

Today, at this conference for educators in landscape architecture whose theme is water, I'd like to propose a new approach to living on the third planet, the water planet; and in so doing, develop with you a curriculum for a SCIENCE OF THE LANDSCAPE. This new course of study should be what I term a DESIGN SCIENCE. What better place to institute such a curriculum than in the niches within higher learning devoted to landscape--the schools of landscape design? I believe it is a departure from the traditional Landscape Architecture educational experience and that it will require a fresh look at what has been the recent goals of Landscape Architectural education.

In my opinion, this curriculum for a Landscape Science should be:

- * One that is grounded in the sciences
- * One that teaches good stewardship and sustainability
- * One that manages wholes instead of parts
- * One that builds from the top down, instead of from the bottom up
- * One that creates thinkers and problem-solvers, that is, generalists not specialists
- * One that uses design as a tool for solving the problems facing humanity in the 21st century

This new curriculum should be fashioned to train the next generation of designers to solve the problems of the future and develop in them an ethic aimed at good stewardship. It is by no coincidence that I suggest it be housed in the domain of landscape design, for the problems of the 21st century will be increasingly within the domain and at the scale of LANDSCAPE.

In proposing such a curriculum, I am drawing upon the past two decades of research and teaching that has led to the inescapable conclusion that we do know how to take care of our planet, but have not yet made the commitment to do so. I have been very fortunate over the past two decades to have had the opportunity to observe the workings of the biosphere at many levels, from the ecosystem, to global patterns of human settlement, from our own state of Florida to the Amazon and Papua New Guinea, from New York City--the greatest coral reef on the planet--to the barrier reefs off the coast of Belize. At each level, at each location, the problems are the same--some more visible than others, but always the same: how to live right, how to balance humanity and nature. I have garnered a view of the biosphere that has given understanding through comparison and has helped to develop some basic principles for developing a vital sustainable partnership of humanity and nature.

As we have traveled throughout the globe, we have explored how best to fit humanity and nature into the same landscape in a symbiotic fit. The result has been an increased understanding of how things work, and an ever increasing set of principles we feel are important prerequisites to good landscape design and management

What follows is a series of "one liners" that we have found useful; principles by which we are approaching the complex task of designing sustainable interfaces of humanity and nature. As always we take a top down approach, starting with the most general principles applicable at all scales of inquiry and end with several, relatively site-specific design parameters.

Landscape Design Principles

The correct scale from which to view any problem is the next larger scale. The biosphere is composed of systems within systems within systems like a series of chinese boxes. Each box, or system is within the next larger and is driven by the energy sources and resources of the system within which it is embedded. Analysis of a problem and designing a solution without taking one step back to view the next larger system can result in missing the main driving forces and causal actions that ultimately dictate how the system operates.

The biosphere is organized hierarchically, good landscapes should reflect a hierarchical organization. Whether we speak of transportation networks, drainage networks, the hierarchical distribution of cities in the landscape, or ecological food chains, there is an order which follows naturally