduce?

But I'm not letting you off that easily. While switching off your A/C when you leave the room is good, it won't get you much closer to your 90 per cent. Choosing a smaller car is also smart, but you still won't be anywhere near our magic number.

You realize: we need dramatic change! Some call it transformational change. I simply call it a revolution! Believe me, I don't use this word lightly. I am the daughter of a revolutionary, and I am proud of the social change that the revolution of 1948 brought to our country. But we are here in a peace loving Quaker College with a strong anti – war tradition and while I received little training here in handling a machine gun, I did receive inspiration and values which still guide me today.

So, I'm not calling for an armed uprising, I'm calling for something much more challenging: an uprising against our own consumption patterns which have become incompatible with our vision and our responsibility for a sustainable future. Energy is at the heart of everything we humans do, and I'm calling for a radical transformation in the way we generate, transmit and use energy.

Ladies and gentlemen, as tomorrow's leaders I need your help. No matter what field you will go into, you will likely be affected by climate change. I need the brightest minds to come up with real and lasting solutions in every field. I need you to discover them, articulate them, operationalize them, in such a way that they make environmental, economic, and ethical sense.

It's what Swarthmore College is all about–what it's always been about.

This College was forged in the crucible of the Civil War in the US, a time in which some human beings literally owned other human beings. At the time, most people thought this paradigm was intractable, but people with passion who knew it to be wrong took firm steps to remedy a profound wrong.

Today not just the US, but the entire world, is facing the challenge of addressing climate change. Some may think it is too complex to be solved or too distant to warrant concerted effort now. There is no doubt that the complexity of climate change is unparalleled in our human history. But I hope I have shown you that we are making progress. Above all I hope I have shown you that each one of you can make a difference, that each one of you must make a difference.

Don’t sit in your dorm room waiting for an invitation. Let’s get to work together.

Together to make the radical changes required of us. Together to meet challenges with conviction, and resistance with resiliency, regardless of odds or opposition. Together to build upon the proud Quaker tradition upon which this school was founded and lead by example. Together to have our voices heard . And together to let our lives speak.

Thank you.
