INTRODUCTORY REMARKS TO THE CONFERENCE:
“MULTI, INTER, TRANS, META? OVERCOMING DISCIPLINARY BOUNDARIES IN ENVIRONMENTAL CURRICULA”

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I join President Caputo in welcoming you to Pace University. And I thank him for his kind words. As most of you know, the accomplishments he noted would not have been possible without support and entrepreneurship from the top. I offer President Caputo my deep gratitude for his leadership and friendship.

It struck me last night. There is nothing revolutionary about crossing disciplines in academic studies. If there were we would be talking about it in small clutches in hallways and cafeterias rather than at today’s gathering or in the numerous conferences and meetings that have been held on the topic throughout the nation.

Indeed, the marriage of disciplines is an ancient art. There was a time when science and philosophy were inseparable. A time when the study of nature meant not simply the lives of the feathered, finned and clawed but the nature of all things, including human behavior and our place in the universe.

Unfortunately, the results were often misguided, if elegant. The Greeks, in addition to laying the foundations for philosophical thought, assiduously maintained that Earth sat stationary at the center of the universe, surrounded by perfect spheres that moved in perfectly circular orbits around our perfectly spherical planet. Aristotle himself contributed to this confused view by holding that objects, like Earth itself, tend to remain at rest -- motion was not in the nature of the earthbound.

Neither Kepler nor Copernicus nor Galileo were successful at unseating this logic. Galileo felt compelled to recant his heresies on his knees before the Inquisition. For his crime of fostering a new understanding of the universe, he spent the remainder of his years in confinement. It is worth noting that Galileo’s rejection came not at the hands of physicists, a relatively modern term, but, in the language of his time, “academic philosophers.”

It took a dedicated multidisciplinarian, armed with data rather than anecdote and deduction, to prove the radical concept that the universe was powered by forces that put all of us in motion, our Earth included. Isaac Newton, in his 1687 Mathematical Principles of Natural Philosophy or The Principia, as it came to be known, gave birth to the modern pursuit of physics and, one can argue, the modern era of specialization.

Specialties have both enlightened and trapped us. The now classic model of education -- ultimate dedication to a single discipline -- has brought us brilliant and innovative thinkers. But it has also stultified innovation and Balkanized creative thinking.
Here in the Hudson River Valley, demanding and complex issues, such as PCB contamination of the river, beg us to examine their effects from every perspective. Yet, since 1975, we have allowed the public discussion about PCBs to be methodically reduced to a debate on the applications and misapplications of science. It is a bad habit we have developed when it comes to environmental issues.

Unstudied are the psychological implications for the current generation of local 30 year olds whose lifelong memory is of a Hudson River notoriously contaminated with an insidious toxin; the cultural impacts of the elimination of Hudson River commercial fishing, a tradition as old as human habitation of the region itself; or the multifarious consequences for those Hudson River communities that have lived beneath the cloud of industrial despoilment for more than three decades.

And we have no comprehensive understanding of what the accumulation of these impacts has meant to the economic, political and social well-being of a close-knit region like the Hudson River Valley.

The good news is that among us we have the talent. Among us we have the desire. With each other’s support we can transcend the territorial boundaries of our professions – our disciplinary training, our bread and butter -- and learn how to better understand our past and collaborate on the direction of our environmental future.

We have bright lights to look to. President Caputo mentioned Thomas Berry, a personal hero of mine. Another, physicist Freeman Dyson, has written seamlessly on science, spirituality, human nature and the environment in ways that inspire and challenge.

In his fine memoir, *Disturbing the Universe*, Professor Dyson warned, “We delude ourselves if we think that the ideology of ‘Green is Beautiful’ will save us from the necessity of making difficult choices in the future.” He wrote those words in 1979. They have never been truer than they are today.

Sometimes, those choices will require litigation, sometimes lobbying, as they always have. But, unlike the 20th century, these will not be the hallmarks of 21st century environmentalism.

If the 20th century was the era of environmental brawn, the 21st century must be the era of environmental brains. The years ahead will see an unprecedented need for synthesis, integration, delivery and application of knowledge across diverse disciplines. The intricacy of our environmental problems requires it. And even funders, such as the National Science Foundation, are demanding it.

We are on the threshold of a radical new era of applied knowledge. It is up to colleges, universities, research institutions and education organizations to lead the way. We must be so successful at this endeavor that even decision-makers will embrace it. Yes, there will always be hurdles -- there will always be politics, there will always be money. Ultimately, however,
neither the marketplace nor the lobbies of congress can long ignore the consequences of knowledge or our shared commitment to disseminate and apply it.

I discussed earlier why there is nothing revolutionary about crossing disciplinary boundaries in education. There is another reason. The goal of any revolution is to transform the mainstream. “Multi-inter-trans-meta” disciplinary education has already entered the mainstream. We only have to learn how to do it.

From our panelists and speakers you will hear new ideas, new data, and new methods for overcoming the boundaries of individual disciplines so we can train the leaders and thinkers that our very complex future will demand.

My hope is that we will each go from here today engaged in a new discussion about the ancient art of crossing disciplinary boundaries, even while we honor the rigors and accomplishments of our individual disciplines. And that we will recognize and avail ourselves of the extraordinary opportunities all around us to collaborate and cooperate.

As Thomas Berry has said, nothing less than our environmental future hangs in the balance.

I thank you all for being here and look forward to speaking with you more.