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Tom Kelly

University of New Hampshire, tom.kelly@unh.edu

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Virtuous Globalization:

A Dialogue for the University of New Hampshire Discovery Program

Part I: Introduction

TOM KELLY

DIRECTOR, UNH OFFICE OF SUSTAINABILITY PROGRAMS

CHARACTERS of the DRAMA

REFERENCE LIBRARIAN: Dimond Library

SUSTAINABILITY: Narrator, Director UNH Office of Sustainability

ECONOMICS: Senior Faculty, School of Business and Economics

TRADE: Senior Faculty, School of Business and Economics

ENGINEERING: Senior Faculty, College of Engineering and Physical Sciences

ECOLOGY: Senior Faculty, College of Life Science and Agriculture

PHILOSOPHY: Senior Faculty, College of Liberal Arts

STUDENTS: First year, undergraduate, graduate students

I was walking from the Holloway Commons dining hall back to my office when my friend Reference Librarian ran up and grabbed my arm in great excitement.

Sustainability, she said, there is group gathering in the MUB to talk about globalization. You will have to hurry if you want to take part.

Globalization? But I am no expert in that topic.

So what, Sustainability?

So I doubt that I can add anything to what the experts will have to say.

How will you know if you do not participate?

Anyhow, Reference Librarian, I have a meeting of the campus aesthetics committee where we are talking about public art.

But Sustainability, you must come and participate in the dialogue and besides, the aesthetics committee meeting was cancelled so that everyone could take part in the dialogue on globalization.

Well, Reference Librarian, it appears you are not going to take no for an answer, so I guess that I have no choice but to join you.

Good, I knew I could count on you Sustainability. Let's hurry.

As we entered the large room where people were gathering, I was immediately intimidated by the number of experts together in one place. Older students talked with their professors and professors amongst themselves and they all appeared to have such confidence that I could not

detect the least bit of fear or insecurity about the dialogue that was about to take place on globalization, a topic that I found overwhelming.

I noticed some first year students wearing name tags, probably from an orientation program they had just completed, and some of them looked exactly as I was feeling: nervous and excited all at once. This seemed to me to be a good group to stand with so we could watch and listen to the dialogue, so I began to make my way towards them when a strong voice stopped me in my tracks. It was Economics, one of the most expert and powerful faculty members on campus, calling from a short way across the room.

Sustainability, what are you doing here? I suppose you and the rest of the environmentalists came to rehearse anti-globalization slogans?

I was stunned. But before I could even find my voice, he quickly added:

I'm just toying with you, Sustainability, presumably there is some optimal amount of that kind of perspective that we need to include. Just so we don't waste too much time on it.

Thank goodness he softened the blow by saying that he was kidding; this allowed me to regain my composure because I wanted to know how he could be so certain that I would be anti-globalization.

Well, speaking for myself, Economics, I don't see how I could be anti-globalization, pro-globalization or

anything-globalization when we have not yet even established what globalization is.

Are you suggesting that we discuss what globalization is before we look at its benefits and costs, Sustainability?

Yes, that's right: what is globalization? What is its nature and purpose? These are the kinds of things I want to learn about; and above all, I want to know if globalization can be virtuous and sustainable.

What do you mean virtuous and sustainable?

Here I realized that I could get in way over my head. I wanted to say that whatever helps build a better world for everyone, including future generations, would be sustainable, but fearing that that would sound silly I decided to use what I was most familiar with.

Well, Economics, if I were to use the four topics that our UNH Office of Sustainability is working on, I would put it this way: anything, including globalization, that nurtures biodiversity and increases the use of clean, renewable energy while strengthening local food, agriculture and nutrition, and does all these things in a manner that nourishes cultural development for all people in all parts of the world, is virtuous and sustainable.

My goodness, Sustainability, I don't follow what you're trying to say. I thought the idea here was to share expertise about globalization so that students could develop a more sophisticated understanding of this phenomenon. Your formulations are so jumbled and lack precision to such a degree that it is difficult to converse with you.

I am sure that I must have turned bright red with embarrassment and had there been an easy exit I would have run from the room—but a kind of circle had formed around us so I felt I had no alternative but to respond in some way, so I appealed to Economics not to be too impatient with me.

Please, Economics, it is just that I need to get things straight if I am to determine if globalization can be virtuous and sustainable.

What things do you need to get straight, Sustainability?

Things such as what globalization is, and whether there are alternatives to it. What is the opposite of globalization? Is it localization or regionalization? Or, is it something else?

I don't have time for crossword puzzles, Sustainability.

Seriously, Economics, I was thinking of whether globalization had something to do with universal principles being applied in all places.

What do you mean?

I was thinking about things like human and civil rights and the kind of things that promote the integrity of all people. If globalization is a project to uphold these rights and principles for all people, then it would be difficult not

to be pro-globalization. But then I was thinking that diversity is also an important principle and that if globalization is an effort to make all things the same in all places then I would have problems with it.

Then a geography student said: yes, what about food and agriculture? It would be impossible to have everything be the same given the diversity of climates, soils and cultures.

And what about plants and animals, asked an ecology student; we don't want to have the same plants and animals in all places, rather what is appropriate or native to a place. That way they are adapted to their unique conditions and community.

Well, said an anthropology major who was there listening, if we are going to talk about the value of diversity in food, animals and plants, then we need to include languages and cultures, wouldn't you agree, Sustainability?

Yes, I do. This is very interesting. So maybe what we are saying is that there are some things, like rights and principles dealing with issues of fairness and justice that we think should be at work for all people in all places; but that there are other things, such as ecosystems, food and agriculture systems, and languages and cultures that reflect the uniqueness of diverse peoples and places.

Yes, the students said, that is what we are saying.

Do you think it would be too confusing to say that we are advocating for a universal principle of diversity? Is that a contradiction?

Everyone laughed, and there was a light in all of our eyes from the excitement we shared about continuing the dialogue. But just as our laughter died down and we were ready to continue, Economics suddenly became very impatient and began making broad, sweeping gestures, shaking his head back and forth.

Do you have any idea how much time, effort and money is spent on translating different languages? It serves no purpose and is grossly inefficient. That is why English is becoming the universal language. You are all so blinded by your political correctness about diversity that you fail to see that diversity not only does not increase productivity, but introduces distortions into the market that undermine it through proliferating inefficiencies. The facts speak for themselves: the GDP of the US is higher than all of the other developed countries; we have the strongest economy in the world and the freest society with the most consumer choice; not only are our consumers free to pursue their self interest to their hearts' content, but everyone ends up better off because of the efficiency of the market; that is why everyone wants to be like us; that is why the American dream is everyone's dream.

TOM KELLY

Virtuous Globalization

Part II: Economics

Now I knew that I had made a grave mistake by trying to converse with such experts and I decided that the time had come to get myself out of the discussion as quickly as possible. But just as I turned towards the exit, my friend, Reference Librarian, suddenly spoke up.

Efficiency, but what about what's right and wrong, Economics?

That is simple, Reference Librarian, whatever is efficient is always right.

But Economics, It sounds as if you are saying that the most efficient country with the highest GDP automatically has the highest quality of life and is therefore right: is that really what you mean?

Don't tell me that you take issue with that fact, Reference Librarian?

Fact? But is it a fact? Just the other day, Sustainability and I were discussing this question of quality of life, and afterwards I looked it up in a number of data bases and it turns out that there are many interesting books, articles and even conferences devoted to this question of how to define and measure quality of life. Then, turning to me, she said, Go ahead, Sustainability, share some of what you were saying the other day.

Now I had to muster my courage and engage with the discussion: Well, I must say, Economics, your argument is wonderfully clear, but if we are to get to the bottom of this, I think that we will need to make sure that we are all talking about the same thing.

That is patently obvious, Sustainability, of course we are all talking about the same thing: globalization, the American dream and the efficiency of the market that makes it all possible.

So you are saying that what is efficient is right and good and is always best?

Of course I am, Sustainability, who wouldn't?

But Economics, if I understand what you mean by efficiency, you are only referring to part of what we are talking about.

What do you mean, Sustainability?

Well, what I mean is that we are concerned here with

how to build a better world, right? Isn't that what globalization is supposed to be about, building a better world?

Of course it is.

Well to agree on that, we need to be sure that we agree on what is better.

Better than what, Sustainability?

No, I mean what is better and what is worse.

Than what? What are you talking about Sustainability?

I apologize, Economics; you are right that I am awkward in my arguments because I am always trying to look at everything at once, all together. But let me try to clarify what I am trying to say about better and worse and what is efficient and right.

Fine, but I feel that we are not maximizing our time here at all.

OK, let's try this: if your dorm room or office is cluttered and disorganized to the point of such chaos that you can not find papers, phone numbers, keys and other things you need, and you take a day and order it by organizing files, washing and folding clothes, recycling papers and folders that you no longer need and perhaps dusting and vacuuming away dust mites: would you say that you had made the room or office better?

Yes of course, order leads to greater efficiency.

And efficiency is good?

Yes, that is self-evident.

So inefficiency is bad?

Well, it is inefficient.

So is inefficient good?

Absolutely not!

So inefficient is bad?

Why do you insist on this?

I just want us to be clear. If something is not good, then is it bad?

No, it could be neither good nor bad.

So inefficient is neutral, neither good nor bad?

No, inefficiencies distort the market place and undermine productivity.

So they need to be removed?

Yes.
Because they are bad?
Fine, yes, they are bad.
So if we were going to make a room better, we would make it more efficient?
Yes.
And so in order to build a better world we should build a more efficient world?
Yes, which is precisely what I said at the beginning so there was no need to waste time with talk of rooms and offices.
It appears, Economics, that you are saying that efficient is good and right and inefficient is bad and wrong whether we are talking about our room or office, or the world. Is efficiency a universal principle to be upheld in all places at all times?
Of course it is, Sustainability.
But let's see if that is the case, Economics: what if our UNH administration decided that all of the Muslim students on our campus needed to be questioned about their patriotic commitment to the United States: how would they be identified and brought together? Would you put up a sign at the MUB or perhaps an announcement in *The New Hampshire* telling all Muslim students to report to the field house for questioning?
No, you could simply do a file search in student records using the religious preference field; or you could offer a financial incentive.
For people to turn in Muslim students?
Not necessarily. Muslim students could be paid for turning themselves in.
So there are more and less efficient ways to identify Muslim students for questioning?
Of course there are.
Good and bad ways to go about it?
Yes.
And similarly there are good and bad ways to privatize groundwater and sell it in bottles?
Yes.
And build strip malls and factory farms?
Yes, but...
And to build and market automobiles that get 9 miles per gallon?
Sustainability, you are obviously very confused and I don't think that I can help you.
But Economics, you can. Just answer a few more brief questions.
What questions?
Is it wrong to segregate a group of students by religion or race or sexual preference like that for questioning?

That is not what you asked before.
Yes, but that is what I am asking now, Economics.
Questions of right and wrong are not for economics to decide, Sustainability; you had better talk to someone in the philosophy department.
Philosophy department? So economics deals only with questions of good and bad, while philosophy deals with right and wrong?
Apparently.
So economics cannot tell us if it is right or wrong to segregate students based upon religion?
What are you talking about, Sustainability?
I am trying to understand what you meant earlier when you said that whatever was efficient was right and good.
I was talking about economic efficiency, not segregating students, Sustainability.
So if we are going to determine how to build a better world and whether globalization is helping or hurting, then we better talk to someone from philosophy as well as economics.
Yes, Sustainability, and the sooner the better. I am getting tired of this conversation.
Where do I find Philosophy?
In the college of liberal arts; I am in the college of business and economics.
What? Do you mean that knowledge of good and bad is in a different college than knowledge of right and wrong? How are we ever going to learn to build a better world?
At this, Economics produced a look of pity and disgust; but before he could say anything else one of the students cried out:
Economics, you cannot go yet. Sustainability has tied you up with a bunch of questions and we still do not know what you think of globalization: is it good? Is it bad? Is it building a better world?
Of course it is good. Naturally there are issues of managing transitional dislocations to make sure that our economy stays strong and that everyone remains better off.
Do you mean having jobs?
Well, we want to manage our unemployment levels so that the general efficiency benefits of globalization are reflected in our domestic economic indicators.
I could see that Economics was losing patience so I tried to clarify his final points: so, Economics, you are saying that globalization is good because it is efficient and that as long as it is managed well within one's own country then everyone will benefit?

Yes, ultimately.

So globalization is the right thing to do?

Of course it's the right thing to do.

But when I asked you about segregating students by religious affiliation, you said that philosophy dealt with questions of right and wrong?

Yes, I did, Sustainability, and I would also agree that you ask inane questions.

Then a hydrology student who was several rows back said, What about groundwater, Economics?

What do you mean, what about groundwater?

Well, Economics, right now in our own Oyster River watershed, which by the way is UNH's primary source of water, an international company is spending tens of thousands of dollars to own the rights to the groundwater.

I don't understand your question. Private ownership of an economic good will lead to its most efficient use, so what are you concerned about?

But they want to pump more than 300,000 gallons a day so that they can bottle it and sell it all over the world.

That sounds like a viable business opportunity; and judging from the number of people on this campus who drink bottled water, it looks like a very good business opportunity indeed.

But Economics, what about when we have an extended period of drought?

What about it?

The company will still have a right to pump the same amount of water even if we do not have enough for our needs here; what then?

Then the market will deliver water from wherever it is cheapest to produce and you can buy it.

What? The student was clearly getting upset.

Do you really call that efficient, Economics? And anyway, businesses don't produce water, they pump it and bottle it. Fresh water comes from healthy ecosystems that are part of the hydrologic cycle and that makes it a public resource that should be conserved.

Yes, well, anyhow, we are here to talk about globalization, not groundwater.

But Economics, the company is using the North American Free Trade Agreement to justify its claims on our water: isn't that part of globalization?

Well, first of all, it is not our water and, secondly, I am not a trade specialist.

The hydrology student was clearly not satisfied with this response, but I was concerned that he might lose his

temper so I tried to intervene to cool things down a bit: Economics, your point of view is certainly clear and precise, but I wonder as I listen if it is really right to treat water like laptop computers or cosmetics that are available to anyone who has the money to pay for it, but not to those who don't.

Why wouldn't you?

Well, for one thing, fresh water is an absolute necessity for survival and with more and more people in the world using more and more water, I understand that it is becoming increasingly scarce.

Well, Sustainability, the best way to protect this kind of resource is to give people a financial stake in it.

Does it have to be a financial stake?

What do you mean, Sustainability?

Well, if fresh water is essential to all of our survival, and of all the water on our planet less than one half of one percent of is fresh water, then don't we all have a stake in it?

No, Sustainability. Look around you. Look at all the people drinking bottled water. Because the market is increasingly in charge, there is water in bottles everywhere and all the time. If there is a drought in one place, there will be plenty of rain in another, and the market will ensure the efficient distribution of the water.

For those who can pay?

Yes, of course.

So do you think that we should have bottled air as well?

Don't be ridiculous, Sustainability, that would be impossible.

But if it could be worked out, Economics, I mean to make it feasible to contain air and capture the rights to it so that you could bottle it and sell it, would that be the right thing to do?

We are talking about water, not air.

I apologize, Economics. But you understand that these international trade agreements like NAFTA that the student mentioned are giving companies the right to pump groundwater everywhere, including in our Oyster River watershed?

We have already established that, Sustainability.

And you also understand that with a growing shortage of fresh water around the world, and its absolute importance for survival, that it has already become a cause for war in some places?

As I say, Sustainability, look around you. No one here is fighting over water.

Economics, what if your children and grandchildren

are living here in Durham in the year 2030; and suppose that a series of long-term droughts have pushed our local water supply far below what is needed in the community; and the global demand for water has become so intense that water is too expensive for your children and grandchildren to afford as much as they need?

There you go again, Sustainability: whenever an argument is not going your way, you bring up people's children and grandchildren.

That is because sustainability is equally concerned with future and present generations, Economics.

No wonder you are confused.

But Economics, billions of people already lack adequate water and sanitation, and extended droughts are already happening.

But just as I thought we were really making progress, Economics dismissed me as confused and incoherent: I refuse to continue this discussion with you, Sustainability.

I was confused by Economics' reaction, but before I could recover, Trade, a colleague of Economics, intervened: now Economics, you should not be so harsh towards Sustainability. His questions, while naïve, are on balance relatively fair and it appears to me that some of those questions have yet to be answered.

Economics waved him off: I have had enough of this kind of amateur discussion, Trade, you continue.

TOM KELLY

Virtuous Globalization

Part III: Trade

Trade, it was very kind of you to come to my aid; I do appreciate it.

Nonsense, Sustainability, think nothing of it. But don't give me too much credit, for my intervention was driven as much by my own impatience with Economics' parochial line of reasoning as with my feelings of camaraderie with you. That said, I do not like to see you disregarded like that, Sustainability, but unless you develop a more sophisticated approach to the world and the global trends that shape it, you will continue to find yourself disregarded.

Then this is indeed a magical moment, Trade.

In what sense do you mean magical, Sustainability?

Well, my esteemed colleague, not only have you demonstrated a genuine sense of looking out for my best interests, but you have offered me the opportunity to learn from you about this more sophisticated outlook on the world; and in that regard you have taken what I feared to be the end of my participation in the dialogue on globalization, and transformed it into a chance to learn from you. There is a kind of magic in that, don't you think?

Let's leave magic to others, Sustainability; I deal with reality, data and facts; and with control of those, I find no need of magic. However, I am very busy with meetings and research so I will not be able to continue with this discussion at present.

But a sense of excitement had now replaced the tension that had been growing, and like ships lost at sea that turn to the stars for guidance, students and all those gathered now turned their attention to Trade: Trade, you simply must stay and share your knowledge with all of us so that the students can learn from your expertise.

Very well, Sustainability, but I will only have time to provide an executive summary of the case. Students who desire a more advanced understanding will have to schedule an appointment with my secretary for a slot during my office hours; and they will have to be patient as international business, trade and finance majors must come first. Those who truly want an advanced understanding will have to take my courses.

Wonderful, Trade; let's not waste any more of the fleeting moments that we have with you. Please tell us where to begin with these urgent questions of globalization and building a better world.

Very well. First we need to be clear that globalization is nothing new. Global capitalism has been institutionalized for at least two centuries and its antecedents are clearly visible long before that. But that is beyond the purview of this summary lecture. The current phase of global capitalism that we know as globalization finds its origins in the institutions established following the Second World War.

Do you mean the United Nations?

No, Sustainability, I refer to the World Bank and the International Monetary Fund; in professional circles we refer to them as The Bank and The Fund, while the popular press usually refers to them as the World Bank and the IMF.

Fascinating.

Indeed, the formal establishment of The Bank and The Fund was executed at an international conference right here in New Hampshire's White Mountains, at Bretton Woods. This foundation gave rise to subsequent institutional mechanisms including the GATT, NAFTA, and just recently, CAFTA.

I don't know how you keep track of all these acronyms, Trade, but I wanted to ask, What are these institutions and regimes you refer to? Are they laws?

Technically speaking, they are part of the corpus of public international law, Sustainability.

You mean like the United Nations?

No, not exactly. These are a set of norms and mechanisms designed to liberate the power of the market, not oppress it; to advance productivity and competitiveness, not retard them, Sustainability.

Is the point to use money to force other countries to do what is best for them, even if they don't want to?

No, Sustainability, it's about freedom.

Freedom for whom, Trade?

For consumers, Sustainability, freedom for consumers all over the world.

What about multinational corporations like Exxon, Phillip Morris and General Motors: is it about freedom for them as well?

Yes, of course, Sustainability. They are the workhorses or engines that harness and organize capital and ingenuity. By allowing them the maximum amount of freedom, they provide jobs and consumer benefits.

But aren't people losing their jobs, Trade? I read somewhere that whole communities are crumbling under declining real wages and family income?

But this is just the provincial outlook of Economics that I detest: "our workers, our consumers, our economy:" this parochialism is culturally backwards and puts a tremendous drag on the global economy, Sustainability.

Then why are so many people worried about the immense and growing power of these multinational corporations?

Well, Sustainability, I am tempted to say ignorance, but I suppose it is not their fault.

What do you mean, Trade; whose fault is it?

The truth is, Sustainability, that the tremendous consumer benefits that flow from globalization are distributed across millions of products and jobs and investments all across the globe to the point that they are virtually invisible; as a result, consumers are susceptible to manipulation by the very few who oppose the free market.

This last insight simply stunned all those listening to Trade's summary as we were flooded with awareness of the tens of thousands of consumer benefits that we had taken for granted because they were invisible. I somehow found my voice and congratulated Trade: you have given us such an elegant summary, Trade; and I must say that I feel so overwhelmed and intimidated that I can only conclude that your argument has carried the day.

But as I proceeded to bring my participation in the dialogue to a close, a shrill voice broke in: What? What? You can't be serious, demanded our attention: You are nothing but a bunch of apologists for the status quo. What about climate change? Where do the soaring and completely unprecedented levels of greenhouse gases in the atmosphere fit into this "elegant argument?"

Once again, it was a student voice that roused me from the spell of expert argument, this time cast by Trade. Blushing with embarrassment for not having thought of climate change myself, I turned to ask Trade his thoughts on the matter but was overtaken by several other student voices demanding to know about astounding rates of poverty in our own country and

around the world and what they called "obscene concentrations of wealth and corporate profits and salaries for top management while people are literally starving by the millions."

And what about health care, another student asked; and this was immediately followed by a torrent of questions: what about loss of biodiversity? What about slave labor? What about global monoculture? What about the obesity and asthma epidemics? What about world hunger and disease?

If this was not enough, one student stepped forward in a very assertive, and if the truth be told, angry manner and pointed his finger at Trade and me; and speaking through what appeared to be clenched teeth he asked:

What about the war? The war, he repeated: We invaded Iraq; remember? Our President and his entire cabinet lied about weapons of mass destruction. Why aren't we talking about that? Can anyone tell us how many innocent Iraqi citizens have been killed? Is it 25,000 or is it 50,000? Talk about invisible. Aren't we supposed to have a free press? And while we are at it, why aren't we talking about the Patriot Act and our steady loss of civil and political rights?

The room reverberated with a kind of electricity as the words of the students swirled around us and settled down. I turned to Trade who did not look particularly pleased, and said: I think that we must respond to these questions even if they are not expertly formulated.

Though clearly agitated Trade did respond: I am no expert on the war or the media, but as for poverty and job loss in this country, I would ask our students if they want all people to be better off? Or do you only want to see our people better off and the rest be damned?

Well I think that is what the students were asking, but let's continue with your question: who decides what better off is and how to achieve it? Isn't that why democracy is supposed to be important, Trade?

Democracy. All democracy gets us is nationalistic economic illiterates and isolationists. They vote solely on "our jobs, our economy, our wages and income;" Democracy breeds protectionism, Sustainability; walls to protect inefficient industries. Why do you think we have the global market distortions that the students are so preoccupied with?

That is an extraordinary response, Trade. How about hunger, polluted air and water and slave labor: are those global market distortions as well?

Yes and no, Sustainability; they can be. But they may also be the early stages of development.

Early stages of development? Trade, do you mean that

when things are at their worst they can only get better, there is only one way to go and that is up?

Don't be ridiculous, Sustainability, what you call slave labor may be a relatively low wage, but as the power of the market is unleashed, those wages will rise and with them, cleaner industries will develop and when per capita income reaches a certain point, environmental awareness will emerge and the air and water will be cleaned up.

Are you saying that a poor person living in a slum, say in Mexico City or Abijon, doesn't value a clean environment?

Of course they don't. They can't until they have a job; and you can be certain that if the only way for them to have a job is to pollute the air and the water, then they will gladly pollute.

But why is that the choice, Trade? Who decides what the choices are?

This is how the world works, Sustainability. If you are not willing to open your eyes and deal with reality, then you can remain up in the clouds.

I am glad you mentioned the clouds, Trade, because that reminds me that the students asked about greenhouse gases and climate change as well.

Well I am no expert on climate change, but I do understand that at least there is some movement towards creating a market for greenhouse gas emissions, including an interesting cap-and-trade effort right here in our own region. But overall, Sustainability, climate change is just another diversion from what is important.

And what is that?

Free trade, Sustainability. Free trade. Have you forgotten what we are here to talk about? Unleash the power of the market everywhere and you will have a global economy that is efficient, environmentally sound and allows everyone a fair chance at competing; as a result of that competition, everyone will be better off. I am certain, Sustainability, that you are familiar with the saying that puts in layperson's terms what I am trying to say?

What saying is that, Trade?

A rising tide lifts all boats.

That reminds me of sea level rise, Trade. You cannot truthfully be suggesting that climate change is something to be ignored?

And why not? Really. Think about it, Sustainability: how could a responsible policymaker even consider responding to the question of climate change?

How could they not?

There is no scientific consensus that climate is even changing; and even if you were to grant that it was

changing, there are just as many people who say it has nothing to do with human activities as there are who say it does.

Now, Trade, with all due respect, that is simply not true. An unprecedented international scientific consensus has developed over the last ten years. But before I could continue, a graduate student from Earth System Science spoke up in a firm, clear voice:

The scientific consensus, Trade, is clear that one, the climate is changing; two, human activities, chief among them the burning of fossil fuels, is responsible for a significant degree of that change; three, in the last 150 years levels of greenhouse gas concentrations in the atmosphere have reached levels unprecedented in the instrumental and proxy records going back more than 400,000 years; four, we recently completed the warmest decade on record, the 1990s, which concluded the warmest century in the last thousand years. And don't forget the continued melting of the vast majority of the planet's glaciers. The majority of the world's scientists agree that climate change is real, and in the words of the scientific advisor to the British government, climate change is a "real and present danger, requiring urgent and committed action."

As proud as I was of the student, I quickly turned back to Trade to try to finish the argument before our time was up. But before I could say a word he started shaking his head with a slight smile and held up his hand to stop me.

All right, all right. Have it your way, Sustainability. But even if there is a scientific consensus, you will never get the political support required to reduce emissions.

But Trade, I have heard compelling arguments that a truly efficient approach to reducing greenhouse gases can create jobs and improve local and regional air quality while increasing energy security in a way that would not require large military interventions in oil producing regions. Why, right here on our own campus we have reduced our greenhouse gases while saving millions of dollars and increasing our energy security.

Perhaps up in your ivory tower you believe all that, Sustainability, but to consumers around the world, such benefits are far too diffuse and remote. People vote their pocketbooks, as they should, and there's no consumer confidence in climate change policies. Moreover, deep down, I think that consumers have a gut sense that by growing their economies everything will ultimately be better; and, quite frankly, even if they don't believe that and just want to, as you would say, be self-centered consumers, then the laws of economics - what students of-

ten remember as the invisible hand - will turn their self-centeredness into the best chance that the world's poor nations have of pulling themselves out of the miserable conditions they have created.

Good heavens, Trade, how on earth will all that happen?

Globalization, Sustainability, what else? As we in the first world drive ourselves to work longer and harder to increase competitiveness and to consume more, we fuel the economic growth of the poorest nations that will lift them out of poverty and liberate them from pollution and oppression.

Trade, you have truly overwhelmed me this time. I have so many questions that my head is spinning; but we don't have much time left, so let me see if I understand what you are saying. The benefits of immediate and aggressive actions to reduce greenhouse gas emissions, such as investing in energy efficiency, renewable energy technology, public transportation and local and regional agriculture: the benefits from these investments would be distributed so far and wide that they would be invisible and therefore not supported by the public?

That is correct, Sustainability.

So, Trade, you are saying that if we just concentrate on unleashing the power of the market and competition, all problems, including climate change, will be addressed?

Now you finally begin to understand, Sustainability. All you need to do is look at what this great country did in the nineteenth and twentieth centuries: we built the strongest economy in the world.

But what about the twenty-first century?

What do you mean?

I mean that our greenhouse gases are growing, not decreasing, and I think there are some worries about our economic stability and even our quality of life, Trade.

Well, Sustainability, we have to keep growing the economy.

Does that mean that we have not yet reached that stage you described where economic, environmental and social goals are all automatically achieved simultaneously?

Don't be frivolous, Sustainability.

So if we have not yet reached the stage of economic development where self-centeredness is magically transformed into everyone's economic, environmental and social goals being achieved, do you think we will get there by 2050?

We very well could, but it will depend upon sound leadership and good policy.

So if it took us 200 years to get to this point, does that

mean that China, India, Indonesia and the Ivory Coast and others like them will not get there until the year 2200 or even 2250?

No, Sustainability, not unless the economic isolationists erect barriers to protect bloated bureaucracies and inefficient industries.

Do you mean that protectionist policies are bad and wrong?

Of course they are, Sustainability; they restrict and block the healthy flow of trade.

Trade, you describe protectionists as if they were globs of fat in our bloodstream that clog our arteries and makes us sick.

Exactly. And not just sick, Sustainability. It can kill us.

So globalization is almost as natural as the blood flowing through our bodies?

Yes.

But Trade, does that mean we should fully embrace globalization and ignore all of the issues that the students raised while we wait for all of the invisible benefits to occur?

The students are young, Sustainability, and if they become educated they will eventually realize that risks are part of life and that the most sustainable way to manage them is to spread them across the world in as efficient a manner as possible.

But my goodness, Trade, assuming that is true, who other than a god or a king would have the ability to do that?

Markets, my baffled Sustainability; specifically, functional markets that are seamlessly integrated into the global marketplace.

But Trade, I am troubled: is this really the best that we can do?

What?

Should millions of people have to go hungry and impoverished while they wait for the invisible hand to transform conspicuous consumption and greed into the consumer benefits of globalization? Is this all we have to offer; a kind of magic dealing with invisible benefits? There must be a better way.

You know, Sustainability, though I did defend you earlier I am just about out of patience with your village idiot kind of mentality: if this then that, what about this and what about that. What is your role here anyway: to ask an occasional decent question amidst a river of inane ones? Sustainability is essentially about environmental science, not globalization. Don't you think you should let those of us who are expert in the field deal with the issue of globalization?

TOM KELLY

Virtuous Globalization

Part IV: Engineering

Just then Sociology and Engineering stepped forward and echoed Trade's point: Trade is right, Sustainability. You go deal with recycling or whatever it is you do with the environment and let us deal with globalization.

But my esteemed colleagues, sustainability is not just about the environment. Where did you get that idea?

It is common knowledge that sustainability is part of the environment: that is why it is in the department of natural resources.

But my friends, sustainability is not part of the environment, the environment is part of sustainability; and that is why it is not in the department of natural resources or any other single department. It is a university-wide program.

Then Engineering, who had been quiet up to this point, joined in. Look, Sustainability, no subject deals with every topic under the sun. That is an irrational claim.

But Engineering, I agree with you; sustainability doesn't deal with every topic under the sun; it deals with the whole and how things fit together or could or should fit together to sustain a good life for all of the world's cultures and future generations.

I really don't follow you, Sustainability.

A wise man once said that everything is connected to everything else and that we can never do just one thing,

Stop talking in riddles, Sustainability. What is your point?

My point is that if everything is connected to everything else, then it is true that like the ripples created by throwing a stone in a pond, we never can do just one thing.

What do ponds and stones have to do with globalization?

Well, Engineering, all of our actions create ripples that may send frogs leaping off lilly pads or dragon flies into flight and all of these actions and interactions take their place in a whole web of connections. So you see...

Trade was right, Sustainability. You are confused. Don't you realize that you have to focus on one thing, or

at most, a small group of things, and then deal with those?

But what happens to things that you don't focus on, Engineering?

Someone else with their own specialization will deal with them.

How do you know? How can you be sure, Engineering, and how do you choose what you will focus on and what you will ignore?

Well, Sustainability, there is a saying that I learned from my colleagues in the social sciences, *ceteris paribus*, which means all other things being equal.

I don't follow you, Engineering, what happens to the other things?

You simply assume that they are not affected, *ceteris paribus*.

So you mean that *ceteris paribus* is like *hocus pocus*?

What are you saying, Sustainability?

I am saying that it appears to be a form of magic that freezes all the other things so that the ripples don't affect them, because normally they would affect them.

Sustainability, I simply cannot interact with you if you insist on talking nonsense.

All right, Engineering, I do apologize. I really do not intend to be difficult. Let me try to be more specific: How about sprawl?

What?

Sprawl is a local issue that really concerns people in many places, including right here in Durham and in fact all across the southern part of the state of New Hampshire.

For goodness sake, Sustainability, we are supposed to be talking about globalization.

But Engineering, do you think that people set out with the goal of creating sprawl?

Obviously not.

Don't they set out to do something else, like build a shopping center or a housing development; or extend a roadway or sewer line or move their families out of a city where there may be crime or the schools are poor?

I suppose so, Sustainability.

And all of these actions interact with each other and with other institutional actions like zoning laws, tax rates and land values and all of a sudden we have sprawl gobbling up our farms and our rural communities and the landscapes and ecosystems that are part of their culture.

Please tell me what on earth you are trying to say, Sustainability.

Well, to use your phrase, all of those actions were taken, *ceteris paribus*, but it turns out that in reality, the world is based on *ceteris imparibus*: all other things not being equal, because everything we do affects everything else.

What?

Everything is connected, Economics; and we all need to reason and take action as citizens and professionals based on the reality of interconnectedness and interdependence if we are to be sustainable; and it has to be somebody's job to focus on how things fit together. It's not that it is more important than other jobs, but it is certainly equally important.

Well then I have a question for you, Sustainability, and I want you to try to continue being concrete.

Wonderful, please ask it.

Just what is it that sustainability is trying to sustain?

Marvelous question. Well, sustainability is working to sustain all of the relations that sustain us.

So much for being concrete, Sustainability.

OK then, Engineering, in a word, integrity. Sustainability is an effort to sustain the integrity of what sustains us as human beings, families and communities.

And globalization?

If globalization is to be virtuous, and this is what I want to find out with our dialogue, then it must nurture, restore and sustain integrity in the institutions that weave together nature and culture to sustain us, and future generations.

Engineering was just shaking his head in silence when a political science graduate student suddenly spoke up with concern: are you saying that integrity is more important than freedom, Sustainability?

Can you have freedom without integrity?

I don't know what you mean.

Well if you were in a plane crash and washed up on an island where no one else lived, would you be free to do whatever you wanted? Would you have freedom?

No, because I would have to struggle to feed, house and clothe myself.

Well, what if a large, state of the art tent and several huge trunks of clothes washed up with you?

Then the student smiled and said: What about newspapers?

I don't think that they would be up to date for very long.

Then the student chuckled: Could I have access to the internet?

Everyone got a good laugh from this last question and probably would have liked to joke about this a bit more, but I was concerned that we were running out of time and so tried to continue.

Well, it appears that freedom for you depends upon many other things being organized, like the internet, media, laws, education, agriculture, manufacturing, banking and others.

Yes, I guess so; so where does integrity fit into that, Sustainability?

All of those things need to work together in a way that sustains us for generations to come, and integrity is concerned with working to ensure that they do.

Then Engineering spoke up, somewhat impatiently: Well, why isn't it the other way around?

What do you mean, Engineering?

Why isn't it that you can't have integrity without having freedom? And for that matter, Sustainability, I don't know what you mean by integrity. Are you trying to confuse the issue or are you just confused?

Well, Engineering, I was thinking about integrity the other day when I was riding bicycles with my son. We were coasting quite fast down a very steep hill and when I looked over to check on him, he was just beaming as he took his hands off the handlebars and flapped them out to his sides like he was a bird; he actually said he was flying.

That is very nice, Sustainability, but it doesn't have anything to do with what we are talking about.

But it does, Engineering; because as I watched him flying down the hill, I realized that we both had a lot riding on the integrity of our bicycles.

What do you mean, that you felt safer because they were expensive bikes?

No, Engineering, integrity is not about the price of the bicycles. Integrity is about all of the parts working together, all the time, especially when we are riding ten or fifteen miles per hour down a hill. When they don't all work together, it could be very dangerous; I mean, if a wheel came off going down a hill you could really be hurt, couldn't you?

Of course you could, Sustainability.

So if the bicycle loses its integrity, all of the parts stop working together; and that loss of integrity can cause pain and suffering. Do you agree, Engineering?

Don't tell me that you're going to suggest that we imagine the world as a bicycle and globalization the hill that we're riding down, or perhaps flying down?

Well, to tell you the truth, Engineering, I wasn't going to suggest that; but now that you have I think it is a wonderful idea and I am eager to ride down that road with you; but first I just need to ask one very quick question. And what is that?

What is the opposite of integrity?

I don't have time for crossword puzzles, Sustainability; and I also don't have time to talk about bicycles and hills of globalization.

But in the case of the bicycle, if it loses its integrity, what happens to it?

It breaks, one of the new students said with a big smile.

So the opposite of integrity is brokenness?

No, said a student who was a classics major, I mean not exactly. I think that, at least in terms of classical philosophy, each word has just one exact opposite, and that for the Greeks of antiquity, the opposite of integrity was corruption.

So if something becomes corrupt, it loses its integrity?

Yes, I think that makes sense, Sustainability.

Wonderful. So that would be true of the foundation of a building, or a bridge or an estuary.

Well, an estuary or stream becomes polluted or degraded said one of the ecology students.

But doesn't the pollution corrupt the integrity of the ecosystem in those cases?

Well, I guess so, Sustainability; I hadn't thought of it that way before, but sure that makes sense.

And wouldn't it also be true of government and education and religion and the media as well?

What about them?

That if they become corrupt, they lose their integrity? Or, if they lose their integrity, they become corrupt?

Yes, the students all agreed.

And turning back to Engineering, I asked: and is it also true of a bicycle?

I already told you that I am not here to talk about bicycles, Sustainability.

But please Engineering, think about it for a minute: you have come up with a great idea here. Bicycles integrate so many things: physics, engineering, aesthetics, coordination, health, transportation, renewable energy and even freedom. Indeed a famous Irish novelist once said that the bicycle was the most civilized conveyance known to man.

And what does that mean, Sustainability?

Well, she also said and that while other forms of transport grow daily more nightmarish, only the bicycle remains pure in heart.

Then a student who was an English major, and also a member of the bike club said: Yeah, another great Irish author once asked why should anyone steal a watch when they could steal a bicycle.

Everyone chuckled, including a theater major who stepped forward, quite dramatically, and added in a kind of stage British accent: Well, a very intelligent woman once favorably compared bicycles to husbands and found the bicycle to be just as good company; and moreover, when it gets old and shabby, she said, a woman can dispose of it and get a new one without shocking the entire community.

Well, now everyone was laughing, or at least all of the students were; and come to think of it so were all of the women faculty and staff. But in any event a very serious looking young man who was an engineering major spoke up saying:

I don't you think you should make fun of bicycles, Sustainability, because in some ways they are a kind of genius invention.

Let me assure you that I agree with you completely, which is why I think we should use it as a vehicle for understanding integrity and thereby sustainability and how they relate to the question of globalization.

He became very animated and passionate as he stepped forward. The physics and engineering of bicycles are crazy in terms of efficiency, Sustainability.

Is that good?

The best. In fact the efficiency of the drivetrain with its variable gear ratio is beyond cool.

Cool. I mean, go on.

I read a study once about it: it calculated that almost one hundred percent of the rider's energy is transferred from the pedals to the wheels.

Impressive.

He continued: Only a miniscule amount of the energy, like one or two percent, is lost in the transfer from pedals to wheels. It simply rocks when it comes to efficiency.

I have heard it said that one of the bicycle's most curious qualities is that its passenger is its engine.

Yeah, cool, whatever, Sustainability, but there is no doubt that it is the most efficient form of self-powered transportation in the world. Talk about freedom.

Beautiful.

Then an art history student spoke as she raised her hand from several rows back: the bicycle is beautiful both in its elegance of design and rhythm as well as its efficiency.

Do you mean like a work of art?

Yes, Sustainability. I mean that bicycles can be both functional and beautiful. They are also the subject of paintings, sculpture and I would guess poetry; and I know that museums around the world have mounted many exhibits on the art and history of the bicycle.

A graduate student from history nodded in agreement and added that there is no doubt that the bicycle is considered to be a revolutionary invention that liberated ordinary people by giving them a highly efficient, self-propelled way to transport themselves. It has also been identified as a liberating force for women and perhaps in its own way contributed to the women's suffrage movement.

Do you mean voting, women getting their political rights?

Yes, exactly, Sustainability.

Well then, I said, it appears that the bicycle has much to say about sustainability and globalization. Wouldn't you agree, Engineering?

Look, Sustainability, I agreed to be part of this program to build a community dialogue, but I have run out of time with your convoluted discussion. I asked you what sustainability was trying to sustain and you said "integrity," then I asked you what you meant by integrity, and now we are talking about bicycles.

But Engineering, I think we have made significant progress here.

How?

Well, didn't I say that sustainability was concerned with integrity?

Yes.

And didn't we then agree that integrity was about all of the parts of something working together?

Yes, I guess so.

Well then, just like a bike needs all of its parts to work together to sustain its integrity, then all the parts of society, its institutions, need to work together to sustain its integrity; and just as Economics found that efficiency was a principle that could be applied to everything from our room or office to the global economy, we are finding that integrity can also be applied to everything from a bicycle to the global economy.

So what is the point, Sustainability?

Well, in the case of efficiency, it appeared that the sciences of economics and engineering were the ones concerned with efficiency, wouldn't you agree?

Absolutely.

And they achieve what they think to be efficiency by using your *ceteris paribus* trick of focusing on just one

or a few things but not worrying about the rest.

It is not a trick, Sustainability, it is a rational way to achieve objectives and if you look at the incredible developments in technology over the past fifty or one hundred years, the results speak for themselves.

Yes they do, Engineering, but what they say depends upon when, or for how long, you listen to them.

What are you talking about, Sustainability?

I'm talking about all of the technologies we have developed based on fossil fuels, the internal combustion engine and the automobile, chief among them.

What about them? They are miraculous.

What about all of the unintended consequences?

What consequences?

Greenhouse gas emissions, melting ice caps, rising sea levels, air pollution, respiratory disease, tens of thousands of automobile fatalities every year, sprawl, obesity, billions of dollars in taxes to keep building more and bigger roadways; How can you call the automobile efficient when it is directly connected to all of these negative consequences and many others?

What are you saying, that bicycles are going to solve all of these problems?

Well, not by themselves they won't, but they are a part of sustainability; the point, Engineering, is that we can learn from those who designed the modern bicycle: in terms of efficiency, the results of their design have been speaking for themselves for well over a hundred years.

Sustainability, the designers of the modern bicycle were driven by efficiency to make a better bike.

Yes, Engineering, but by all accounts, it turns out that what was efficient for the bicycle was good, right, and sustainable in economic, political and cultural aspects of life. So we might say that in their pursuit of mechanical efficiency they actually achieved Efficiency, with a capital "E."

Capital "E." What are you talking about?

I mean that sometimes what may appear to be efficient turns out to be very inefficient and therefore bad, wrong and unsustainable like cheap fuel prices and gas guzzling cars; but that in other cases, what appears to be efficient turns out in fact to be Efficient because in the long-run it is good, right and sustainable in all of its relations, like the bicycle.

Well, what is your point, Sustainability?

My point is that we can and should learn from what the bicycle can teach us as a cultural object; and if we can generalize its sustainable qualities then we can incorporate them into our notion of efficiency to ensure that it is sustainable.

What are we supposed to learn from the bicycle?

Well, first it is non-polluting, uses renewable energy and is a highly energy efficient form of transportation, isn't it?

Yes.

Second, by providing tremendous mobility and access for the general public, the bicycle plays a key role within the life of neighborhoods in a large city, or a town like Durham. In other words it is a fundamental part of what are sometimes called livable, rideable, walkable communities.

What are you referring to here, Sustainability?

Land use patterns, Engineering: Bicycles are part of sustainable communities that tend to protect open space and ecosystems in terms of both land use as well as runoff, and that support biodiversity and healthy ecosystems;

What do you mean runoff?

I mean the hundreds of millions of gallons of oil from cars and trucks that collect on our roadways and are transported into lakes and streams when it rains, where it corrupts their integrity.

You mean that it pollutes them?

Yes, now where was I?

You are getting to the third point I think, said one of the students.

Right. Third, the bicycle promotes health and goes hand in hand with living locally, including supporting local agriculture such as farmer's markets, roadside stands and pick your own produce businesses.

What do bicycles have to do with local agriculture, Sustainability?

Well if you ride your bike to purchase food from local sources, you will end up finding local food and agriculture enterprises. For example right here in Durham there is a farmer's market on Mondays and on Wednesdays the Student Organic Garden Club has a stand in the middle of campus.

Can we please get to your final point, Sustainability?

Of course; last but not least, we agreed that bicycles have had a liberating effect on men, women and children since the late nineteenth century; and because of that bicycles have earned the reputation for being democratic and egalitarian.

What do you mean by that?

Well, in short, bicycles are affordable and accessible to almost all members of society as long as they are able to pedal. And they are also a fundamental part of what planners call human-scale communities that foster

greater community interaction, dialogue and democracy.

I'm sorry, Sustainability, I lost the point of this.

Well, Engineering, if globalization is about increasing efficiency, and if it can be the kind of Efficiency that the bicycle has achieved, then globalization could be virtuous and sustainable.

Sustainability, look: engineers are called upon to solve problems in an efficient manner; and I think that sustainable engineering is an interesting and quickly growing field.

I agree, Engineering; and it is imperative that we work more closely together. People are working on sustainability all over the world, Engineering. And what they have in common is their concern that integrity is sustained by making sure that the many parts that are involved all work together, including technology and engineering.

That's fine, Sustainability, just remember that engineers are very concrete.

I understand, Engineering. Then perhaps we could develop a class on Efficiency, the Bicycle and Sustainability. What do you think?

Well, Sustainability, I think that students just might like that kind of course.

Then Ecology, who had arrived a bit earlier from collecting field samples, said: I agree that sustainable engineering is a very interesting field. Also I would say, based on what I heard you talking about with respect to the bicycle and ecosystems, that I would certainly be open to participating in the kind of class Sustainability just mentioned.

Wonderful, Ecology, I am so glad to hear that and equally glad that you are here for the dialogue.

Then Engineering put his hand on Ecology's shoulder and said: look, Sustainability, I have to go for a while so I will leave it to Ecology to try to keep you on track.

TOM KELLY

Virtuous Globalization

Part V: Ecology

Well, Ecology, we were about to return our attention to globalization to determine what its nature is and if it can be virtuous and sustainable.

That sounds interesting, Sustainability, why don't you continue and I will jump in as I see fit.

Excellent, Ecology; in fact, I have been thinking about a point that Trade made, just before he took a break from our discussion earlier, that I think may be important for our dialogue.

What was that, Sustainability?

Well, Trade talked about globalization as something that was as natural as the blood flowing through our bodies. Do any of you remember?

Yes, I do remember, a nursing student chimed in; Trade also said that protectionism could block the natural flow of globalization and make us sick or even kill us.

Exactly; and Trade talked about forms of globalization going way back in time so that it seemed to be a natural and inevitable part of our world. Do you remember that?

Yes, Sustainability, that is accurate.

So then I thought to myself, well perhaps globalization is like the air or the atmosphere. It is all around us and we are in it. Do you think that sounds reasonable, Ecology?

Well, yes, I suppose you could say that.

Yes, said one of the engineering students; and we know from earth system science that our atmosphere has currents that flow around the globe.

So it passes through all of our nations and communities?

Yes, Sustainability. I hadn't thought of it that way, but it is true.

So we can no more avoid globalization than we can avoid the air that we breathe?

Then another engineering student excitedly piped up: Sustainability, there is no reason that nations and communities can't harness those currents of air with wind turbines and reduce greenhouse gas emission while providing renewable energy.

Excellent. Now could we also say that globalization is like water?

I was just thinking the same thing,

Sustainability, said an ecology student. Globalization is like the hydrologic cycle.

Is that some kind of disease?

No, Sustainability. It's just the never ending recycling of water through the land, lakes and streams, oceans and the atmosphere.

So water is passing through all of our nations and communities?

Yes, of course it is, Sustainability.

So we can no more avoid water than we can avoid air or globalization?

I am beginning to think that that may be the case.

So is the idea that just as we can harness air and water for renewable energy and other facets of sustainability, we can also harness globalization to build sustainable communities?

Yes, yes, the students said, we think that may be the case.

There was a definite excitement amongst the students and while some of the faculty did agree in principle with this analogy, most said that they found it a bit simplistic.

Let me ask, then, for clarification, Ecology, wouldn't the opposite also be true?

What do you mean Sustainability, what are you asking?

Well, just as we can harness air and water for sustainability, we can also fail to do that and worse still, we can pollute and degrade the air and water that pass through our nations and communities and as a result hurt not only ourselves but those downstream so to speak. Isn't that true?

Well, yes but...

And as with water and air, if upstream nations or communities harness globalization in an unsustainable way then wouldn't it degrade our community the same way that polluted air or water would when it got to us?

Well, globalization is not something that I am expert in, Sustainability, but I'm here to learn about it along with everyone else.

And what a wonderful addition you are, Ecology. It appears that we can agree that education will be fundamental for all aspects of globalization including our own education right here.

Agreed.

So join us in exploring this idea, Ecology.

OK, then. Well perhaps it's better to say that globalization is like a river that flows around the world. Do you follow what I mean, Sustainability?

Yes, I think so, and countries or economies put rocks in the river, or take them away, and in some cases they may build dams and in others they remove wetlands that impact the quality of the river. Is that the sort of thing we are talking about, Ecology?

Well, as I say, I'm not an expert in this area, but yes, Sustainability, I think this is an interesting analogy.

Well by all means, then, let's continue with this: I think that I recall from restoration work on a portion of our own College Brook that the placement of rocks in a stream or the curving of a stream results in a kind of filtering or cleaning of the water that is slowed down as it passes through. Does that make sense, Ecology?

Sure.

And I also recall that the curves and rocks create habitat, little nooks and crannies where different communities of species, or neighborhoods we might say, take root.

Yes, that's right, Sustainability.

And I take it that if the stream were straight, like a channel, designed to move the water through as quickly as possible, then there would be less filtering or cleaning of the water as well as fewer communities and neighborhoods of species?

Yes that is correct, Sustainability.

So if globalization is like a stream passing through all of our communities, as air and water do, then we could understand the task of sustainability as one of placing rocks and perhaps introducing curves and maybe even small ponds, to increase filtering and habitat.

Yes, Sustainability, I think that might be an interesting way to think about it.

And if we did this successfully, then the stream of globalization would be filtered and cleaned, in a manner of speaking, and we would have diverse habitats and neighborhoods.

I would say that is consistent with the analogy. Yes, Sustainability, and I do think this is very interesting.

Thank goodness you are here, Ecology: your knowledge and enthusiasm are extremely valuable. But let us continue so we don't run out of time. Based on what we talked about earlier with Economics, could we say that there would be better and worse ways to organize the rocks, ponds and curves in our portion of the globalization stream?

Yes, of course; the composition and distribution of biodiversity would change with the design.

Then Hydrology spoke up and said: Well I am no expert on biodiversity, but I can tell you that a poor design could result in flooding and runoff that would clog up the stream with silt.

Yes, said Ecology, that's absolutely right. And while we're talking about runoff, if our stream is surrounded by lawn that's being fertilized, or a farm that's spreading too much manure, then the runoff would also bring nutrients into our stream which would take all of the oxygen and destroy those neighborhoods we were talking about.

Hydrology then continued: and for that matter, Sustainability, depending upon where we are along the stream, other communities could decide to remove the water for their own purposes and the way that we arrange our rocks, ponds and curves would have little to no impact if there was little or no water reaching us.

So design and planning would be fundamental and in human communities that would relate to fields like architecture, politics and law?

Yes, that makes sense, Sustainability.

And while there are better and worse ways to organize our community, arranging rocks and ponds as we discussed, there isn't only one best way to do it, but rather a diversity of good ways to do it.

I'm not sure that I follow you, Sustainability. What is it you are referring to?

I am referring to culture, Ecology. Creative culture that gives rise to things like diverse languages, art, customs, laws, work lives, foodways and rituals. We were discussing this earlier when the students agreed that a universal principle of diversity would be a fundamental part of globalization if it were to be virtuous and sustainable.

I see, Sustainability. Unfortunately I was not here for that part of the discussion.

So when it comes to organizing our communities along this global stream, can we agree that, as the saying goes, there is more than one way to skin a cat?

Absolutely.

Excellent, Ecology; then let me see if I understand the argument we are developing: Globalization is like a stream that flows through our nations and communities, correct?

Yes, we have agreed that that's an adequate analogy.

And have we also agreed that there are certain things that we can control, such as the placement of rocks, digging of curves or the building of ponds, to develop a sustainable community?

Yes, that's true. Everyone nodded in agreement.

And we showed how the fields of ecology and hydrology, as well as architecture and politics would need to be integrated to achieve a good result?

Yes.

And we agreed that creative culture was capable of many different ways to achieve a good result, correct?

Yes, Sustainability, said an anthropology major. We all agreed on what you called a universal principle of diversity that would take its place right alongside other universal principles such as gravity and human rights.

But then we uncovered a startling reality, Ecology.

What is that, Sustainability?

That no matter how well we design our community and its neighborhoods, other communities, nations or corporations upstream of us could do things that would devastate our ways our life in spite of all our art and effort?

Then both Politics and Earth Science began to speak at the same time, which only added to the sense of excitement of our discussion; but Politics insisted that Earth Science go first.

Very well, what I wanted to say was that climate change is a perfect example of what we're talking about; only the stream runs in a circle.

Good heavens, Earth Science, I have never seen or even heard of such a stream.

What I mean is this, Sustainability; that in your example of the community upstream of us diverting all of the water, they get all of the benefit, but we suffer the consequences.

But Earth Science, that would be so unjust, what if our community became so desperate that we decided to wage war in order to get our fair share of the water?

This is precisely along the lines of what I was going to say, said Politics, you see...

But Earth Science said: Please, let me complete that thought, and Politics agreed.

What I was going to say was that even though we would be suffering the direct consequences of a lack of water and habitat, with the issue of climate change,

everyone: that is, all communities, suffer the consequences because climate is upstream of all of us.

I could see that Politics was on the verge of bursting with comments so I suggested that we let her have the floor.

Look, Sustainability, this is what laws are for; and working within your very simple analogy of the stream, the only thing that can limit the ability of the community upstream from taking all of our water, or for that matter sending it crashing into our community like a flood, would be law. And in this case, since globalization is our topic, we are talking about international law, that is, law among nations.

That is preposterous, snapped Trade, who had rejoined us. Law is not the only thing to stop our water from being taken; the market would distribute the water most efficiently if you and your laws would simply get out of the way.

Now Trade, I must ask that you respect Politics' right to have her say on this.

My apologies, Politics.

No apology required, Trade. I understand that this is a provocative topic we are discussing. I do, however, want to point out that it takes laws to "get laws out of the way" as you say. That is what NAFTA and now CAFTA are, you understand: international trade agreements legislated and sanctioned by our Congress.

Yes, thank you, Politics, I am well aware of what trade agreements are.

But my esteemed colleagues, how will we weave together the actions of countries, corporations, non-governmental organizations, international organizations and others to ensure that everyone uses the stream of globalization in a manner that is Efficient with a capital "E," in other words good, right and sustainable?

Honestly, Sustainability, why do you insist on asking impossible questions? We can't organize such an enormous thing. That is why unleashing the power of the market is the only efficient way to proceed.

But Trade, if I may jump in here before Sustainability responds, your free market approach is being organized globally through trade agreements and institutions like the World Trade Organization and the General Agreement on Tariffs and Trade.

Yes, Politics, but organizing the liberation of the free flow of commerce is inherently efficient.

What do you mean by that, Trade?

What I mean is that globalization is simply removing all of the debris and barriers to what is natural; so while

it's complicated, it's much simpler than trying to build an entire world government like Sustainability is talking about.

But Trade, I don't think that is exactly what Sustainability was saying. Was it, Sustainability?

But before I could respond, Philosophy, who had just returned to the dialogue, intervened. If I may, Sustainability?

Please, Philosophy. I think that we could use your help.

Yes, I think so. This discussion strikes me as quite unwieldy and clearly in need of some clarification if it's to proceed in a productive manner.

Yes, Philosophy, I agree, and if you will permit me, I will try to summarize the most recent part of our discussion, with clarification from others, of course, so that you can see how we arrived at this point.

That sounds reasonable, Sustainability, as long as you can be brief.

Very well, Philosophy. I will try to be as brief as humanly possible. I believe that a consensus is forming that Globalization, with a capital "G," is in the world - a permanent, if not natural, part of human society; and like streams of air and water that move through our communities, Globalization is a vital part of a good life. So far, so good?

Everyone nodded their approval.

However, we also agreed that like water and air, Globalization can be polluted, diverted from its course towards ends other than what is efficient, good, right and sustainable. In other words, it can be corrupted; and when it no longer has its integrity, Globalization with a capital "G" becomes globalization with a small "g." Have I summarized accurately?

Yes, Sustainability, more or less.

What do you mean, Trade?

Well, I think that while we agree that Globalization is a natural and vital part of our world and that it can be corrupted, as you say, I don't think that we agree on what it actually is in what you would call its uncorrupted state.

Excellent point, Trade. While you talk about Globalization as the free flow of commerce, I see those flows of commerce as part of a larger, sustained interaction of creative cultures, and the institutions that comprise them. This is something that we will need to explore further, don't you agree?

Yes, I think that we all agree on that.

And finally, Philosophy, just as you joined us, we were debating issues of laws, governance and commerce; and

while we did agree that globalization presents a daunting task if it is to be virtuous or sustainable, we were not in agreement on questions of how best to approach it.

Yes, Sustainability, I did hear that last part of your discussion, and the only thing I would add is that I'm not at all certain that you reached complete agreement on precisely what virtuous or sustainable globalization is, in detail.

I think you are right, Philosophy, but I am worried that we will not have enough time today to work through all of the details.

I agree, Sustainability. We're all very busy.

Then I would like to propose one final point for agreement that could help move us towards a question of direct importance to everyone in this room.

What is that, Sustainability?

That we agree that sustainability, both right here in our own community as well as in the rest of our world, is not just my job or the job of sustainability professionals, but that it is and must be everyone's job to ensure that the institutions of society work together to sustain integrity.

I'm not sure precisely what you mean, Sustainability, but in general I think that is a reasonable proposition; and the others nodded their agreement.

Then can we agree that only Education, with a capital "E," can ensure that Globalization, with a capital "G," is kept pure of heart like the Irish novelist said of the bicycle?

Obviously we all think that education is fundamental to civilized life, Sustainability.

Then we can agree that the challenge of Education is urgent and critical?

Agreed.

TOM KELLY

Virtuous Globalization

Part VI: Philosophy

But Philosophy, if we are to succeed in this urgent educational challenge we will need your help to clarify things so that we can get everyone working with a common purpose.

What kind of things are you talking about, Sustainability, and what common purpose?

Well, the common purpose is Education with a capital “E,” and the things I am talking about are the institutions that make up culture: government, religion, art, industry, media and, of course, education, and how they fit together.

Well you could certainly use help clarifying things, because I don’t believe that your conversations with Economics and Trade produced any type of common purpose.

Precisely, and yet without that common purpose we will not be able to educate about the vital importance of integrity and making sure that all of the parts of community and society work together.

What are you looking for from me, then, Sustainability?

Help me craft an argument that will bring us all together, Philosophy, so that we can play our part in ensuring that globalization is not corrupted by demonstrating how a university Educates, with a capital “E.”

Well, Sustainability, you need to start where people are, with what they know and then work from there.

That is what I thought, Philosophy, so I tried to focus on efficiency as a place to begin and to look at what it means in the world. At first, Economics said that whatever was efficient was right and good, but then, when I asked him about segregating students, he separated what was efficient and good from what was right and sustainable.

Indeed he did, Sustainability. That is as I heard it.

And while I thought I was making progress with Trade, he also insisted on keeping them separate so that efficiency could be pursued independently of other aspects of globalization using a form of magic that I later learned from Engineering is called *ceteris paribus*.

Please, Sustainability, try to be serious and make your point.

I am serious, Philosophy; but anyhow, in the end, Economics and I think Trade as well, are arguing that there is such a thing as economic globalization that pursues efficiency independently of political, cultural and ecological globalization that would presumably advance what was right and sustainable.

Perhaps you should try to be more concrete with them, not so abstract; after all, Sustainability, you’re not trained in philosophy.

But Philosophy, I think I provided some concrete examples from right here in our own community that related economics and efficiency to what was right and good.

I don’t recall which examples you are referring to, Sustainability.

I pointed out that the pursuit of economic efficiency was quite probably going to allow an international corporation to pump the groundwater from the Oyster River watershed that supplies our water, and enable them to sell it all over the world. But when I asked about the problem of fresh water being vital for life and the vulnerability of its supply to climate, land use and other things, Economics, and I believe Trade would agree, dismissed these concerns as inefficient.

Yes, I believe that is what Economics was saying.

So you see, Economics and Trade refused to look at economic efficiency in all of its relations to other aspects of life. Instead they just continued to insist that what is economically efficient in the short run will automatically turn out to be good, right and sustainable in the long run.

Yes.

But my examples showed that it is the other way around, Philosophy.

What do you mean, Sustainability?

That what is good, right and sustainable in the long run is what is Efficient, with a capital “E,” in the short run. So, you see, we are back to what you call the abstract, Philosophy.

I don't follow you, Sustainability?

I think you should stick with the concrete, Sustainability.

Well, it is like I was saying to Engineering in the case of climate change.

What was your point to him?

That what was incorrectly determined to be efficient and good, namely building a wasteful, fossil fuel based society, has turned out a century later to be wrong and unsustainable.

Yes, well that's a complicated affair, Sustainability.

But I repeat, Philosophy, we have an urgent need and responsibility to educate all students who come into contact with our university to advance sustainability, or Efficiency with a capital "E," in their professional and civic lives.

But sustainability, you're being naïve about the importance of specialization.

What do you mean, Philosophy?

I mean that if someone studies with Economics, they become an economist, isn't that right?

Yes, that is quite right.

And if they study with Engineering, they become an engineer?

Yes, that is correct but...

And if they study with Art, they become an artist and if they study with History a historian and Anthropology an anthropologist and so on.

Yes, but...

But if they study with you, Sustainability, what do they become, a sustainabilityist?

Now, that is silly, Philosophy.

Yes, it is; and that is precisely my point, Sustainability.

But Philosophy, sustainability is not about becoming an "ist." It is about how everything fits together and either advances the efficient, good, right and sustainable or doesn't. And where we find that it doesn't, we intervene to try to set it right.

I'm not following you, Sustainability.

OK, Philosophy, are you familiar with the saying regarding specialization that if we continue to learn more and more about less and less we will end up knowing everything there is to know about nothing?

Now you are speaking in riddles Sustainability.

What I am saying, Philosophy, is that if economists are only knowledgeable about what Economics teaches them and anthropologists what Anthropology teaches them, and engineers what Engineering teaches them and so on, who is it that is knowledgeable about how all these parts fit together in our community, state, nation and in the world?

I don't follow you, Sustainability.

I am saying that by the end of our discussion with Ecology, Hydrology, Earth Science and Political Science, we agreed that sustainability had to be both somebody's job, like mine, here at the university, and everybody's job, as in all of our graduates.

I do apologize for missing most of that part of the discussion, Sustainability, but I simply do not follow what job it is you're going on about.

But Philosophy, what about integrity, and all of the parts working together and the example of the bicycle I talked about with Engineering: Don't you remember: me and my son flying down the hill on the integrity of our bicycles? Someone has to be concerned with the integrity of the bicycle.

Are you saying that you want to educate our students to be bicycle mechanics?

No, Philosophy; and I am sorry for my awkward way of communicating. What I am trying to say is that sustainability requires that we harmonize the life of the mind, body and spirit, right here in our own university community if we are to harmonize the institutions of society to sustain integrity.

Sustainability, it sounds like you want to take over the university.

No, that is not what I am saying at all, Philosophy. I am talking about the function of sustainability in the university.

What function are you referring to, Sustainability?

Philosophy, would you agree that there are musical instruments called violins?

Yes, of course I would.

And that there is something called violin playing?

Yes, Sustainability.

And that there are violinists who are experts in violin playing?

Obviously.

Now when the violinists play in an orchestra, say they are playing a famous Beethoven symphony: is their violin playing part of the orchestra or is the orchestra part of the violin playing?

Their playing is part of the orchestra but...

And isn't it the same with the flutes, oboes and clarinets and the expert playing of flautists, oboists and clarinetists?

And I suppose you are the conductor?

No, not exactly, but you are getting a step ahead of me

That's because I feel that you are wasting my time, Sustainability.

So you would agree that there is something called conducting?

Yes.

And that it is concerned with how all the parts fit together in theory and in performance or practice?

Do you really think that you are the maestro of the university, Sustainability?

So can we agree that, in addition to expert playing of individual instruments, in order for an orchestra to perform well, the job of making sure the parts fit together to achieve what is efficient, good, right and sustainable, in this case, making music, is a vital function.

Yes, Sustainability, I have season tickets to the symphony.

So what I am saying, Philosophy is that sustainability is concerned with that conducting function. As a program it is concerned with how the parts of the university fit together in light of the educational challenge of globalization that we are discussing, and as a subject, it is concerned with how the institutions of society fit together to sustain integrity.

Sustainability, I fear that you cannot see the trees for the forest.

Yes, Philosophy, that is a challenge for me. But if you help me, then together we will not only see both the forest and the trees, but how they relate to one another and how best to work to sustain their integrity.

And then what will we do?

Educate, Philosophy. Educate all students in all fields about integrity and corruption, and the need to advance sustainability in their professional and civic lives.

I think that I may finally understand your problem, Sustainability.

Then please, Philosophy, share your wisdom with me immediately.

This common responsibility you're going on about is in some ways similar to the notion of civic virtue.

Yes, you are correct Philosophy, it has some similarities.

But, Sustainability, a great philosopher once said that civic virtue could not be taught.

You're right, Philosophy, it cannot be taught, and yet it is being taught every day right here in our community.

Trade is right, Sustainability, you're now speaking in riddles.

Aren't you going to ask me who is teaching it?

OK, who is teaching it?

We all are. The community teaches it everyday. Every day students move through the community that we all shape and that shapes us.

How do you mean that, Sustainability?

Well, for example, take the fact that we are here together having this community dialogue about globalization. We are teaching students that dialogue is fundamental to learning, and to the development of the citizen and professional. And in a similar way, our students are learning from the beautiful ceramics, paintings and wood sculptures in the library and from our housing, our food and transportation, our energy use and emissions and our landscape.

Those functions are the responsibility of our non-academic departments, Sustainability; unless you want me and my colleagues in the department to weed the gardens?

There was a poet or philosopher that said: What you are speaks so loudly that I cannot hear what you say. Are you familiar with that, Philosophy?

Meaning do as I say and not as I do?

Yes.

Come now, Sustainability, you can do better than trotting out that tired old saying.

But Philosophy, when you learn how to play basketball, you don't just lie around on the court and talk about the concepts of passing, shooting and playing defense. You practice it, don't you?

Yes, of course, but we're talking about education.

And the same with singing, painting and acting: students practice these disciplines to learn them.

Yes.

And don't we pride ourselves on our commitment to undergraduate research at this university?

Yes, we most certainly do, Sustainability.

And how do we express that commitment, by simply talking about research, or do students practice it?

They practice it.

So if we can say to our students: look, as a community we have reduced our greenhouse gas emissions while saving a significant amount of money and establishing a cleaner and more secure source of energy for heating, cooling, lighting, transportation and other uses, then we teach them that reducing emissions and saving money are not in conflict like two school kids fighting for the last seat on the bus, but are two parts of the same thing.

And what is that?

Sustainability. And if we can also say to our students: look, as a community we teach courses and conduct research on the relationship between energy and climate as well as climate and health, then don't we teach them that these are important topics for the public good and that our land grant university is serving the public good by focusing on these topics?

I don't know, I suppose so.

And the same for teaching and research about renewable and alternative fuels. We can say: look at our shuttles that move you around campus: some are fueled with cleaner and more efficient compressed natural gas, and soon some will be fueled with biodiesel as will some of our farm equipment and at least some of that biodiesel will come from waste vegetable oil right from our own dining halls.

And are you saying that these are all parts of the same thing as well?

Of course. They are all parts of sustainability just as lowering the heating temperature in our buildings by one or two degrees and having only one refrigerator in a dorm room and using compact fluorescent lights are also part of the same thing. And let us not forget using their civic voices to advance policies in our community, state and nation that reduce greenhouse gas emissions while saving money, and improving air quality: these are all parts of the same thing.

Now you sound like a politician, Sustainability.

We'll get to that in a minute, Philosophy. I am not quite finished with how we can teach civic virtue in our community.

I don't have time to listen to a long harangue, Sustainability.

Very well, I will be as short and to the point as I can. If we can also say to our students, look: as a community we have protected and enhanced the biodiversity and health of our ecosystems, including the Oyster River that is the major source of our water, while saving money and beautifying the campus; and you can take classes and participate in research about how to do this for our state's lakes, streams, wetlands, estuaries and coastal areas, and the relationship of biodiversity and healthy ecosystems to public health and disease and...

For goodness sake, Sustainability, would you please breathe, I'm running out of air just listening to you.

My apologies, Philosophy, but I am trying to be quick and I haven't yet talked about food and agriculture. You see, if we can also say to our students, look: we are supporting local agriculture, New England foodways and public nutrition by purchasing local and regional food to prepare in our dining halls and even growing some of the local organic food on campus! Not only do we have a student organic garden club and a chapter of Students Without Borders, but you can take classes and participate in research about organic and sustainable agriculture, horticulture, fisheries and aquaculture and even organic dairy and livestock systems that serve the public

good of our state and region, and you will know that it is good for the state and region if you study and participate in work on nutrition, wellness and food and all of this part of sustainability is coalescing under themes of integrated agriculture and food systems and regional food security.

I do hope that that is it, Sustainability.

Just one more point: if we can also say to our students, look: we have just developed public art guidelines for our community with the first piece of sculpture already on its way, and we have celebrity performing arts and Jazz series right here on campus; and faculty and student concerts, plays, dance recitals, poetry readings and exhibitions in our own art gallery and our beautiful Dimond Library. And don't forget that politics is the highest art, so you should join the student senate and take classes about the art of politics and governance and participate in clubs concerned with politics and governance as it relates to human rights, diversity, peace and justice and other vital issues of our day like this forum on globalization.

Sustainability, I really do appreciate your enthusiasm, but what does all of this have to do with globalization, or Globalization, as you refer to it?

Education, Philosophy; the only way that we can respond to the educational challenge of virtuous globalization is to bring it into being, right here in our own community.

Bring what into being, Sustainability?

Virtuous Globalization or sustainability, Philosophy. They are the same thing, and we have everything we need right here in our own community to embody these vitally important ideas. But we must weave them together, like all the parts of the bicycle or the rocks and curves of the stream, weave them into a learning community: Education with a capital "E" is not just about the life of the mind, Philosophy, but the life of the mind, body and spirit as an integrated whole, just like a whole person, and just like a whole society.

Look, Sustainability, we are out of time here; and to be honest with you, while I appreciate your enthusiasm, I am not at all sure that we have made much progress here, at least at the end of our discussion.

But Philosophy, we have. Think of the questions that we have left hanging in the air to be picked up and carried back to classrooms, dormitories, apartments, houses, dining halls and coffee shops.

Which questions?

What does it mean to be educated about globalization and sustainability? Can globalization be virtuous? What

is integrity and what is corruption? These are marvelous questions, Philosophy: it's like a magnificent, hand-carved door that leads into a room full of mystery knowledge and beauty.

I don't know, Sustainability; it sounds like you are selling tickets to a carnival ride.

Now Philosophy, don't be too tough on me; I am sincere about this. In fact, I'll bet that there are members of this community that will jump at the chance to go on such a ride.

Maybe, Sustainability, but how are you going to find out?

Well, Philosophy, are you familiar with the old saying that there is no time like the present?

Yes, but I cannot stay right now, Sustainability.

Just then I noticed two first year students with their name-tags still on who had edged their way right up to where we were finishing our discussion; and to me it seemed that they were on the verge of bursting with questions and ideas. Philosophy saw them as well and said, why don't you ask them, Sustainability?

All right, Philosophy, I will: what do you students think it means to be educated about globalization and sustainability?