

Thoughts on Complexity



The observation of nature, both living and inanimate systems, reveals a beautiful complexity that operates at every scale from macro to micro. To touch on how the philosopher Whitehead put it, patterns of activity are constantly interacting with each other producing organizations of relating systems that are in constant flux, change and adaptation to each other. In every case, behaviors are present that are irreducible in their parts and revealed only in the top level hierarchy of their development when all the participating agents are present and active. This can occur in many overlapping layers with each level of relationships creating a more complex organization than the preceding level. At any level, the organization of the holistic system is more than the individual components that form it. The more sophisticated systems are present only when upper levels are complete, and are untraceable and unpredictable at lower levels of component groupings.

This phenomenon is around us in the natural world everywhere, the patterns on the surface of a body of water, the bark and branching of trees, the way the leaves react when the wind influences them. Complexity is found in dynamic manmade environments, such as the walking patterns on a crowded city sidewalk, or a packed freeway. When the manmade world blends with the natural, the potential for more and more complexity and unpredictability is presented.

Searching for complexity in working systems of the built environment offers a sophistication that can push architecture beyond the presence of form or function. It has the potential to create a living organism that can be in a symbiotic harmony with its natural environment and its biological hosts. And with this comes a changing, unpredictable architecture that offers new perception through life.