Sustainable Humanity

10th annual Wege Lecture on Sustainability

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Transcript:

Dr. Rosina Bierbaum: For a decade, we have jointly invited an internationally known speaker to give the Peter M. Wege Lecture on Sustainability. Today, that honor goes to a Detroit native and a Michigan alumnus, whose entire life has been focused on improving the human condition. Of course, I am referring to Dr. Larry Brilliant, the President and Chief Executive Officer of the Skoll Global Threats Fund. It's impossible not to be impressed by the scope of his life's achievement. Larry's impact has been felt from the prison buildings on Alcatraz Island, to the dirt streets of Indian Village, to the academic halls of this University, and to the board room at Google. He has appeared in a Hollywood film, Medicine Ball Caravan, and some think maybe he was a band groupie of sorts. He has been nominated for an Oscar on a documentary on polio eradication. It's clear though, that what matters to Larry most are actions, and actions in support of people. Indeed the common theme in his research, professional activities, and worldly engagement is humanity. That outlook and purpose is captured in many wonderful quotes by Larry, but here's just one:

"What is sustainable humanity? It's not simply an economic construct. Human lives are more than double-entry bookkeeping, and human progress is more than increases in GDP. Our generation should bequeath to the next a world where people live healthier, longer, better lives in a world of peace and fairness, a more humane world. Civilizations should be judged not by how they treat people in power, but how they treat people furthest from power."

Now as the leader of the Skoll Global Threats Fund, Dr. Brilliant is charged with addressing five global threats to humanity: climate change, water scarcity, pandemics, nuclear proliferation, and Middle East conflicts. Just a few minutes ago, Larry said, tongue-in-cheek, "We should be done by April, and then I'm ready for the next few challenges."

Of course humanity and sustainability are both topics of deep and abiding personal interest to Mr. Wege, the Michigan Corporate and Philanthropic leader, who recently celebrated a birthday in his 10th decade on this planet. I'm delighted to report that the Wege Foundation, a long-time supporter of the University of Michigan, recently pledged to endow this series, ensuring that its message will be heard by generations to come. So, thank you Wege Foundation.

[Applause]

And this lecture series, as with most things taking place on this wonderful interdisciplinary campus, is a byproduct of teamwork. So, in addition to the School of Natural Resources and Environment, today's event sponsors are the Center for Sustainable Systems, which is home of the Wege Professorship, Dr. Peter Bulkley, Dr. Johnathan Bulkley, the Peter Wege Professor, I put the two names together there on you, and it is also the Center for Sustainable Systems' 20th anniversary this year. We are also joined by the office of the Vice President for Research as a sponsor, and the School of Public Health from which Larry received his master's degree in 1977. But the real honor of officially introducing Dr. Brilliant belongs to Mary Sue Coleman, the President of this great University of Michigan. And a university requires a leader of incredible vision to help it be great, to be innovative, and to be the leaders and the best. And under Dr. Coleman's guidance for now more than 8 years, the University has expanded its leadership on a number of fronts, most notably in enriching the undergraduate student experience, in enhancing interdisciplinary research across all of our 19 schools and colleges, in making sustainability a real theme of campus life, of education, and of research, and in expanding our international experiences and our international impact. So, ladies and gentlemen, please welcome the great 13th President of the great University of Michigan, Mary Sue Coleman.

[Applause]

Dr. Mary Sue Coleman: Thank you, Rosina. University of Michigan graduates are known worldwide for their leadership and their engagement with the world. Indeed, some excel in ways that give us pause because their work delivers such profound impact. Dr. Larry Brilliant is one of those graduates. You can read the highlights of his career in your program, and they really are just highlights because his background is fascinating, deep, and incredibly diverse. The author of a publication here on campus aptly described Dr. Brilliant's persona as a blend of 1960s idealism, 1990s entrepreneurship, and 21st century technological know-how. Regardless of the philanthropic cause to which he is committed, and there have been many, Dr. Brilliant's work has a common denominator. He does not do small.

From eradicating smallpox and securing peace in the Middle East, to confronting the many dimensions of climate change, he is eager to take on genuinely complex issues of our time, and his approach to this work mirrors so many of the values we work to instill in University of Michigan graduates. He shows us the importance and impact of social entrepreneurship, whether through his own startups or by funding the work of innovators.

He demonstrates the power of collaboration, of partnering with others, whether between academic disciplines or between nations. He carries out public service in ways that both inspire and give hope to those in need. And he shows us how critical it is to think globally, because our world has become so interwoven by technology and the challenges we face are no longer contained by geographic or political borders.

We are seeing that with the calamity in Japan, and the economic, environmental, and human toll unleashed by the earthquake and tsunami. These are threats that require the response of not only Japan, not only Asia, but of the entire global community. That is why Dr. Brilliant thinks big, and as Dean Bierbaum told us, thinks humanely. He is the perfect choice to deliver the Wege lecture, which helps us better understand the challenges and rewards of a sustainable world. We are honored that he is with us, and we look forward to his message. Please join me in welcoming the President and CEO of the Skoll Global Threats Fund, a Michigan alumnus, and a respected leader, Dr. Larry Brilliant.

[Applause]

[Silence]

Dr. Larry Brilliant: It's nice to be back in Ann Arbor. President Coleman, Dean Bierbaum, thank you very much for those warm words. Faculty, students, and friends, thank you very much for coming out today. Thank you for the wonderful opportunity to give the 10th anniversary Wege Foundation lecture, and especially thank you very much for inviting me to come back home. And Rosina I know this is also your 10th anniversary of Dean, and all the wonderful things you've done for that, we thank you and we look forward to even more and we hope you'll invite us to your party, whenever that's going to be.

And I also want to thank my friend, Ken Warner, who's the former Dean of the School of Public Health, who couldn't be here tonight. He's in Singapore. It was with Ken that I first started talking about this.

Before we get started, I'd like to pause for a moment and ask us to convey our condolences, our respect, our admiration to our Japanese friends who are struggling in often heroic ways against the ongoing effects of a 9.0 earthquake, a tsunami, and are fighting to stop a catastrophic nuclear event. There are many dozens or hundreds of Japanese nuclear workers who, having just lost everything, lost their family, loved ones in the earthquake, and then the tsunami, they're now risking their lives with no electricity, sometimes with no light or water, to try to save their country from nuclear meltdown. We say, on behalf of all of us to all of them, thank you for your sacrifice and your heroism, and I'd ask us just to take a moment of silence and to thank them for what they're doing.

[Silence]

This tragedy in Japan puts a human face on a lot of abstract concepts, some of which I'm going to try to talk about tonight. We'll talk later about sustainable humanity, and what that means.

I want to talk about issues that touch on low probability but highly consequential events, certainly like what's going on in Japan. The difficulty of decision-making under conditions of uncertainty, there's no road map or guide book, the role of governance and media, the need for risk literacy, science communications in a world where politicians undermine science and special interests underplay risks. Before I do that, I want to talk a little bit about Ann Arbor.

So, what about Ann Arbor? It's so good to come back home. Make no mistake, my family and I bleed maize and blue. My wife Girija and I have 4 Michigan degrees, of course she has 3 of them.

[Laughter]

I was 4 credits short of an undergraduate degree, although I have 3 doctorates, but… Mary?

[Laughter]

That was about the 13th century. I don't know if my chances expired yet.

We both got MPHs here, she got a PhD here, I was a proud faculty member for nearly a decade. Now, how proud Michigan was of me could be seen in the fact that they gave me an office in the basement of Observatory Lodge, hidden away but across the street from the New School of Public Health. It may have been that the door was plastered with all those colorful hippie decals, the peace symbols, the homage to all the religions of the world, and especially the rainbow decal of the Seva Foundation, which was an organization that my wife and I co-founded with a lot of people who are here today 30 years ago to combat blindness and whose projects have given back sight to more than 3 million blind people. It started right here in Ann Arbor.

[Applause]

So, between being students and a faculty member, we lived here for nearly 15 years. Our children were born here, and one, my daughter Iris graduated from U of M last year.

Now, Mary, President Coleman, you and my daughter had a near collision when she was a freshman in 2007. I want to tell that story, not to raise any uncomfortable history, but as a way to speak about sustainable humanity, activism, the youth movement, social media, and a great challenge that's facing us all together, and a little father's pride, rolled all up in one story.

So, this started after Iris had been here on the campus about 6 months, she called me in, I got the call that every father has been begging to have. "Dad, I want to ask your blessing and your approval for something that I'm going to do." Good start? "What is it?"

Then I got the question that no father ever wants to get. "Dad, I want to get arrested." I said, "Well, there are good reasons and bad reasons for wanting to get arrested. Which is it and why?"

"Well dad, the U of M is a huge sports school and they buy some of their athletic clothes from questionable sources that we think use sweatshop labor. There's a group of 10 of my friends and activists that want to occupy President Mary Coleman's office and court arrest to bring media attention."

I don't know how you would have answered. But I answered, I thought, "That's a lovely reason to get arrested."

[Laughter]

And not that it matters, but I think I may have been arrested in President Harlan Hatcher's President's House way back in the War in Vietnam movement days. "Good luck, sweetie."

[Laughter]

The next day I got another call from Iris, "Dad, bad news." "What is it?" "Dad, I couldn't get arrested."

[Laughter]

"Why?"

"There were too many students who wanted to get arrested and wanted to occupy the President's office, so we had to choose who would sit in and 10 or a dozen were arrested while the rest of us went outside and got on Facebook and Twitter to get the word out."

And Mary, I've subsequently spoken to your office and to my daughter, we're 4 years after the fact, and I understand this is still unresolved, but it's a complicated issue, and it goes beyond where and how clothes are made, and it goes into federal laws about single

sourcing, so I wish you great luck, and that's not why I brought it up. I brought it up because I'm proud of my daughter's desire to change the world. I'm proud that she came to Michigan to begin to learn how to do it. I like to think our genes had something to do with that, but I do want to begin by saying that this is one of the very great things that is special about U of M. I think we all know there is activism and a sense of justice in the very soul of this place. It's one of the reasons I'm proud to be a Wolverine.

So, I'm going to talk to you about sustainable humanity. When Ken Warner and Rosina asked me to speak, they asked me to talk about sustainability, it was a little vague. I thought they may have meant environmental sustainability. Lots of times, academicians tend to see sustainability as part of economic development. But that's not the kind of sustainability that I feel it's important to talk with you today about. Today, sustainability brings to mind something much more urgent. Not since the Cold War when the U.S. and the Soviet Union faced off with tens of thousands of nuclear weapons pointed against each other have we faced the kind of human caused existential threats to sustainability that we face today. Many smart people, many of them not prone to hyperbole are now asking the question if sustainability is possible.

Climate change, water scarcity, economic meltdowns, food insecurity, regional conflicts that can escalate into global nuclear confrontations, the ever-present threat of pandemics that can kill tens or hundreds of millions. These are some of the global threats that pose existential threats to humanity and some of them for the first time. So, sustainability is not as Rosina said and cannot simply be an economic construct. Human lives are more than double-entry bookkeeping and human progress is more than increases in GDP. And the only kind of sustainability that matters is if my generation bequeathed to the next generation a world equal or better than that which we inherited from the generation before. Nothing else matters, but we seem to be heading in the wrong direction. The world has become a more dangerous neighborhood of late, and the ideal of human sustainability is at risk. It's at risk from increasing population. We will pass 7 billion shortly. We are consuming more stuff and we're making bad choices about which stuff we consume. This leads to more and more stuff that endangers the planet and to increasingly violent clashes over who gets what share of often dwindling resources.

Now, the fellow who first started talking about stuff in cargo was Jared Diamond, an anthropologist and geographer who wrote another great book called "Collapse," and obviously collapse is the inverse of sustainability. His book "Collapse" was about how societies choose or fail to succeed, choose to fail or choose to succeed. And Jared, who handicaps the possibility of our achieving sustainable humanity at only 50%, sees that we have now four unique challenges.

First, societal collapse is no longer, like Easter Island, local. We're too interconnected. Globalization has made him worry about chain reactions leading to global collapse. We have a fair example in the economic meltdown of 2008.

Second, for the first time ever, we are facing global ceilings on resources: energy, water, seafood, forest, a breathable atmosphere. That atmosphere has been used for so long as a free garbage dump; it can no longer absorb civilization's greenhouse gases.

Third, with increasing media, new and old media, social media, less and less can be hidden. And even living behind gated communities, we no longer can absorb and contain

the inequalities in per capita consumption around the globe. Life expectancy differential does not just mean the number of years' difference that you live; it's the quality of life difference that you live. My beloved India, I lived there 10 years, is proud that there are more billionaires in Bombay than in New York. But a few hundred yards away from the largest single-family house in the world, a 60-story single family house in Bombay, 100 yards away there are thousands of families who live on 2 dollars a day or less. That's not sustainable.

Fourth, according to Jared Diamond, we've run out of the most precious time, we've run out of the most precious resource: time. Maybe we have 50 years, because energy, water, and climate are time bombs that unless we change, can destroy the world as we know it.

Even one of humanity's most inspirational accomplishments, the historic and long-awaited emergence of hundreds of millions of people from poverty, in Asia, Latin America, and Africa over the last two decades, an accomplishment of legendary historic proportions, about which we should be so proud, comes with a twinge of foreboding because of the massive amounts of stuff that they are consuming: coal that's being burnt for energy and rainforests that are being destroyed for fodder, for animals. They will be eaten by the new middle class. Add to this mix the driving forces of media, technology, nationalism, divisive ideologies, and an attack on reason and science from well-healed vested interests. And one has to question the prospects for sustainable human progress.

If society responded to these pressures in a rational way, oil and coal companies would soon be anachronisms, but let's be realistic. How could they be expected to simply give up hundreds of billions of dollars in market value and not to fight?

One of the key questions pollsters ask voters everywhere is the country, or the world, or your city on the wrong path or the right path? It's normal to disagree on the specifics of the path, but whether you're a tea-partier or a protester in Tahrir square or in Cairo, or a union supporter in Madison, Wisconsin, most people have a reason, even if they can't articulate it, to agree that we are on the wrong path. We're not on a path to sustainable humanity.

Another thing that you and I will probably agree on is my generation has left your generation with a bucket full of problems. Human caused, in many ways much worse than the ones we fought for here in the 60s, the 70s, and the 80s. But wait, I think there's great hope. It's the potential activism of the youth today, it's the new tech tools that embolden leadership and flatten power pyramids, being able to create democratizing trends in government, corporations, and civil society, and it's some amazing lovely, lovely science that help us reach ever more noble goals. I also believe that along with the bucket full of problems we have left you, my generation has created and bequeathed you a bucket full of solutions and tools. They're harder to find than the problems. Many of them are from the IT world. But just the technology alone is not enough, because hundreds of billions of dollars in technology wealth is finding itself into the world of philanthropy. My generation did not have these tools. It is easier to find the problems and talk about them. We must force ourselves to find the common cause in the solutions. I'll come back to this later.

Now, here's a more poetic way to state the problem, and being of the generation that I am, this is obviously a Grateful Dead song. I won't sing it.

[Laughter]

You don't know how lucky you are, that's not the song, called "Touch of Grey."

"I know the rent is in arrears, the dog has not been fed in years. It's even worse than it appears, but it's all right. Cows are giving kerosene, kids can't read at 17, the words he knows are all obscene, but it's all right. I will get by, I will get by, I will get by, I will survive."

Well, that's one definition of the problem. It's not a definition of the solution, but it is a great segue back to the world of the 60s and the 70s in Ann Arbor. Because in the 60s, we faced huge challenges. Civil rights and equality were a battlefield. Scenes from that battle played out here in Ann Arbor. I was an undergraduate here from 1961 to 65, and did I mention I didn't graduate for a lack of 4 credits?

[Laughter]

I had an incomplete, though I did go right to medical school. It seemed like everybody on campus attended sit-ins and marches and SDS meetings were packed. I was in a play called "The Peacemaker" by Carl Ogelsby, who became the President of SDS. Peacemaking was in the air. Some of them were deeply committed, made a conscious decision to join what we called "The Movement."

I read about a peacemaker, a civil rights leader, a Baptist minister who was going to speak at Hill Auditorium. I was a depressed sophomore. My father was dying of cancer in Detroit and I was only 18, and I was confused. I rarely left my room at South Quad, but I decided to go and hear him speak. That day, of course, had the worst weather in human history, or so it seemed. The playwright Arthur Miller once wrote that "under certain atmospheric conditions, it is possible to ice skate from one end of Ann Arbor to the other."

[Laughter]

That day was worse because on top of the ice was sleet and rain, and you know all too well, everyone of you, no one wanted to go outside that day. But I was lost and looking for hope, so I trudged along to Hill Auditorium. That magnificent hall seats nearly 3500, but when Dr. Martin Luther King was introduced, he looked out at mostly empty chairs. Instead of being angry, he gazed at the handful of us who had braved the weather, and

instead of looking at the empty chairs, he laughed so hard and so genuinely and he called out, "Ya'll come closer," and invited those of us who wished to come up and sit with him on the stage.

Many of us sat in a circle around him, and he spoke to us of a dream of a country without discrimination, where every woman and every man was treated equally, measured by the content of their character, not the color of their skin. His words were poetry. We felt as if he were transmitting an ancient wisdom, a calling, a commitment, a future. We sat still as stone for hours. No one dared breathe. It was a magical moment.

Hearing Martin Luther King was an invitation, an initiation into a new way of life. None of us who were on that stage with him that day would ever be the same. That day at Hill Auditorium, without knowing it, I joined the movement, a movement for human rights for all people, for civil rights, for racial equality. Later, it became for me a movement for women's rights, gay rights, and a fight for the health for the neglected, and later still, a movement against the war in Vietnam. I changed my major from nuclear physics to philosophy and ethics, I joined an alphabet soup student group, SNCC, CORE, and NAACP.

I never did graduate, did I mention that?

[Laughter]

But somehow, I was lucky enough to go right to medical school, and I quickly joined the group of doctors who accompanied Dr. King wherever he marched. We formed the Medical Committee for Human Rights. Wearing my white coat and a borrowed stethoscope, we travelled from demonstration to demonstration. I got arrested in Chicago with Martin Luther King and hundreds of others marching against the Vietnam War. That was pretty cool. I may have mentioned that arrest once or twice or a hundred times to my daughter Iris, so Mary, I know somehow it is all my fault that she came to your office.

Now, I completely admit the career paths of the 60s were different. It was possible then to live at the edge of society, to live inexpensively. Rents were low, good union jobs paid well, one wage earner was enough to support a family, pay the mortgage, college fees were low.

Did I mention that college fees were low?

The focus of the movement for some of us shifted during the summer of love in 1967 to San Francisco. Young people were gathering in the city by the Bay, the city with a welcome mat for social experimentation. When I finished my medical internship, I built free clinics for La Raza, I joined a group of Native Americans who took over Alcatraz. I delivered a baby on Indian free land.

It being the 60s, that got me on television, where I was asked “what do the Indians want?” I hadn't met an Indian until 3 weeks earlier, but I did my best and I was then offered a bit part as an actor in a terrible Warner Brother's movie. The movie was called Medicine Ball Caravan. I played a young doctor, I was a rock doc, and I became the doctor for the Grateful Dead and Pink Floyd and David Crosby.

I then lived in a commune and travelled on buses from London through Europe, Iran, Iraq, Afghanistan, Pakistan, and India. I spent 2 years in a Himalayan ashram studying eastern religions.

Now, that was a normal career path in the 60s.

[Laughter]

One day in a monastery, my guru tugged on my beard and told me to leave the ashram and kicked me out. He told me it was my destiny to join the United Nations, and that a team of public health workers would eradicate smallpox.

I had pretty much forgotten I was a doctor. I had never seen a case of smallpox. But smallpox was, in many ways, the worst disease in human history. In the 20th century, smallpox killed more than half a billion people. That's not a wordo. That's really half a billion, 500 million people. More than all the wars combined. The year I joined WHO, nearly 200,000 children in India got smallpox. A third died the most horrible death imaginable. The person who took me to see my first case was Bill Foege. Bill had designed the strategy for global smallpox eradication. He would later head the CDC, and after that, help Bill Gates create his foundation's good global health work.

When we left that village after seeing the first and then 12 more cases of smallpox, I was stunned. I didn't think anything so horrible could exist in the world as that disease. I expanded the definition of the movement I thought I had joined when I met Dr. King to include those children.

Bill told me that from that day on, I would have to cease thinking of myself as a clinical doctor. I would have to stop thinking that I was only treating people who could afford to come to my office. To work at global health meant transition from treating an individual to taking responsibility for the health of all people. Instead of intently watching a temperature chart showing a child's recovering from fever, I began to start looking at population-based graphs on paper, epidemic curves showing that a community of people had conquered an epidemic.

Over the next few years, the largest United Nations army in history was assembled. Over 150,000 health workers from 50 countries visited every house in India once a month searching for hidden cases of smallpox. We made more than 1 billion house calls. Doctors don't do that very much anymore. We had some very dark days, huge setbacks from floods, transportation strikes, and the horrific toll of the disease itself. In a city called Tatanagar, I saw hundreds of dead bodies lining the streets, the railway station, while there were reports the river had stopped running, clogged with so many dead bodies.

I've probably seen around 5,000 cases of children with smallpox. Some of these children died in my arms. Some were already dead when their mothers handed them to me in the desperate hope that someone arriving with a jeep that had a U.N. seal on it could cure them. Three years later, though, it was over. We had won.

Everyone had told us it was impossible, that it was a feat that could never be accomplished, but I was privileged to visit the last case of killer smallpox, Variola Major. I watched as a little girl named Rahima Banu, a young Bangladeshi child on Bhola Island in the Bay of Bengal, coughed, and as she did, she breathed out the final virus in a chain of transmission that stretched as far back as the biblical plagues. That lineage of a disease which killed Pharaoh Ramses and two dozen others, kings, emperors, and queens, died out when the Variola virus fell to the Bangladeshi soil in October 1977.

That was one of humanity's finest hours. Everybody said it was impossible, yet we did it.

Yes, sustainable humanity had won one round in 1980 when smallpox was declared eradicated. The ministers of health of 200 countries signed the agreement. The first and so far only disease eliminated by a united world. I expect that polio will soon follow. Last year there were only 44 cases of polio in India, not hundreds of thousands, 44, we're that close. And after that, guinea worm and malaria can be conquered, and we will build the early warning and response systems to prevent potential pandemics from killing the hundreds of millions like the black plague and the great influenza did.

I hate to tell you, but H1N1 was only a dress rehearsal for what might be coming. But being part of this experience where the world conquers a demon like smallpox built hope and confidence. Eradicating smallpox changed the eradicators, the smallpox warriors, as we called ourselves. Like those of us who had met Dr. Martin Luther King, those of us who battled successfully against smallpox would never again be the same. We were on fire with optimism, and we spread that virus of optimism to dozens of programs and institutions throughout the world. Many of our veterans went on to head and lead programs to combat HIV AIDS, malaria, polio, all of the health institutions worldwide.

After we eradicated smallpox, I came back to my university, Ann Arbor, got my MPH, did my residency in preventive medicine and joined the faculty. Many of the smallpox warriors, though, stayed in touch. We still wanted to do something like smallpox again. We were still optimistic. We still wanted to do more.

With my friends, I then started the Seva Foundation to try to conquer needless blindness. Many of us were U of M grads. A dear friend of mine from my ashram days, you never heard of him, Steve Jobs, gave us some money and Apple computers to run our first projects in Nepal. He gave us our seed investment. I often tell him it was the best investment of his life. He knows I'm not joking.

To date, Seva's projects have built hospitals in 11 countries, and it's not just the 3 million blind people whose sight has been restored, it's the optimism that you can feel when you move through the community who work on blindness and public health. This is proof of what a small group of activists meeting in Ann Arbor can do.

My life has since taken me away farther from the front lines. I spent some time in the technology world, learned about some amazing tools for social action, made some amazing friends, tried to understand engineers.

[Laughter]

I then had the great good fortune to join Google to combine my interest in tackling social change with technology as a Vice President for Philanthropy at Google and the head of Google.org, and I got to exercise my inner geek, and use cool technologies to bring to the fight against global threats. I spent way too much time dwelling on my own past and my generation's story, describing what lead one person to a life of active engagement and social change, but I'm doing it for a purpose. I want, while talking about all these terrible things that seem so hopeless, to give you some thread of optimism as you search out the tools that you yourself will use when you conquer the problems that opportunity puts in your place.

We faced and tackled big problems over the last 30 years. We've been pretty good at solving some of them. Never forget what you can do when you gather together. Civil rights, gender equality, the war in Vietnam, global health. We've change the world for the better. The challenges were very big, but here is the difference. Other than the omnipresent risk of nuclear war, these threats were not existential risks to humanity. At that time, we had not yet learned, we could not believe, that mankind could so impact the entire planet as to create existential threats to humanity.

Today, there are an increasing number of global threats that impact everywhere around the world and require worldwide collective action. Climate change, the great exacerbator of all the other threats. Water scarcity, pandemics, nuclear proliferation, income inequality, food insecurity, and regional conflicts like the Middle East all pose a direct challenge to sustainable humanity. How did we get here?

Over the last two decades, there have been several trends, megatrends that have catapulted us until a world of multiple global threats. Among them, population growth, globalization, unconscious consumption, you'll have more to add to the list. Let's just deal with those three.

Globalization. The worldwide expansion of ideas, people, technology, travel, commerce, and more. It cuts both ways. It has been a tremendous boom for hundreds of millions of people. As I mentioned before, as many as half a billion people have been lifted out of abject poverty in China and India alone into the middle class. This couldn't have been accomplished without globalization. This is the greatest achievement on record, it's greater than the pyramids. You can't think of anything that rivals taking that many people out of poverty. Score 1 good for globalization.

But globalization has exacerbated and made visible a new category of global threats that until recently were largely invisible. Moving more goods around the world, moving more people out of poverty, using more energy to do both puts pressure on all resources. Development costs more in energy than it costs in anything else. So, we're using more oil and more coal than ever before, and we're putting pressure on agriculture like never before. Plus of course, with more wealth come more cars, more consumption of meat, greater emissions of greenhouse gases and greater inequality. Perhaps that's the worst of all.

Globalization has created many winners, but many losers. Nobel laureate economist Joseph Stiglitz says there has never in history been such a wide disparity between rich and poor. In all of history. Now, we need the engine of economic growth of the marketplace to create jobs, efficiency, progress, economic development, but we've lost sight of the shared sense that we're all in it together. The social safety net has been eroded. Former president Bill Clinton recently remarked at a TED conference, "the increasing disparity between the wealth of the few on top compared to the billions at the bottom of the pyramid is unequal, unfair, unprecedented, unstable, unsustainable.

[Silence]

Similarly, globalization has meant greater ease of travel, which has opened up opportunities for commerce and education, but also made it possible for pandemics to move with lightning speed. H1N1, the swine flu, was the fastest moving virus we have ever seen in history. More people were affected by it in a shorter period of time than any disease in history. We were lucky it wasn't as deadly as it was transmissible. A few bad genetic mutations and that story could have turned out with a much less happy ending.

I lead an organization now, the Skoll Global Threats Fund. We are trying to get its hands around this type of threats. It was started by my good friend Jeff Skoll, the first President of Ebay, an amazing, kind, smart, generous philanthropist. We are the fortunate inheritors of some of that technology, wealth, philanthropy that I mentioned earlier. My COO, Annie Maxwell, I can't see is here someplace hiding. Where's Annie?

[Silence]

Annie Maxwell: I'm here Larry.

[Laughter]

Dr. Larry Brilliant: Hi Annie!

Annie is also someone who bleeds maize and blue. She's a double UM alumna. We are your maize and blue outpost in San Francisco. We work on climate change, pandemics, water scarcity, nuclear proliferation, and conflict in the Middle East and as Rosina said, I oft say we should be finished with all those by April, and then we'll work on the hard things: greed, and man's inhumanity to man, and lack of consciousness, and things like that.

Needless to say, each of these threats on its own is a huge challenge, and each is getting more complex. You can see this in Japan right now, but they're also interrelated, making the challenge even more daunting.

If climate change is the great exacerbator of so many threats, it's the one that we should be making the most progress on. But in fact we are failing the battle against climate change, and the major reason that we are failing the battle is because of us in the United States, because it has become part of the culture war in the United States.

We are a global laggard when we should be a global leader. We are failing a crucial task to deliver to our children a world as good or better than the world that we inherited from our parents.

And climate change will touch everything. It will bring more climate related public health catastrophes, hurricanes, drought. It will cause the specter of famine. Every 1 degree increase in temperature is a 10% decrease in grain productivity. There are already more and more extreme weather events from warming seas, severe floods are becoming more and more common.

Last year in December after all the record-smashing deluges around the globe, FEMA head Craig Fugate said, "We have to get rid of the term hundred-year flood. Hundred-year evens have no meaning anymore. Because of climate change, we see 500-year events nearly every year."

We need to find a way to make electricity from renewable and store that in batteries, and to use that green electricity instead of oil or biofuels, and Michigan must become the leader in that technology. It is made for us, it is sitting there for us to do.

[Applause]

Climate change reduces arable land for agriculture. We're already seeing some of the most serious food shortages in 30 years. The Economist called the food crisis of 2008, not the economic crisis, the food crisis of 2008, which is threatening a repeat this year, the silent tsunami of deaths from hunger and it has been estimated that we will need to produce as much food in the next 40 years as humanity has produced in the last 8,000.

We need early warning systems for droughts, famines, the new diseases that arise from climate change, particularly deforestation. In the last 3 decades, we've seen 40 new communicable diseases, all of them coming and hopping from animals to humans. Bird flu, SARS, West Nile, Ebola, Hantavirus, and of course, even HIV AIDS and swine flu. As we cut down the rainforest and humans move into areas lived in by animals, we come more and more in contact with a viral chatter that our species has never known before. And last year, Africans consumed over 1 billion kilograms of bush meat, and in every one of those ounces comes an encounter than humans may never have experienced before and we lack the immunity to deal with.

We need to get better attacking the common challenges that make these global threats so difficult to address, these crosscutting issues, challenges like risk literacy, risk communications.

These are hard to understand and sometimes very scary. We can't let ideology or theology trump science, and we need better governance.

We need major reforms of the post-war institutions, which have become ill suited for today's global threats.

We need to clearly articulate what are public goods and what are private goals, and to strike a sensible balance.

We must get better at making decisions under conditions of uncertainty, because that's what we're going to have, more and more uncertainty.

The current tragedy in Japan has elements of all of these confounding and interrelated variables.

As I said earlier, my generation is leaving you a bucket load of problems, but we're also leaving you a bucket load of solutions, tools that can be the basis for conquering these problems. When I was a student here...

[Laughter]

...for four years, just for that one damn class, we organized with flyers and word of mouth. That's how we got people to come to meetings and marches. We were the farthest thing imaginable from a flash mob. U of M had exactly and precisely one computer, an Amdahl 1. You fed cards into it. It was protected by a coterie of high priests. They wore strange clothing.

[Laughter]

Then Steve Jobs said, as we did in the 60s, "let's give power to the people." But he didn't mean political power. He meant give one computer power to everybody, put a computer on everybody's desk, flatten organizational pyramids, and then get rid of the priests and empower everybody. I don't think he's waivered from that vision at all. From those computers first on the desktop, then the handhelds, to the internet, to the web, to new, smart phones, social media, everyone here in this room is today empowered to be as much of as a change agent as 1,000 of us were during the civil rights movement. Al Jazeera said yesterday, "There is a new Arab heroic role model now, one armed not with a band of explosives, but with an iPhone and a link to Facebook."

Organizing anywhere, whether in Tunis or Madison, Wisconsin has become much easier. That attempted occupation of Mary Coleman's office by my daughter and friends was orchestrated on Facebook and Twitter.

So, how does this story end? Three years ago, you had as your lecturer the 14th Dalai Lama. He spoke in Chrysler Arena. He was asked by one of the attendees how does he maintain hope when the news is so disastrous? His answer was "humans are getting better."

Now, what in the world does he mean by that? How can he say humans are getting better when we've seen Abu Ghraib, Darfur, Libya, the tsunami of starvation, and even what the

Chinese have done in the Dalai Lama's own Tibet? How can he say the world and humanity is getting better?

Well, the fact is, by most objective measures, and with a long enough historical view, things are getting better. Human violence throughout the world has dramatically declined. We have today the fewest wars that we have had in 100 years. Torture, for so long practiced in secret, has been brought out into the open and most of the world has recoiled from it. Nearly every industrial country, except maybe the one we're in, has abolished capital punishment. We have an ethic of human rights, something that wasn't at all even on the radar screen 60 years ago. And in just the past few years, we have seen a rapidly evolving consciousness on the right as well as on the left that we must be stewards of our planet with a postmodern belief that nature is not any longer something to conquer but to defend.

Just months ago, the Senate ratified New START to restrict nuclear weapons. Things are getting better.

But things are getting worse. It's the ultimate paradox. Perhaps it's always been so.

In the 60s, the movements for social justice transformed America. Today we're in the midst of another movement, a broader, powerful moment of change, magic, and power. Unprecedented in its size and scope, reflected in the huge and growing global movement dedicated to improving global health, relieving poverty, preserving the natural environment, and making the world a more just place. My friend Paul Hawken has written a book about this silent movement called "Blessed Unrest: How The World's Largest Movement Came Into Being and Why No One Saw It Coming." This new and expanding community has quietly but steadily created more than 1 million environmentally conscious NGOs in more than 100 countries.

And there's a lot of good news. Thirty years ago when I lived in Asia, in Bangladesh and Nepal, 50% of children died before their 5th birthday. It's half that much today. Similar progress is being made throughout Asia and Africa, and even in economics, last year's list of best performing stock indices included names like Peru and Indonesia and countries in sub-Saharan Africa.

Children's deaths from vaccine preventable diseases are plummeting. Thirty years ago, less than 1 in 5 kids in the developing world was vaccinated against childhood diseases. Today it's the reverse. Nearly 4 in 5 children in developing countries have gotten all of their childhood immunization thanks mostly to the Gates Foundation.

In fact friends, when you leave here today, if you look carefully, if you dig deeply, if you take a historical view beyond the terrible news from Japan and from Libya, beyond the many reasons to despair, you will find more reasons to believe that we are capable of meeting and defeating the existential threats that we face. There are many reasons to be optimistic about building a sustainable humanity.

As the Dalai Lama said, "we are improving." But we need to work faster. Jared Diamond said the most precious resource we are running out of is time. Your generation must work faster and you have the tools to do it.

But when you signed up for this, you said you wanted to live in interesting times, didn't you? This is your time. And the good news is that the largest movement for good in

human history is taking place outside today, all over here, and they have saved the place for you. Your timing is perfect. You are part of a global conspiracy. It is a conspiracy of the good and the great, and you have inherited a magnificent tradition. You will find innovative ways to finance both sustainable growth and a just society with a safety net for the poorest in the world. You are invited to join a movement, to use new technologies, whether Web 2.0 or 10.0, mobile phones and social networks, new communications technologies, all for you to create sustainable humanity.

In the 60s when my generation was shell shocked by the assassinations of Martin Luther King and John F. Kennedy and Robert Kennedy, and the daily death toll from the war in Vietnam depressed us beyond imagination, a young San Francisco radio reporter named Scoop Nisker ended every radio broadcast by urging his listeners, "If you don't like today's news, go out and make some of your own."

Well, my friends, I do not like today's news, neither do you. So, from today on, let your activism and your commitment and your passion make the news. Make every day your own newscast. Today you get a license to change the world. Go out, make your own news. Go out, change the world.

And of course, never forget, Go blue!

Thank you.

[Applause]