

## Designing with Natural Systems

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### The *Big Problem* of designing with natural systems

...like stakeholder groups, local and regional communities, ecologies, institutions, social movements, the shifting directions of economies, mother nature herself... is that they all have 'minds' of their own... Complex systems develop by evolving processes that are self-organizing, and have 'emergent' behavior and autonomous organization that develops inherently 'out of control'. It's a marvelous experience, though, to learn how to watch and interact with them, by reading their flows.

A good example would be the design for 'a school', recognizing that a school is also a knowledge community, with an accumulation of history and methods and attitudes that make it a living community. For that to work, the internal networks on which that content flows and in which it resides, need to be connected in the design of the program and facility for the school. Too many of the 'no child left behind' requirements, for example, cut those links within the community of schools, as, for example, restricting the time available for teachers to see each other work and share their accumulated wisdom of the message and method of the community. So, designing for the living system, in this regard, is checking to see that it's knowledge network is not interrupted by people who don't think about that sort of thing.

### The real test

What's hardest about DESIGN WITH NATURAL SYSTEMS is really that we generally have a hard time 'seeing' them. The connections, organization, behavior and content of living complex systems tend to be widely distributed, and there is little in many cases to indicate that they exist at all except the 'sea changes' in our world we notice after the fact. One somewhat better method than 'wait and see', is to watch for their growth dynamics, something that nearly always indicates the rapid evolution of some network of relationships within them, that an observant person may be able to pick out if alerted and attentive.

But THEN what do you do?? There are three choices. 1) Avoid their autonomous behavior, 2) Suppress & control their autonomous behavior, or 3) learn enough to actively engage with them as 'dance partners', facilitating for them what also works for you. It's sometimes a moral issue, whether you show the necessary respect for the things you can't and shouldn't try to control, but usually it's more of a simple practical question. Still, it takes a kind of knowledge and questioning approach to what's happening around you that we're all just learning about.

### The parts that seek you out

The parts of the complex communities of things involved with your work that demand your attention are the ones everyone else tends to see too. It's the parts most often overlooked that you find by maintaining a discipline of always exploring a little, that both you and others would miss. It includes things of all kinds, some of extra ordinary advantage, and some defining the great gaps in human perception of our living world. They look like 'nothing' at first however, so when you suggest that people use a new approach to looking for design opportunities, and you compare their 'important issues' to 'nothing', well, it's quite easy to offend. It's the simple unassuming discipline of regular exploration/recombination/refinement that builds the paths to things no one else would have ever guessed the great value of.