

**NATURAL CAPITALISM:
THE PATH TO A
SUSTAINABLE WORLD**

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OPENING CONVOCATION

FURMAN UNIVERSITY

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Mr. Kohrt, Dr. Shi, Members of the Board, Faculty and Administration, Students and Friends.

I am overwhelmed by the honor you have given me and cannot find the words to tell you how much this means to me and how grateful I am. I would like to congratulate Mr. Blank and all of the others who have been recognized and honored this morning. To share the stage with you is profoundly humbling.

Dr. Shi was kind enough not to tell you how we first met. It was about 12 years ago when he was still leading the simple life as a vice-president here at Furman and living in a home much more modest than his current residence.

I was in the grips of a fairly serious mid-life crisis, and I came out to Furman to meet with both Dr. Johns, who was of course the President, and Dr. Shi, in search of their advice and guidance. I knew two things: I wasn't going to be practicing law for the rest of my life, and I wanted to remain actively involved in the environmental field. But that was about all I had figured out.

They offered me a visiting teaching position here, and I immediately and enthusiastically accepted the offer. The law firm where I worked kindly allowed me to reduce my hours so I could prepare for and teach the course.

Of course, being a native of Greenville and having lived here most of my life, I was familiar with Furman, but I am embarrassed to say it was only a vague familiarity. But teaching here every day changed that. I got up close and personal with this university. I had the opportunity to work with an administration and a faculty that are second to none and to teach these amazing students who soaked up information like sponges and made my job so enjoyable and rewarding. I saw first hand what a strong and wonderful institution this is.

Everyone here this morning should be immensely proud to be associated with Furman University. And to those members of the class

of 2010, who are joining the Furman family today, congratulations! You are at a very special place.

My experience at Furman put me on the right track. I had the time to think and reflect out here on this beautiful campus, and I figured it out. I decided to leave the law business and start Upstate Forever.

Almost exactly eight years ago to the day, I billed my last hour as an attorney and recruited my first six members of Upstate Forever—my wife Diane Smock, my parents Harriet and Tommy Wyche, my mother-in-law Bette Smock, and my two sisters Sally Coenen and Mimi Wyche, most of whom are here today. Thank you for your support and for believing in me.

Today, we have over 1,700 members, a terrific Board and staff, and things are going well. Thank you, Furman—Upstate Forever probably wouldn't have happened without you.

Of course, I'm just one of countless thousands of people helped and guided by Furman over the years—students, faculty, and non-students. Greenville and all of South Carolina, too, have benefited enormously from Furman's influence and leadership.

Now Furman's leadership is benefiting the entire world. I cannot tell you how it lifted my heart to receive Dr. Shi's report this year entitled **Sustainability and Furman University**, reporting that the university has adopted a commitment to sustainability as one of its four overarching goals and that it has established a goal of becoming the national leader among liberal arts colleges on sustainability, both educationally and operationally.

Furman is well on its way to achieving these goals with the Eco-Cottages, the Environmental Community of Students Initiative, the great work of the Environmental Action Group, the new Science Center, the organic garden, and more. Well done, Furman!

And speaking of the Environmental Action Group, I urge all of the students here to support the group's initiative to purchase renewable energy credits. It's a great opportunity for each of you to show your own individual commitment to sustainability.

Furman's leadership could not be coming at a better time. Our world faces a monumental crisis—the shocking and accelerating degradation and depletion of the very resources on which life itself depends. Every living system on the planet is declining at an unprecedented rate. In the past 50 years, we have lost one-fourth of the planet's top soil and one-third of its forest cover. And this loss continues at the rate of 750 metric tons of top soil every second and 5,000 acres of forest cover every hour.

At the present rate of destruction, we will lose 70 per cent of the world's coral reefs in our lifetime. In just the past 30 years, we have consumed one-third of the planet's natural resources. At the present rate of consumption, with the world's population increasing at the rate of 10,000 people per hour, there will be little left by the end of this century.

We are witnessing a massive extinction of plant and animal species—at the rate of 27,000 per year. And on top of all of this is the greatest threat of all—climate change, with its destructive consequences of melting glaciers, rising sea levels and more frequent and intense storms. And there's no longer any doubt that human activities are responsible for it.

Why is this happening? Why are we allowing the depletion and destruction of the very systems on which life depends? The main reason is that capitalism, as now practiced, assigns little or no value to natural systems and fails to account for the impact of production and depletion on those systems.

Take the example of the fisherman who tosses a stick of dynamite into a coral reef and harvests the stunned fish for local markets and the broken pieces of coral for the pharmaceutical industry. He takes

these items to the market and receives cash. Under generally accepted accounting methods, the only costs considered relevant in this transaction are the cost of the dynamite and the cost of the labor. But we know that is wrong. We know that the value of the coral reef habitat far outweighs the revenues received from its destruction.

Similarly, we know that the cost of draining or filling a wetland, the cost of over-pumping an aquifer, the cost of paving over huge areas of a watershed, the cost of building in flood plains, the cost of applying pesticides, and on and on includes more than just the cost of the material and the labor—much, much more.

Sadly, and tragically, capitalism, as now practiced, does not assign any value to the largest stocks of capital that we use—our natural resources and living systems. Acting as though these resources and systems have no value has brought us to the brink of disaster.

The brutal reality is that our current economic system is not sustainable. People in developing countries aspire to Western standards of living, and rightfully so, but let's just consider China. If China had two cars in every garage and consumed oil at the U.S. rate, they alone would need 80 million barrels of oil per day—more than the entire world now consumes. If carbon emissions per person in China were to reach the U.S. level, this alone would double global emissions. If annual paper use in China ever reaches U.S. levels, that country would need more paper than the entire world now produces.

China provides irrefutable proof that the world cannot remain for long on its current economic path. China underscores the urgency of restructuring the global economy, of building a new economy—an economy designed for the earth.

The true path to sustainability lies in adopting a new form of capitalism that values all forms of capital—human and natural. It is a form of capitalism called “Natural Capitalism” in a book written by

Paul Hawken, Amory Lovins, and Hunter Lovins: Natural Capitalism: The Next Industrial Revolution. It is a book that I believe one day will be recognized as one of the most important books ever written. If you haven't already read it, please do so. And to the faculty: please make it required reading for all of your classes.

The title of the book uses a word that certainly gets your attention—"revolution." But it's not an overstatement. We need nothing less than a revolution to put us on the path to a truly sustainable world. We must, as they write, "establish an economy that is organized not around the lifeless abstractions of neoclassical economics and accountancy but around the biological realities of nature." Along the same lines is Lester Brown's statement in his compelling book, The Eco-Economy: "We must have an economic system that tells us the ecological truth."

The central premise of Natural Capitalism is that the Earth can be restored and protected and that people and businesses will prosper economically. Yes, that's right, ***we can have it both ways—environmental protection and economic prosperity***. It is the ultimate win-win. As Interface Carpet Chairman Ray Anderson says: "You will do well by doing good."

How does Natural Capitalism work? There are four central strategies: radically increased resource productivity; a service and flow economy; reinvesting in natural capital; and biomimicry.

The first principle—radically increased resource productivity—is based on making our natural resources—metals, minerals, water and forests—work five, ten, even one hundred times harder than they do today. Happily, there are many examples where this kind of productivity is actually being achieved.

Astonishing results are being achieved with "green buildings" which use 30 to 70 per cent less energy, sell and lease faster and at higher rates and prices, and reduce employee absenteeism by over 15

per cent because they are such nice places to work.

There are several examples of that right here at Furman. Once again Furman led the way with the construction of Hipp Hall—the first certified green building in South Carolina. Every building since then has followed green principles.

There are many examples of greatly improved water efficiency, such as the Pacific Coca-Cola plant which has reduced its need for rinsewater by 79 per cent by using air instead of water to clean the insides of cans before filling; Armco's Kansas City steel mill which uses its water at least 16 times over, reducing its demand from 58 million gallons per day to 3.6 million gallons per day; the roof of Mike McElveen's house in Austin, Texas, which collects all of the rainfall into two 8,400 gallon tanks and has supplied all of his water needs since 1988, even during a three-year drought; the use of "graywater" from showers, sinks, tubs and washing machines for subsurface irrigation; and New York City's rebate program to install 1.6 gallon per flush toilets which has reduced water demand and wastewater flow by 90 million gallons per day, resulting in a net savings of \$605 million.

The second principle—a service and flow economy—is based on consumers obtaining services by leasing or renting goods rather than buying them outright. For example, instead of purchasing a washing machine, consumers would pay a monthly fee for the service of having their clothes cleaned. The washing machine would remain the property of the manufacturer who would be responsible for replacing and repairing it. The concept could apply to computers, cars, refrigerators, and almost every durable product that people now buy, use up, and ultimately throw away. Products would be returned to the manufacturer for continuous repair, reuse and remanufacturing—a true "cradle to cradle" process.

The service model has been successfully adopted by several businesses. Under its "Evergreen Lease," Interface leases a floor-covering service for a monthly fee. When the carpet is worn out,

Interface picks it up, puts in a new carpet, and recycles the old one. The result: the customer gets cheaper and better services that cost the supplier far less to produce.

Other examples include Schindler, which leases vertical transportation services rather than selling elevators; Dow Chemical, which leases dissolving services because they can reuse the same solvent scores of times; and United Technologies, which is shifting its mission from selling air conditioning to leasing comfort.

The third principle is reinvesting in natural capital. The foundation of textbook capitalism is the prudent reinvestment of earnings in productive capital. Natural Capitalism works the same way—we must reinvest in, restore and sustain the ecosystems that provide the services on which industry and life depend. That means changing industrial processes so that they replenish and magnify the stock of natural capital rather than depleting and degrading it.

It is not only the right thing to do, but it can be extremely profitable because nature handles the production. For example, in California, the Sacramento Valley rice fields are now flooded after harvest rather than burned. The result: seasonal wetlands for wildlife; replenished groundwater; improved fertility; and no more air pollution.

The same principles apply to the development of the land itself. The conventional approach to development is to prepare the design first and then "make it fit" the site. This often means massive grading of the property, the flattening of hills, the obliteration of trees, and the destruction of wetlands. The philosophy of green development is just the opposite: The natural conditions of the site are given paramount consideration in designing the development. As a result, there is usually little or no impact on the significant resources and features of the property. Studies show that developments done in this manner are more profitable and have less impact on the environment. Another win-win.

The final principle—biomimicry—is based on doing it the way nature does it. Spiders make silk that is tougher than Kevlar without needing vats of boiling sulfuric acid. A tree turns sunlight, water and air into a wonderful material called wood and produces no waste. Why can't industry manufacture its products the same way? This is a perfectly serious question.

“Total Maximum Daily Load” is a concept under the Clean Water Act that is attracting a lot of attention these days and causing much anguish and controversy. It involves basically trying to figure out how much pollution a river can tolerate and then allocating that total amount among all the polluting sources. But what if there were no polluting sources? What if there was no load to allocate?

No discussion of this subject is complete without mentioning the “E Word”—energy. What will be sources of energy for the next industrial revolution?

One thing is clear. Our current energy economy, based primarily on fossil fuels, is fundamentally flawed and unsustainable. The impacts are staggering—on public health, air quality, and the climate. If these impacts were truly reflected in the cost of gasoline, we would be paying \$11 per gallon. The geopolitical impacts are equally staggering as nations obsessively pursue strategies for ensuring access to steady supplies of fossil fuels.

Yet the question is not whether we will run out of these fuels, but when. The general consensus is that non-OPEC oil will peak in just the next 10 to 15 years.

We do not have a choice. We must build a new energy economy, and the sooner, the better. Looking into my crystal ball, I do not see a “silver bullet” but a diversity of renewable sources of energy to power the new economy—solar, geothermal, biofuels, and hydrogen. All of these technologies are for real. I will never forget my recent ride on a bus powered by nine hydrogen fuel cells. I walked to the back and saw

the only emissions—water vapor—spewing out of the tailpipe. Conservation, too, is essentially a source of energy. For example, just improving the efficiency standards for household appliances would eliminate the need for 127 power plants.

Yogi Berra said, “When you come to a fork in the road, take it.” We are now at the fork in the road to our destiny. One path takes us to a future of depletion, degradation, and poverty even worse than today. Down the other path lies a protected and restored earth, a vibrant economy, productive jobs, and a better quality of life for all. As South Carolina native and Yale Forestry School Dean Gus Speth writes, “There is still world enough and time enough for this century to see the coming of a future more wondrous, intimate and bountiful than we can imagine. But this world cannot be won without a profound commitment to urgent action.”

Through its own commitment and action, Furman University is helping us win the world. Furman is pointing the way and guiding us down the right path—the path that leads to a future where a new philosophy prevails—a philosophy that Wendell Berry has described as follows:

“We have lived by the assumption that what was good for us was good for the world. We have been wrong. We must change our lives so that it will be possible to live by the contrary assumption that what is good for the world will be good for us. And that requires that we must make an effort to know the world and to learn what is good for it. We must learn to cooperate in its processes, and to yield to its limits. But even more important, we must learn to acknowledge that the creation is full of mystery; we will never clearly understand it. We must abandon arrogance and stand in awe. We must recover the sense of the majesty of the creation, and the ability to be worshipful in its

presence. For it is only on the condition of the humility and reverence before the world that our species will be able to remain in it.”

Thank you.