

## Commencing with Commensuration Marshall Clemens

As the world grows more complex – as the man-made world manifests more numerous, diverse, interconnected, and dynamic products, services and organizations, and as individuals assert more autonomy – there is the perception that we face more uncertainty and exert less control and that the scope of what we can reliably manage has shrunk. It seems that the kinds of prediction and control we used to have (or at least that those in positions of power had) no longer work like they used to.

This anxiety-inducing acknowledgement of diversity, uncertainty and lack of control is not simply a result of the *world* getting more complex, but is also the healthy result of our *world-views* becoming more sophisticated; we are beginning to give up some of the illusions of certainty and control with which we flattered ourselves. Paradoxically, by giving up our *illusions* of certainty and control we can start on the path to increasing our *real* certainty and control; knowing what we don't know will work in our favor.

The anxiety generated by our increasingly diverse and complex world, and the acknowledgement of our naive modernist pretensions, has generated several responses. On the one hand, a pessimistic, relativist, post-modern, incommensurable hetero-ontological reaction. On the other hand – the perspective we will argue for – an optimistic neo-modernist hypothesis that the devilish complexity of the man-made world won't drive, at least in the long run, a fractioning of concepts, language and praxis into a plethora of incommensurable enclaves, but rather just the opposite: that, as our understanding of complexity and its entailing practices advance, we will develop a consilient world view; a transdisciplinary skein of commensurable theories composed of both traditional scientific laws as well as a new scientifically-based complexity-metaphysics and complexity-heuristics. From this neo-modernist perspective, grasping the difficulty of our situation is a step forward, not a step back. By acknowledging the existence of complexity, difficulty, and variousness, and by understanding the limitations of our intellectual resources, we can begin to develop new mental models and new representations that will ultimately increase our level of certainty, control and effectiveness.

To help lay the groundwork for this neo-modernist perspective, to provide it with an epistemological base and a plausible development path, we present a typology of problems that will help us differentiate the 'simple' (the domain of traditional scientific laws and engineering practice) from the 'complex' (the domain of complexity metaphysics and heuristics). Because the nature of our practices – theorizing, problem solving, strategizing, decision making, management and leadership – should be quite different in these opposing (though always intertwined) domains, the ability to differentiate and move between them will be a key management skill. To develop this skill we must devise a practical understanding of 'complex problems' and begin to assimilate the consilient world view that underpins it. From this understanding we can begin to expand the boundaries of our rationality and thus make possible more effective reasoning and action in the face of complexity.