

# **Grand Unification**

## **Preface**

August T. Jaccaci, Dec. 2005

There are moments in the history of human curiosity and inquiry when a new way of seeing and thinking emerges and transforms our human understanding of life itself and our place in nature and the cosmos.

Grand Unification is the story of one such moment, the story of a new and different way of seeing and thinking. It is a story of exploration into the deep structure of nature using a different form of binocular vision which synthesizes the scientific rational with the visual intuitive. This different vision emerges from a new domain of thought called General Systems Theory (GST).

In this story of grand unification, general systems thinking has been used to stand on the shoulders of great visual structures of ancient intuitive wisdom and great progressive discoveries of modern scientific observation. General systems thinking has been used to combine those two root sources into a search for new general principles of order which are all-pervasive throughout nature's behavior and thereby offer breakthrough problem solving potential. When found, these principles are equally true in every domain of human discovery and endeavor. They are isomorphic which means they are identical in the structure of their process in every instance and system throughout all of nature.

Often in the history of human thought, advances in understanding are made when a new and different information set is discovered and its logic and order begin to be unfolded. Mendeleev's discovery of the periodic table of chemical elements and Watson's and Crick's discovery of the double helical structure of DNA are well known examples. As Gregory Bateson has said, "Information is a difference which makes a difference."

Grand unification is a story of the power of differences united to make a difference. It is the story of the discovery of a new and different information set which has the potential to make a beneficial difference in the course of human evolution. Humanity is at a moment in our history when conscious human evolution is a necessity for our species survival. The discoveries of grand unification offer a map for that conscious journey leading toward a new well-being for humanity and for the whole family of life on Earth.

The authors have borrowed their title, Grand Unification, from one of the names in the domain of physics for the search for a grand unification theory (GUT) also known as a theory of everything (TOE). When John A. Gowan turned forty, he decided to dedicate himself to the completion of Albert Einstein's search for a unified field theory. Out of fascination with and respect for Einstein, Gowan had thought of that search as a young man. But at that forty year milestone in his life, he took on the serious endeavor which has been for many seekers like the hunt for the holy grail of modern physics. Aided by the new perspective and methods of general systems thinking, Gowan was able to discover a new superordinate information set he called Organization of Nature. Combined with this progressive use of superordinate general systemic principles which overarch and guide the four physical forces, electromagnetism, the strong and weak nuclear forces and gravity, Gowan has been able to synthesize and offer a new unified perspective and ordering of physical reality.

Gowan's chosen general systemic principles of Conservation, Entropy, Symmetry and Causality-Information inform and guide the four physical forces. These principles are general systemic in that they are universally present and applicable to every domain of action and discovery we have ever named and ever pursued from psychology to astronomy from sociology to economics from poetry to politics. Conversely, the four physical forces sought for unification in physics, while present everywhere in material interaction, do not inform the dynamics and serve as guiding concepts to be considered in most other domains of human knowledge and creativity such as those named above.

The search for working principles with all-pervasive, overarching universality is the nature and purpose of general systemic thinking and research.

From the new perspective of general systemic discovery, when a new information set and ordering within nature is found, it can also yield answers to other old and difficult questions. August Jaccaci, working with Gowan's Organization of Nature chart, was able to combine the chart with work begun by George Land on a theory of growth and transformation. Then with modifications and expansions, Jaccaci found the complete isomorphic relation between Gowan's organized progression of nature and its developmental and evolutionary sequential dynamics of creativity and growth. Next, Jaccaci discovered the fractal nature of growth stages within growth stages that allowed him to create a map of the general periodicity he and Gowan had found. The map he called the [Metamatrix](#) reveals that all growth and evolution processes are identical in their structured staged dynamics and in their progressive developmental sequence.

The mapping process yields an answer to the ancient question of whether the life of an individual human reenacts the life of the human species, whether ontogeny recapitulates phylogeny. Since both stories of growth are each special cases of general periodicity, since both stories are procedurally isomorphic, they are the same story in both directions. Individuals reenact the species and the species reenacts individuals in the general dynamics of their growth and evolution. This discovery offers a beginning for the consideration of mapping conscious human evolution toward Earth harmonious human fulfillment.

The authors have come by their insights during a mutually encouraging and inspiring friendship of over twenty-five years. How that creative synergy has evolved is part of the story of the emergence of their visions and suggestions of a grand unification unfolding in world culture. Working together they have, of necessity, created new revealing ways to chart, map and model their discoveries in evermore natural and organic forms. In this evolving creative effort, they have been able to learn more themselves and teach others in more conceptually understandable and visually explanatory forms of expression. The intention of this work in visual thinking and communication has also been to return the understanding and ownership of cosmology, the how and why of the universe, back to the general public.

It is the authors' opinion that when the mass of humanity loses its soul-deep understanding of the universe and all of nature, this alienation is the basis for mass murder of humans and mass destruction of the environment. In the last century, such alienation, murder and destruction was ever-increasing and seemingly irreversible. Our times now cry out for a resonant and reverent reunion with all life, all nature and all universal order. Grand Unification is the story of building the gateway, the triumphant arch, to that healing reunion. It is the story of developing a new social architecture for a new world civilization. It is the story of the wisdom of the universe as it is revealed in natural order being used for the planning and enhancement of human evolutionary fulfillment.

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[home page](#)