

Seeing the World with New Eyes: Hortus Cultura in a Discordant Age

Keynote Speech by:

ROB ABBOTT, PhD, CMC

June 14, 2005

Sustainable Horticulture Think Tank

Kwantlen University College, Langley, British Columbia

1.0 BEGINNING

The poet and gardener, Patrick Lane, begins his award-winning memoir, *There is a Season*, with a quote that serves as a potent distillation of much that I want to share with you this morning. He says “If what we know is what resembles us, what we know is a garden.” I draw both strength and, dare I say it, a certain melancholy from these words. The strength comes from the reminder that we are all, ultimately, part of nature. The melancholy soon follows because too few of us know this, or accept this. As Michael Shellenberger and Ted Nordhaus pointed out last year in their controversial essay, *The Death of Environmentalism*, “most people wake up in the morning trying to reduce what they have to worry about. Environmentalists wake up trying to increase it”. It pains me to say that those of us with an interest in sustainability tend to be viewed as little more than latter-day environmentalists. We may know how we differ from our “green” friends, but to the mainstream we need to reach, we're too often seen as the “same old”, “same old”.

And so to the title of my remarks: “*Seeing the World with New Eyes: Hortus Cultura in a Discordant Age*”.

Over half the world's population now lives in cities – human-made habitats, and with technological innovations continually flowering from fertile minds, some have asked if the human species even “needs” nature. They can be forgiven for asking the apocryphal question. We do, after all, live in an era of unprecedented innovation. And yet, despite our intellectual prowess, the gift that sets us apart from other species, we do not understand the world around us. Too many of us live at a remove from nature, a remove that blunts our understanding of nature and our dependence on nature. Too many of us go through our days in a quest for ease, comfort and convenience. And of course, too many of us, especially in North America, are consumers – whose sense of self is

defined through the acquisition of stuff – more and bigger cars, bigger houses, better clothes. It is like the close of the nineteenth century all over again, a time when wealthy Londoners felt they had to demonstrate their wealth through conspicuous consumption.

This culture of more, not less, creates discord. It also creates the need to see the world with new eyes – a poet's eyes, a gardener's eyes. The increasing segregation of people, especially in our cities – by age, family status, education and income exacerbates the discord. Worse, our collective lack of understanding has brought us to either the edge of an abyss, or to a fork in our evolutionary path – we have begun to shred the tapestry of natural capital on which we depend. To arrest these changes and forge a new relationship with nature, to choose a path that embodies a more sustainable relationship with the Earth, we must create a spark that excites and engages more than a green constituency; we must create novel partnerships among both experts and non-experts; champion transdisciplinary work; and raise the nature “literacy” of the people with whom we interact. We must also, crucially, accept and rejoice that we are nature.

Soon, you will disperse to focus on such topical horticultural issues as water conservation, pest management, and the challenge of enhancing British Columbia's garden image. Before you do that however, before you dive into the necessary detail, I want to provoke you, and I want to encourage you. I'm going to talk about four things this morning: (i) this thing called sustainability; (ii) disconnects that limit our progress in moving toward sustainability; (iii) questions for the horticulture profession arising from these first two pieces of discussion; and (iv) some thoughts on the way forward. In doing this, I want to provoke you to think about your profession differently, to ask different kinds of questions of each other. And I want to encourage you to think about the art of the possible. Great things happen when people imagine what's possible. What is the story you are creating today? What are the values that inform it? How are you going to communicate your results today, and to whom? I think all of us here this morning value the physical environment that underpins our lives in British Columbia. We value the mountains, the clean air, the weather, the open space, and the quality of life. We also value our physical health and wellbeing. I want you to tap into these fundamental values and use them as a lens through which to view your work. I want you to follow the game, not the ball; to keep your brainstorming today rooted in a healthy appreciation for the course you and your profession are traveling through time. Because, ultimately, there is only one question for you today, Gauguin's last question: Where are we going?

2.0 CONTEXT: WHAT IS SUSTAINABILITY?

In the closing years of the 20th century, human concern over the consequences of production and consumption decisions, growth if you prefer, previously a niche discussion, became a conspicuous feature on the cultural landscape and the subject of much academic and popular discussion. As we begin the 21st century, the relationships between environmental protection, economic development, and social welfare are being explored and debated with great fervor around the world. These relationships, commonly called sustainability, were first cited under that moniker in the *World Conservation Strategy* in 1980, introduced to a wider audience in the report of the World Commission on Environment and Development (WCED) in 1987, and further elaborated at the United Nations Conferences on Environment and Development (UNCED) in Rio de Janeiro in 1992, and Johannesburg in 2002 – the so-called Earth Summits.

In the same year as the Rio Earth Summit, the Union of Concerned Scientists sent the *World Scientists' Warning to Humanity* (1992) for endorsement to all scientists worldwide who had been awarded the Nobel Prize, and to national academy-level scientists in Africa, Canada, China, Europe, India, Japan, Latin America, Russia, the United Kingdom, and the United States. The *Warning*, signed by over 1700 scientists, including a majority of Nobel Laureates, was a passionate argument for sustainability. It said, in part:

We the undersigned, senior members of the world's scientific community, hereby warn all humanity of what lies ahead. A great change in our stewardship of the earth and the life on it is required, if vast human misery is to be avoided and our global home on this planet is not to be irretrievably mutilated.

Five actions were identified to shift society's trajectory onto a more favorable plane:

- bring environmentally damaging activities under control to restore and protect the integrity of the earth's systems
- manage resources crucial to human welfare more effectively
- stabilize population
- reduce and eventually eliminate poverty
- ensure sexual equality, and guarantee women control over their own reproductive decisions

These actions struck at three related and fundamental themes: (1) the criticality of the Earth's natural systems as the basis for life; (2) the need to stabilize population to avoid “overshooting” the ability of natural systems to support human life; and (3) the

relationship between resources and poverty. To a large degree society continues to struggle in making progress on these actions. The late, lamented Dana Meadows amplified the UCS message in a monograph published shortly before her death. She said:

The world economy is doubling roughly every twenty years. The world population is doubling every forty to fifty years. The planet that supplies the materials and energy necessary for the functioning of the population and economy is not growing at all. That means whatever planetary resource was one-fourth-used a generation ago is half-used today. Whatever waste sink was half-full a generation ago is full today. Whatever was full a generation ago is overfull today.

In some respects, Meadows' argument is reminiscent of the character in Ernest Hemingway's novel, *The Sun Also Rises* (1926), who is asked how he went bankrupt. Two ways, he says: gradually and then suddenly. If, despite education, technology, and other features of contemporary society, humankind's production and consumption habits threaten or outstrip life-sustaining habitat, the trajectory is not sustainable. To survive, much less prosper, the trajectory must be changed. It is to this end that considerable effort has been spent in recent years elucidating the idea of sustainability.

There is no universally accepted definition of sustainability. In fact, many are tiring of the term, but a review of sustainability initiatives throughout the world suggests that it is generally understood to be a roadmap for human development that recognizes the importance and interdependence of environmental, social and economic well-being. A partial typology of the arguments and positions includes proponents of "weak" sustainability, who believe that as long as the total stock of natural and human-made capital does not decrease between generations the conditions for sustainability have been met. It would also include advocates of "strong" sustainability, who believe human-made capital cannot be wholly substituted for natural capital. David Pearce (1992) defined sustainability as a "wealth inheritance – a stock of knowledge and understanding, a stock of technology, a stock of man-made capital and a stock of environmental assets – no less than that inherited by the current generation." The Swedish oncologist and environmental scientist, Karl-Henrik Robert (1997), has spoken passionately about what he calls the resource "funnel" as a metaphor for the sustainability challenge. As he sees it, shrinking resource supplies coupled to rising consumption creates a funnel in which society exceeds its carrying capacity. He has proposed a series of system conditions, popularly known as *The Natural Step*, to lead

society out of the funnel. The list of ideas and definitions goes on, and the debate is a fertile one.

While the specifics of each of these positions differ, some common attributes can nonetheless be identified: (i) sustainability means more than ecological or environmental management; (ii) sustainability is not solely an economic, engineering, technical or scientific problem, although these disciplines have much to contribute to society's search for good questions and answers; (iii) tradeoffs between environmental, social, and economic aspirations, the need for tradeoffs, and the way in which those tradeoffs are made, should be an integral part of sustainability discussions; and perhaps most importantly (iv) a more holistic approach to management, planning, and design will be needed to spur the actions in all sectors of society that foster sustainability.

I might add that three kinds of capital or wealth are fundamentally important in talking about sustainability. **Financial capital** concerns the creation of wealth or prosperity in an economic context with an emphasis on tangible assets such as cash or something that can be turned into cash. **Social capital** concerns people. It includes the economist's view of people and their ability to do work, but increasingly it means more than that. It is about reducing adverse social or community impacts and facilitating the creation of the trust, mutual understanding, and shared values and behaviours that bind the members of human networks and communities and make cooperative action possible. **Natural capital** concerns ecology *and the critical services provided by ecology*. It is the sum total of the ecological systems that support life. Any organization or endeavour that purports to be sustainable should be consciously working toward improvements across all three capital stocks.

Wendell Berry has said that if we were sincerely looking for “success” as a society, we would turn to the communities of which we are a part – humanity, water, earth, air, plants and animals. Put another way, we would forsake our individual lives of affluence and remember that what really matters are the choices we make everyday to help ourselves *and each other*. And therein lays the crux of the sustainability challenge for us all – how do we deliver the utility people want in a way that respects the hopes and aspirations of others? In a way that doesn't erode the aesthetic and productive capacity of the environment? How do we make the connections between our daily lives and the natural world, which should be obvious, more immediate and immediately important, to more people?

3.0 DISCONNECTS INHIBITING SUSTAINABILITY

It is now over three decades since the inaugural Earth Day. As one who grew up in the modern environmental movement, I still hear echoes of Rachel Carson's voice directing us to protect the world around us, to move society onto a different road, a different trajectory. But these echoes are of a time that is a distant memory, part of our history. The intervening years have seen cause for celebration, fear and perhaps most urgently, confusion. Today there are those who fear ecological and social collapse as the too heavy price of "progress".

At the close of his eloquent disquisition on biodiversity, *The Diversity of Life*, E.O. Wilson suggests that time is slipping away from us, and with it, the ability to arrest the loss of biodiversity and understand the world around us. While human ingenuity has flowered magnificently, the paradox of our evolution is that our progress has begun to imperil the "natural capital" on which we depend. Where is the human-made analogue for photosynthesis that can maintain the balance of carbon dioxide and oxygen in the atmosphere, or a filtration device that mimics the roots of trees and other plants and filters heavy metals and other toxic contaminants from our water?

Many of you will be familiar with Jared Diamond's bestselling new book, *Collapse*, which chronicles the failure of previous civilizations to negotiate a relationship with the Earth that is sustainable. Ronald Wright made a similar, and to my mind at least, even more persuasive argument in his Massey Lectures from 2004, *A Brief History of Progress*. And John Ralston Saul is climbing the bestseller lists with his new book, *The Collapse of Globalism*, in which he argues that we live in a storm between two weather fronts in which nationalism is reasserting domestic interests in both positive and negative ways. This is sustainability on a vast canvas; the argument writ large. Can we learn from our mistakes – both historical and recent? Can we begin to chart a course that is deliberately different from the civilizations of the past, or indeed different from our predecessors at the beginning of the 20th century – arguably the last time unregulated markets and dispossessed citizens collided? Time will tell. In my darker and more pessimistic moments, I am reminded of Eugene O'Neil's comment that there is no present or future, only the past, happening over and over again. These moments tend to be spurred by what I perceive as disconnects in our media and popular culture. Let me give you four quick examples.

Report on Business in the *Globe and Mail* contained two recent articles that underscore how far we have yet to travel if we are to wean ourselves off oil – and in doing so, forge an exciting new future of cleaner air, healthier people, and new types of economic opportunity.

In one story, “India tells West: Take our oil, please”, we were told that India's Oil Minister was crisscrossing the globe (no doubt burning many barrels of oil) in an effort to encourage oil and gas investment in his country. Soaring economic growth in India is creating a huge appetite for energy. Nothing wrong with that, but why is the default position oil? Okay, I know that demand for energy in India far outstrips the supply of clean, green energy alternatives. And of course, with an estimated ¼ trillion barrels of oil and gas just offshore, India sees a comparatively easy solution. Economy growing like a rocket, and with it the need for energy? No problem, we've got boatloads of oil just offshore. The problem is that exploiting the oil and gas perpetuates a global malaise – reliance on an energy source that is shredding our planet's life support systems through climate change, and accelerating the deaths of thousands of people each year who choke on the emissions of cars and trucks, particularly in the world's cities. Why not position oil and gas as a transition fuel for India and earmark a portion of the profits from its use for investment in cleaner alternatives? I have nothing against the Oil Minister stumping for investment, but I'd like to see him and his colleagues frame the energy problem more strategically.

In many respects, the same thinking that has spurred oil and gas investment at the expense of other energy options cropped up in another recent ROB story, “Hybrids won't dominate market, study predicts”. Here, the good people at J.D. Power & Associates told us that despite increasing popularity, hybrid vehicles will peak at roughly 3% of the U.S. automobile market by 2010. Regrettably, the article didn't tell us anything about the method used to generate that estimate, but no matter, if it's even close to being accurate, we've got a problem, a big one. Why is it that lifestyle aspirations and choices in the U.S. (and I would argue Canada is similar) run against nature? The answer must be more than a failure to “get the price signals right”. On a global scale, we have failed as a society to make the connections between social and economic well-being and nature both obvious and important to more than a green constituency. And so it is that India is shopping around for partners to exploit oil and gas while hybrid vehicles that might help shift society onto a cleaner, healthier trajectory languish.

I would have hoped that by now it was obvious that the complex patterns of interaction that characterize biological and human systems cry out for new ideas. Evidently, there is still much to be done. To paraphrase our own Rick Mercer in his delightful series of commercials promoting Canada's 1-tonne challenge to reduce greenhouse gases, "if we could see greenhouse gases, we'd be screaming for change". We need to make people aware of the true costs of energy and point out that non-carbon alternatives are available that won't cramp anyone's style. More to the point, we need to start thinking about hybrid and other technologies as something more than novelties or curiosities – they're going to fuel the future, but only if we start to think of them in that light. Which brings me, by the way, to my t-shirt, and some good news; this symbolizes the launch of an exciting initiative by Vancouver to empower individual residents and businesses to take small steps, "one day" at a time that can lead to big changes in local air quality, and quality of life. Watch this "one day" tag line – you'll be seeing and hearing more.

The third example of a disconnect I want to share with you is an editorial published last Fall in the *Calgary Herald* that took issue with a research project that sought to measure the ecological footprint (the cumulative resources necessary to support each citizen) of 20 Canadian cities. At nearly 10 hectares per person, Calgary exceeded the Canadian average of 7.25. The editorial defended the status quo, arguing that while Calgary consumes a lot of resources, it "bakes a bigger pie" for more people to eat. Further and most crucially, the editorial asserted that to reduce the city's footprint it is necessary to "kill growth" – an assertion that misses two important points about the metaphor of the footprint, and the larger objective of sustainability. First, it is less about shaming us for our resource consumption and more about sparking innovation in how we think about, measure and improve our economic, social and environmental performance. Second, reductions in a city's footprint do not automatically mean a drop in welfare. In fact, there is a growing body of evidence that suggests the opposite may be true. A 2001 study by the Pembina Institute for Appropriate Development found that despite steady GDP growth in Alberta since 1982, average real disposable income and real weekly wages, adjusted for inflation, have remained virtually unchanged. Meantime, per capita taxes have increased nearly 500% since 1961, and household debt exceeds disposable income. Maybe those pies aren't so big after all? Maybe we need a better analytical frame to contain more of the costs and benefits of our current growth path? Further, two different national surveys recently found that the unhappiest Canadians live in cities where income is highest. Proof again that as a measure of overall well-being, economic growth and income alone are poor benchmarks.

We need to resist the seduction of easy measures of wealth such as GDP or income because they lead us into what Ronald Wright artfully calls “progress traps”:

“A small village on good land beside a river is a good idea; but when the village grows into a city and paves over the good land, it becomes a bad idea. While prevention might have been easy, a cure may be impossible – a city isn't easily moved.”

When an economy grows beyond a certain threshold the additional benefits of growth are often exceeded by costs that aren't seen or counted until it's too late. As a result, it is instructive to supplement traditional measures of wealth with such things as the costs of crime, family breakdown, resource depletion and pollution. These “genuine progress” measures strive to offer a more complete picture of well-being. And any discussion of our relationship to nature should not be viewed as anti-development; quite the contrary. The economy can, and should, continue to develop, but it must shift to conceptions of wealth that are not defined by conventional metrics but by a throughput of matter-energy that is within the regenerative and assimilative capacities of the ecosystem.

The last example of a disconnect is a just-released study by the Toronto Board of Health and Environment Canada pointing out that over 1600 people die each year in Toronto and Montreal (over 800 in each city) because of poor air quality. It is tempting to call this an environmental story, but that is too limiting. It is a social and economic story as well – quite apart from the number of deaths, think about those who don't die, but are hospitalized at considerable personal and societal cost to treat respiratory problems. To date, few have begun to connect the dots I'm outlining here, but I'm hopeful that we might still begin to frame the problem properly – and in doing so, recognize that sustainability permeates every aspect of our world, and that understanding it requires new, bold, radical thinking.

4.0 LINK TO THINK TANK

So what might all of this mean for the horticulture profession? At one level of analysis, you need to understand how to manage land, water and other resources in ways that are sustainable. You also need to understand community and stakeholder expectations with respect to sustainability – is there a shared vision around which people can rally? And those stakeholders need to learn about horticultural issues in ways that encourage their active, engaged participation. At another, and far more important level of analysis, you need to think about the analytical framework that informs (or should inform)

everything you do, and might do differently in the future. Put another way, can you truly see in three dimensions? Or more accurately, can you see across three dimensions? What is your strategy to be a genuine steward of natural capital, and how will this affect both your short-term financial requirements and the perspectives of your stakeholders? How will you protect biodiversity? How will you leave the next generation of horticulturalists with an asset base, in the broadest and richest sense, at least as healthy, diverse and productive as that which you enjoy today? And returning to a question I posed at the beginning of my remarks, what is the nature of the story you want to create today and how will you communicate it?

5.0 THE WAY FORWARD

Robert Altman's wonderfully cynical film about the movie business, *The Player*, contains an essential truth about stories that may be instructive in this regard. In the film, the central character is asked why a particular screenplay wasn't filmed. He says it lacked certain qualities necessary to make a commercially successful movie. There is a pause. He expands on his answer. He says up, as opposed to down; happy as opposed to sad; hopeful as opposed to desperate; and a happy ending...especially a happy ending. His point is that while all people like stories; most people like stories that offer hope – and a happy ending. Stories in which good triumphs over evil. Stories propelled by an engaging and entertaining narrative – the route to the happy ending matters.

Now consider the way in which the sustainability “story” has been told. Is it any wonder the majority of people have tuned out? What about the sustainable horticulture story? We need to forge a story about sustainability that hasn't been told yet (or told well). We need to shape a compelling vision of the future, and sell that vision with the kind of passion, money and marketing savvy that Hollywood sells movies. We need to convince people through the art of storytelling that this vision is worth fighting for. And it's okay if the story seems strange – this is what will first take hold of us (and others) and make us believe it.

Nothing happens without first a dream. My dream is a world in which human society lives in a more sustainable relationship with the Earth, and with each other. To get there, we need to write a new story – a story about the future and what can be done now to secure it. We also need to sell this story in ways that heretofore have been overlooked by the sustainability community. We have a great cause; what we lack is a story to grow the constituency of supporters for that cause.

The opening words of a 16th century Polish church-song, *Already it is Dusk*, describe a fervent prayer for deliverance from evil-doers and the powers of darkness. However much we might like to disagree, we are the evil-doers, those who have brought the Earth to its knees in our headlong rush along the evolutionary corridor to higher levels of consumption. The scientist, philosopher and scholar, Nicholas Georgescu-Roegen highlighted the dangers of this human trajectory:

Once man expanded his biological powers by means of industrial artifacts, he became ipso facto not only dependent on a very scarce source of life support but also addicted to industrial luxuries. It is as if the human species were determined to have a short but exciting life.

As we look to the future, let us lead with both our head and our heart and make the smart choices that define a new relationship with nature. Let us follow Henry David Thoreau's example and learn the language of the fields that we may better express ourselves.

Our head should compel us to be smart; to make prudent decisions that are not irreversible and to try and improve our understanding of nature. This will require new forms of partnership among both expert and non-expert stakeholders. It will also require the intellectual leadership to champion transdisciplinary work, something that is too often marginalized if not punished in academia.

Our heart should compel us to honour the birthplace of our spirit and the children who will follow us. We may never solve the mystery that is the green prehuman Earth, but we must allow others to try.

To begin this journey, we should define a vision of our organization, project, or community as sustainable and ask what we would do that is different from what we do now. This vision should be a manifesto for change that catalyzes critical and creative thinking. Among the questions to consider are:

- Why does my horticulture firm exist? What am I producing or creating that is truly of value to the community of which I am a part?
- Am I changing or even challenging the mainstream horticulture profession and its dogma, or am I content to do the occasional boutique project?
- What does sustainability mean to me and my colleagues?

- How do (or should) we engage our customers and partners in a meaningful discussion of sustainable horticulture?
- How should we think about and measure success?

Our willingness to ask searching questions about what we do and why we do it; our willingness to engage our students in a different kind of learning; and our willingness to accept that there are many ways of knowing should shape our ability to meet the design challenges of an era that is characterized by economic, social and environmental change. Put another way, it will determine if we can, as Proust would have us, “see with new eyes” and frame our challenges to accord with the principles of sustainability.

FURTHER READING

Benyus, J. 1997. *Biomimicry: Innovation inspired by nature*. New York: Quill.

Daily, G. C. (ed.) 1997. *Nature's Services: Societal Dependence on Natural Ecosystems*. Washington, D.C.: Island Press.

Diamond, J. 2004. *Collapse*:

Hawken, P. et al. 1999. *Natural capitalism: Creating the next industrial revolution*. Boston: Little, Brown.

Hemingway, E. 1926. *The sun also rises*. New York: Scribner.

Lane, P. 2004. *There is a Season: A Memoir*. Toronto: McClelland and Stewart Ltd.

Wackernagel, M. and Rees, W. 1995. *Our Ecological Footprint: Reducing Human Impact on the Earth*. Gabriola Island, B.C.: New Society Publishers.

Worster, D. 1977. *Nature's Economy: A History of Ecological Ideas*. Cambridge: Cambridge University Press.

Wright, R. 2004. *A Short History of Progress*. Toronto: House of Anansi Press Inc.