

Elements of 'Dynamic Constellation':
Concepts and Sources for an Interdisciplinary Practice

Associating terms and methods that promote constellating consciousness

- Δ *Dynamic Constellation is a reasonably holistic approach to comprehending natural complexity's self-organizing character*
 - Δ *Its logical basis derives from scientific study of subjects such as deterministic chaos, nonlinear dynamics, and ecosystems*
 - Δ *That empirical study of self-organizing discontinuity validates similar views on interactive reality from other knowledge fields*
 - Δ *As a practice, Dynamic Constellation provides a way of correlating these methods for elaborating dynamically complex knowing*
- *Both analytical **and** imaginative, conceptual **and** artistic, these diverse approaches to interactivity represent its confounding dynamics without reducing them to predictable processes, absolute definitions, or simplistic generalizations*

Composing a General Language for use in Constellating Consciousness—
 By Combining Elaborative Elements from Many Disciplines



Correlating Diverse Methods for Knowing Dynamic Complexity

Dynamic Constellation is an approach to knowing focused upon comprehending dynamically complex interactivity. It distinguishes between linearly progressive and concurrently interactive modes for modeling phenomena to reveal how both are required for realistic understanding. The sciences of complexity and deterministic chaos provide an empirically based logic for this effort. That scientific evidence also serves to connect similar reasoning from other fields of knowledge. *Dynamic Constellation* uses a non-technical language to articulate complimentary associations of those various 'elaborating views into complexity.' The commonality of these insights about interactivity is most effectively posed by the metaphor of 'constellation.' Thus the generalized terminology developed for *Dynamic Constellation* is based around this image of '*points that compose networks of interconnections.*' This notion of constellation effectively models both the 'structure' and activity of dynamically interactive relationships—whether these develop among enzymes, words, or persons. *Dynamic Constellation* employs rational, imaginal, and experiential elements in its practices. Together these elaborate the interactivity of 'how things actually happen.' In this way, empirically factual, logically abstract, emotionally compelling, symbolically metaphorical, imaginably associative, and experientially tangible access to dynamic complexity can be brought into correspondence. *Dynamic Constellation* is itself a 'constellation' of approaches to 'opening up' or elaborating the interdependencies of life that cannot be understood by reductions to sequence, hierarchy, or oppositions such as 'the good versus the bad.'

Constellating Elaborative Approaches to Dynamic Complexity involves:

- > **Identifying concepts and attitudes that tend to reduce awareness of interactive complexities**
- > **Specifying core concepts from complexity science that foreground the presence of dynamic complexity**
- > **Rendering those scientific concepts into generally accessible terms that promote constellating thought**
- > **Correlating these approaches to complexity with similarly elaborative perspectives in other disciplines**
- > **Bringing rationally analytical views of complexity into dialogue with symbolic and metaphorical ones**

If you don't look at it more than one way, then you can't see dynamic complexity

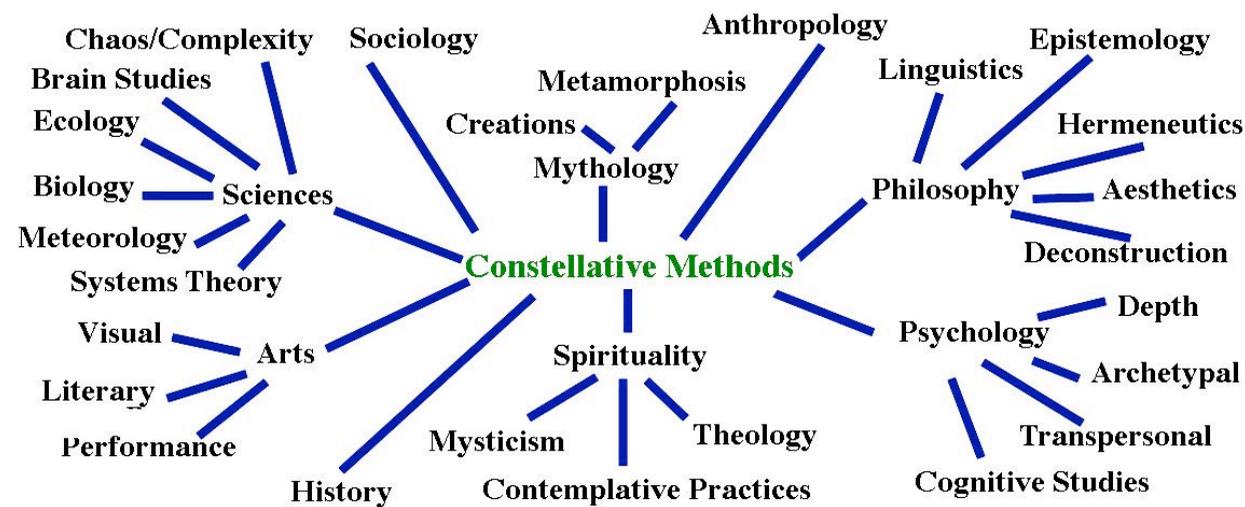
Diverse Elements of a 'Cognitive Therapy' that Expands Dynamic Awareness

Sources of Constellating Perspective are found in all Knowledge Fields and Cultural Traditions

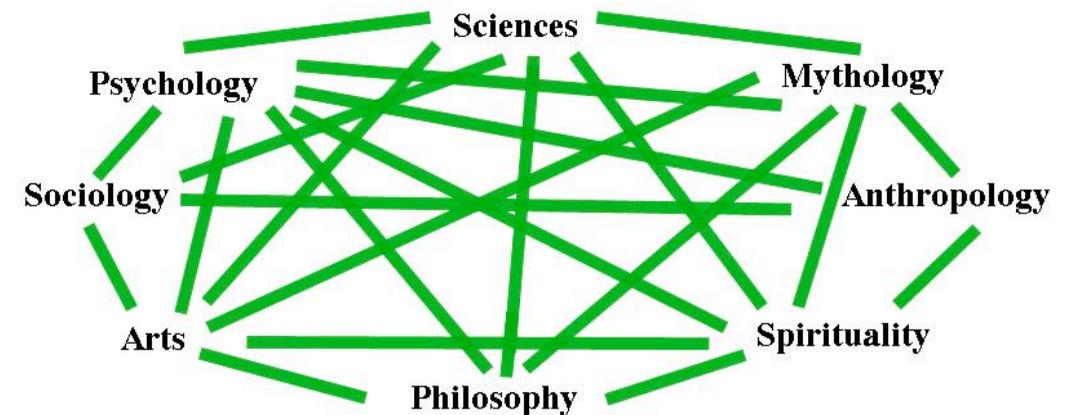
Dynamic Constellation seeks to expand awareness of dynamic complexity by promoting the perception and representation of interactive phenomena. To do so requires a constellating perspective capable of conceiving concurrent interactions and their chaotically self-organizing processes. Such insight into 'telling what happens' can be found in some aspect of every discipline of study. Those instances can be used to illustrate the role of dynamic complexity in a wide variety of contexts. Thus, the formulation of terms and practices for *Dynamic Constellation* has drawn upon a diverse range of knowledge fields and expressive styles to 'constellate their constellating qualities.' Subsequently, these have been cross-referenced in ways that enhance their promotion of dynamically holistic understanding—or what can be called 'dynamical literacy.'

In addition, aspects of various mythical, spiritual, mystical, religious, and wisdom traditions from all cultures serve to elaborate our awareness of interactive dynamics. *Dynamic Constellation* provides a context in which to 'read' these expressions as constellating approaches to understanding the intricacies of both mind and matter.

Examples of sources for constellating methods in contrasting fields of knowledge



An interactive constellation of potential correlations between constellating methods



Complexity science provides the empirical logic for composing the general terminology of Dynamic Constellation. Those terms in turn provide the basis for correlating constellating methods from other sources, bringing together empirical, rational, imaginal, and experiential approaches to knowing the extra-ordinary reality of Nature's irreducibly interactive, disorderly ordering.

Scientific Terms-- that inform *Dynamic Constellation* Terms-- that correlate other disciplinary terms--

- > **Deterministic Chaos**
- > **Nonlinear Dynamics**
- > **Self-Organization**
- > **Dynamic Equilibrium**
- > **Co-Regulation**
- > **Acausal Relationships**
- > **Decentered Networks**
- > **Phase Transitions**
- > **Sensitive Dependence**
- > **Emergent Properties**
- > **The Edge of Chaos**
- > **Disturbance Regiemes**
- > **Self-Similarity**
- > **Dancing Landscapes**
- > **Patch Dynamics**
- > **Agent Based Models**

- > **Disorderly Ordering**
- > **Interactive Causation**
- > **Nonlinear Creativity**
- > **Lateral Interconnectivity**
- > **Triangulated Relationships**
- > **Autonomous Patterning**
- > **Complimentary Conflict**
- > **Disjunctive Unity**
- > **Interarchy**
- > **Lateral Progression**
- > **Constellative Plotting**
- > **Oblique Perception**
- > **Reductive Delusion**
- > **Paradigm Pluralization**
- > **Matrix Minding**
- > **Context Interdependency**

- > **Dissemination of Meaning**
- > **Particle / Wave Duality**
- > **Co-Evolution**
- > **Totalizing Metanarratives**
- > **Epistemic Responsibility**
- > **Conscious and Unconscious**
- > **Hermeneutics of Suspicion**
- > **Nature vs. Nurture**
- > **Stakeholder Analysis**
- > **Close Reading**
- > **Deconstruction**
- > **Psychological Complexes**
- > **Patch Dynamic Modeling**
- > **Collective Unconscious**
- > **Dynamic Psyche**
- > **Sacred and Profane**

The Trans-Disciplinary Origins and Applications of a General Language for Constellated Understanding

The basic terms of *Dynamic Constellation* were generated in reference to particular concepts in the sciences of deterministic chaos and nonlinear dynamics, complex systems theory, ecology, and aspects of theoretical biology. Subsequently, the formulation of this non-technical, generalized terminology enables the identification of constellating perspectives in any knowledge field. Thus the scientific disciplines provide an empirical basis and logic for *Dynamic Constellation* which, in turn, reveals and associates similar approaches to complexity from other fields. Subsequently, *Dynamic Constellation* can incorporate the approaches to dynamically complex processes revealed in those other disciplines. Combining a general terminology with discipline-specific ones composes a broad methodology for promoting constellating perception, conception, representation, and

comprehension. This interplay makes *Dynamic Constellation* a 'trans-disciplinary' practice because it 'cuts across' disciplinary boundaries to connect their constellating aspects, rather than generating an interdisciplinary combination of their complete methodologies. But its general terms for knowing sequential and concurrent dynamics holistically can also be imported into any particular discipline to enhance constellating perspective within it. *Dynamic Constellation* also can serve to connect methodologies in an interdisciplinary manner. Its basic terms promote the application of one field's constellating perspective to the subjects of another's. Thus it can provide the context for employing ecosystem modeling to enhance constellating analysis in economics.

Some examples of inherent complexity constellation that already occurs in various disciplines are shown below.

Constellating Interactive Complexity in Various Disciplines

- > **Ecological Constellation:** configuring the interactively interdependent relationships between plants, animals, environments, & climate
- > **Psychological Constellation:** associating interactions among 'psychic contents' such as impulses, aspects of identity, social introjections
- > **Sociological Constellation:** representing mutually modifying relationships between social groups and issues as expressed in political activity
- > **Economic Constellation:** correlating interdependencies of chaotically self-organizing elements of productivity, capital, & markets
- > **Biological Constellation:** plotting interactive relations among molecules, genes, organs, & organisms regulating both change & homeostasis
- > **Philosophical Constellation:** tracking the interactive uncertainty between ideal & real, subjective & objective 'states of mind' or being
- > **Historical Constellation:** exploring concurrently active issues, agents, groups, and the 'lateral breadth' of their contingent interactions
- > **Mythological Constellation:** modeling complexes of causal forces, behaviors, & relationships through symbolic & metamorphic expressions
- > **Artistic Constellation:** creating images and forms that prompt awareness of ordinarily obscured aspects of things, contexts, relationships
- > **Literary Constellation:** language that expands awareness of concurrent, conflicted, yet complimentary causation, experience, & meaning,

Constellative Adaptation of Existing Disciplinary Methods

The actual practice of *Dynamic Constellation* seeks to selectively adapt aspects of many disciplinary fields—without distorting or misrepresenting these. At the same time, effort is made to evade their reflexive reductions. Constellative tactics and examples from eco-logical, psycho-logical, or socio-logical thought are engaged while maintaining a wary attitude about dynamically dubious mechanistic interpretations. It is important to emphasize that this selective adaptation does not inherently denigrate or challenge the value of reductive methodologies. Reductive insight is essential but can be over emphasized to the degree that it distorts dynamically holistic understanding—leading to 'reductive delusion' or what might be called 'dynamical illiteracy.' *Dynamic Constellation* does not contradict reduction but attempts to alleviate the effects of its predominance.

Four Groups of Terms and Concepts Basic to *Dynamic Constellation*

Terms and concepts important to promoting constellating comprehension can be divided into four general categories. Some examples are provided below for each category.

- > **Terms for Reductive Concepts and Attitudes**
- > **Terms for Concepts from Complexity Science**
- > **Terms for Concepts and Practices of *Dynamic Constellation***
- > **Terms for Related Concepts from Other Knowledge Fields**

1. **Reductive Attitudes:** terms for attitudes that can block awareness of dynamic complexity

This list specifies orientations to describing, explaining, defining, valuing, managing, or prioritizing phenomena that tend to reduce awareness of dynamic complexity. When any of these attitudes or issues gains dominance in one's thinking, whether consciously or unconsciously, awareness tends to become constricted. Subsequently a reflexive bias can develop about 'how things actually happen' that blocks perceiving and valuing the essential roles played by disorderly diversity, interactive interdependence, chaotic self-organization, and unpredictably creative nonlinear dynamics. Such narrowing of focus and interpretation is necessary and inevitable—nonetheless it eventually poses the need for a countervailing effort to 're-expand' awareness of complexity. Full engagement of human intelligence with reality requires an on-going dialogue between linear and non-linear, reductive and non-reductive, exclusive and inclusive perspectives. Therefore, preoccupation with any of the following is worthy of concern.

- > **Idealism:** reference to abstract and exclusive standards of 'how things ought to be' or to concepts as defining ultimate reality
- > **Materialism:** belief that existence is limited to material substances and their predictable mechanical actions upon each other
- > **Instrumentalism:** emphasizing the predictive explanation of phenomena that promotes control as the primary value of thought
- > **Fundamentalism:** as holding to simplistically basic beliefs regardless of contrasting logic, evidence, or experience
- > **Mechanism:** defining causation as sequentially progressive, proportionally consistent, & reducible to predictive 'laws' of physics
- > **Literalism:** reliance on most basic definitions of words to define reality & resistance to significance of symbolic or metaphorical expression
- > **Manipulation:** as ability to alter or influence forms and processes so as to control events, behaviors, thoughts, organizations, nature
- > **Competition:** treating relationships between entities, individuals, or systems, as oppositional struggle for advantage & dominance
- > **Prediction:** focus upon defining deterministic processes that obscures emergent and unpredictable phenomena
- > **Linearity:** in regarding truth, logic, order, or causation as progressively sequential, self-consistent, and predictable
- > **Control:** ability to impose predictable sequences on processes or systems so as to manage these and determine their outcomes
- > **Judgment:** when preoccupied with oppositional determinations such as good or bad, true or false, natural or unnatural
- > **Preference:** in pursuit of what is already desired that obscures other possible sources and states of interest, value, satisfaction
- > **Rationalism:** as limiting reasoning to linearly progressive, hierarchically self-consistent logical description that conclusively defines reality

The above are only a few of the orientations to phenomena that can obstruct dynamic understanding. Their reductive impulses are an intrinsic part of everyday life and thought. They are encountered in every field of knowledge, even at the most advanced levels of scientific research. That is why it is important to become aware of how they distort perception of dynamic complexity.

2. Concepts from the Sciences of Complexity: terms that guide the logical rigor of *Dynamic Constellation*

Scientific study of natural complexity in biology, ecology, and meteorology 'feel' much more tangible than the abstract investigations associated with chaos theory and complex systems theory. But despite this range of concrete and abstract subjects, some concepts appear with relative consistency across these disciplines of study. The science that generates these ideas is rigorously logical in applying the reductive precisions of its computational and quantitative methodology. Yet the result is a 'more than mechanistic' interpretation of 'how things actually happen.' In these instances, the familiarly reductive logical analysis of 'standard' science has been used to describe events that do not 'reduce' to predictable or controllable processes. Here, reductive techniques of measurement and calculation reveal the disorderly generation of order through unpredictably chaotic self-organizations in turbulent phenomena. The resulting concepts of this science constitute a view of causation that is remarkably different from the one most of us ordinarily use to describe reality. It is these logical principles and empirical examples that provide the basis for composing the generalized terminology of *Dynamic Constellation*. Some examples are:

- > **Deterministic Chaos:** seemingly random or disorganized activity that generates orderly, deterministic events—'disorderly ordering'
- > **Nonlinear Dynamics:** generation of additional traits not predictable from those of initial factors—'the whole is greater than the parts'
- > **Complex Systems:** interrelated parts manifesting chaotic and nonlinear yet self-regulating activity—'disjunctive wholeness'
- > **Self-Organization:** a system's internal generation of increasing complexity/order with no outer input—'autonomous reconstitution'
- > **Dynamic Equilibrium:** the role of dynamic variation in maintaining identifiable continuity over time—'unstable stability'
- > **Sensitive Dependence:** sensitivity of systems to minor perturbations that can result in unpredictable, macro scale variations
- > **Emergence and Emergent Properties:** expression of unpredictably novel qualities in a given system—'self-generated novelty'
- > **Self-Similarity:** expression of similar but not identical proportions and qualities in a system over time—'mutable identity'
- > **Feedback Loop:** the "output" of a system's activity that subsequently influences it as "input"—'self-influencing'
- > **Conflicting Constraints:** factors posing contradictory demands or restrictions upon a system's operation that can provoke its adaptation
- > **Self-Regulation:** systems that modulate their activity through feedback and response to conditions of environment—'adaptive interaction'
- > **Co-Regulation:** systems that regulate each other's activity by interacting in ways that benefit each—'cooperative mutual modification'
- > **Acausal Relationships:** conditions where some causal factors only 'appear' in future moments, making causation unpredictable
- > **Networks:** organization of structures and dynamic patterns around centralized, de-centralized, or distributed 'hubs' of connection
- > **The Edge of Chaos:** the 'boundary' between random and orderly activity that is regarded as particularly creative and adaptive
- > **Holistic Science:** an approach to scientific analysis that emphasizes 'whole' contexts or systems as the primary object of study, not 'parts'
- > **Patch Dynamics:** discrete zones of interactivity that overlap and interact disjunctively to generate a larger 'patchwork' coherence

- > **Co-Evolution:** evolutionary process that develops from mutually modifying interactive adaptations between species
- > **Phase Transition:** process of state transformation in composition and properties, such as liquid to gas, or chaotic to ordered activity
- > **Irreversibility:** effects of unpredictably disjunctive, transformative process that prohibit return to preceding states of development
- > **Disturbance Regime:** a repeating incidence of often destructive perturbation to an ecosystem that promotes its adaptive diversity

3. Concepts and Practices of *Dynamic Constellation*: Notions for promoting constellating consciousness

Terms for aspects of *Dynamic Constellation* are divided into two categories below: General Concepts and Specific Practices.

> General Concepts for Describing, Perceiving, and Representing Dynamically Complex Conditions

These basic abstract terms describing dynamic complexity derive from primary concepts in the sciences of complexity, such as those listed above. The core conceptual metaphors here are interactivity, concurrency, constellation, triangulation, and a sense of 'lateral width' to 'causal moments.' These notions, and related terms developed around them, are posed here as the basis for a trans-disciplinary terminology that can be used within any discipline of knowledge as a means of promoting elaborative perspectives upon dynamically complex contexts. As such, they are intended for use within specific knowledge fields as an addition to existing terminologies that enhances their existing constellative perspectives.

Differentiating Traits of Dynamic Complexity

- > **Concurrent Causation:** causal effects that are produced simultaneously by different sequences of actions, or concurrent interactions
- > **Interactive Causation:** consequences or effects deriving from mutual modifications occurring between multiple elements
- > **Interactive Reality:** existence as intrinsically involving concurrent, mutually modifying, irreducibly interactive causation
- > **Inter-archy:** structural arrangement of elements that promotes mutually modifying, concurrent interactivity among them
- > **Interactive Fields:** contexts of concurrent interactivity that constitute relatively discrete, dynamically complex, self-regulating coherence
- > **Irreducible Interactivity:** interactions too concurrently interdependent to be reduced to exact description or sequentially progressive process
- > **Mutual Modification:** interactions between elements that significantly alter the form, organization, or activity of each
- > **Nonlinear Creativity:** generative interaction between factors that produces novel consequences not predictable from original elements
- > **Non-Linear Relationships:** clustered interactions with divergent 'directions of causation' and multiple, unpredictable consequences
- > **Lateral Interconnectivity:** association of mutually modifying, concurrently interactive factors arrayed 'across' de-centered networks
- > **Lateral Progression:** simultaneous 'advance' in time and space of multiple causal sequences 'across' a 'field' of concurrent interactions
- > **Dynamic Complexity:** association involving concurrent interaction, mutual modification, disjunctive unity, self-organization, and nonlinearity
- > **Triangulated Relationships:** interaction among three or more elements that constitutes continuous mutual modification between them
- > **Autonomous Patterning:** unplanned, internally generated patterning in a system that can become a primary factor in its operation
- > **Complimentary Conflict/Contrast:** conditions of diversity, contradiction, or opposition that actually contribute to ordering & creativity
- > **Disjunctive Unity:** coherence of a context or system that manifests in part because of some internal discontinuity
- > **Extra-Ordinary Order:** order involving chaotic self-organization, emergent properties, nonlinear dynamics, and irreducible interactivity

Dynamically Reductive Orientation

- > **Reduction:** predominantly quantitative, definitive, materialistic, mechanistic, or elementally simplistic description
- > **Reductive Mentality:** attitudes that reflexively impose simplistic, definitive, quantitative, or mechanistic assumptions upon phenomena
- > **Mechanistic Modeling:** exclusive reference to sequential, proportionally predictable mechanics as explanation of causal processes
- > **Reductive Delusion:** reliance upon reductive, mechanistic modes of explanation in ways that obstruct awareness of dynamic complexity
- > **Manipulative Reduction:** use of simplistically reductive representation for the purpose of deceiving or gaining power over others
- > **Exclusive Reasoning:** use of particular rationales to dominate other reasonable arguments or to evade plausible evidence
- > **Ordinary Ordering:** seeking to organize processes in linearly sequential, consistently predictable, thus controllable ways
- > **Obsessively Oppositional Description:** reliance on binary dualisms, mutually exclusive categories, and conflict to represent things or events
- > **Rationalistic Absolutism:** privileging absolutely self-consistent, non-contradictory rationalization as the only source of truth or accuracy

Dynamically Elaborative Orientation

- > **Constellating Consciousness:** experiencing self and world as overlapping fields of mutually modifying, disjunctively organized interactivity
- > **Constellating Perspective:** Perceiving and thinking in terms of interactive fields involving spontaneous, sometimes chaotic self-organization
- > **Lateral Perspective:** attempts to 'see sideways' thus 'across' contexts of concurrent events and interactive relationships 'as they happen'
- > **Dynamic Elaboration:** analysis that tracks sequential as well as concurrent activity and linear as well as disjunctively nonlinear causation
- > **Oblique Perception:** tracking tangential associations among multiple elements from multiple perspectives without imposing linear sequence
- > **Non-Reduction:** using constellative perspective to defer definitive description, simplistic opposition, exclusively mechanistic explanation

Constellative Association

- > **Dynamic Constellation:** viewing contexts or concepts as dynamically complex conditions of concurrently active and interactive relationships
- > **Constellative Plotting:** diagrammatic representation of related elements tracking their actions and interactions
- > **Poised Constellation:** representing interrelationships among elements as constant or as these appear at a specified time and place
- > **Progressive Constellation:** representing successive states of dynamic constellation that track subsequent changes in factors & relationships
- > **Relational Triangulation:** investigation of associated elements focused upon discerning triads of interactivity and mutual modification

> **Terms for Practices that Promote Thinking and Applying Constellating Comprehension**

The basic terms for constellating perception and conception listed above provide a framework for conceiving more specific practices. These include specific approaches to conceptualizing, analyzing, representing, experiencing, and actively corresponding with dynamically complex contexts. Some examples are:

Evasions of Reductive Habits

- > **Bias Deferral:** conscious identification and deactivation of personal, social, and cultural biases about 'how things happen'
- > **Judgment Suspension:** taking care to postpone judgment of value while attempting to track actual interdependent interactivity
- > **Intellectual Honesty:** refusing to evade, deny, or distort reasonable assessments of evident facts in order to deceive, manipulate, or 'win'

Elaborative Styles of Thinking

- > **Thought Diversification:** deliberately employing different lines of reasoning and interpretations to explore topics and events
- > **Matrix Minding:** thinking issues and contexts through the actual patterns of their specific de-centered and distributed networks
- > **Inclusive Reasoning:** logical thought directed by a motive to account for all of observable elements and the relationships between these
- > **Paradigm Pluralization:** concurrent use of contrasting models for how things and events are structured, function, and effect each other

Interactive Analytic Methods

- > **Global to Local Scaling:** tracking relations between micro and macro aspects of interactive fields over time and space
- > **Archetypal Analysis:** tracing networks of originating elements and their interrelations that configure contexts, issues, and meanings
- > **Lateral Reading:** tracking networks of associations that extend laterally 'across' events, concepts, contexts, and organizations
- > **Triangulating Oppositions:** connecting seeming opposites to third elements to show how these are actually parts of interactive networks

Dynamically Complex Representation

- > **Network Interactivity Plotting:** creating visualized 'maps' of relationships between elements of topics, contexts, events, and concepts
- > **Narrative Therapy:** diversifying descriptive style and modality to articulate concurrency of interactivity and its non-linear relationships
- > **Symbolic Re-Imagination:** metaphorical and metamorphic representation to convey interactivity, emergence, chaotic interdependence, etc.
- > **Mythical Model Correlation:** using myths and their archetypal themes to explore interactivities of mental, social, and cultural contexts

Reflective Reorientation

- > **Identity Differentiation:** distinguishing behaviors and expressions to show the pluralistic, interactive identity in persons or organizations
- > **Cultural Contextualization:** exploring a topic's varied positions in the dynamic networks of social and cultural attitudes, practices, beliefs
- > **Reductive Manipulation Exposure:** discerning where reductive representation is used to deceive or manipulate self and others
- > **Reflexive Bias Identification:** specifying one's habitual reductions, prejudices, preferences, interpretations, and paradigmatic models

Experiential Elaboration

- > **Improvised Creativity:** generation of unplanned, emergent images, designs, or strategies through chaotically self-organizing process
- > **Discordant Continuity Awareness:** activities that prompt sensations of conflicted interconnectivity in self, others, and environments
- > **Experimental Re-Constellation:** altering existing behaviors or processes to experience changes in interactive dynamics and effects

Interactivity Incorporation

- > **Self-Organizational Facilitation:** detecting conditions that promote emergent organization in one's own thought, behavior, efforts
- > **Patch Dynamic Management:** promoting connections between elements of a context or system that facilitate its interactive self-regulation
- > **Conflict Incorporation:** engaging the potential of opposition, reaction, and misunderstanding for increasing awareness and comprehension
- > **Disjunctive Collaboration:** allowing disorganization in combined efforts aimed at shared goals to permit emergence of nonlinear creativity
- > **Self-Accomplice Activation:** dividing consciousness into reductive and elaborative perspectives that dialog to constellate interactivity

4. Related Concepts from Other Knowledge Fields: Constellating perspectives from various disciplines

Analysis of seemingly opposed conditions often reveals 'hidden' interdependencies and indefinite interactivity between them, such as the interplay of conscious versus unconscious aspects of mind or literal and metaphorical meaning in language. These interdependences are typically present in many aspects of everyday life yet are not overtly evident to ordinary assumptions. Thus they provide compelling examples of how we remain ignorant of the implicit, non-hierarchical interconnectedness that pervades our existence. Though often theoretically formulated, these 'anecdotes of interactivity' are, in effect, 'mythic tales' of the irreducible nature of dynamically complex phenomena. When looked for, these 'interactive oppositions' appear in every context of study. Most disciplines also provide illustrations chaotic self-organization, unpredictably emergent properties, and the instability of reductive description or explanation. s

Established terms for specific theories are shown in italic text below.

Specific Examples of Dynamically Complex Contexts and Concepts in Various Knowledge Fields:

- * **Brain science:** Differentiated cognitive functions in the brain whose non-linear self-organization generates a unitary consciousness
- * **Biology:** *Co-evolution* of interdependent species and the mutualism of their concurrent interactivity through mutational changes
- * **Ecology:** *Hierarchic patch dynamics* that spontaneously organize mosaic environments into sustainable networks of interactivity
- * **Cultural Anthropology:** *Participant Observation* as essential to comprehending interdependent relationships in a culture to which one is not native
- * **Ethnography:** Emphasis upon providing a holistic account of a society and its milieu that is both objectively and subjectively communicative
- * **Anthropology:** Rites of Passage as chaotic, self-organizing transformation of identity necessary for maturation and change of social status
- * **Sociology:** *Interactionism* of face-to-face relationships as the actual process of society that is not its evident its 'rules and structure'
- * **Post-Structuralism:** *Deconstruction* as revealing oppositional bias of Western philosophy and unstable basis of axiomatic assertions in language
- * **Postmodern Theory:** Collapse of Modernism's *reductively totalizing meta-narratives* as logical failure of post-Enlightenment rationalism
- * **Critical Theory:** notions of identity and truth as unstable and dependent on cultural and historical context, making definition ever problematic
- * **Political Philosophy:** individual freedom from coercion as paradoxically dependent upon collective conformity to a principle of liberty
- * **Philosophy:** *Perspectivism* as necessary use of multiple approaches to discerning 'truth' since the latter is variously composed
- * **Ethics:** 'Is vs. ought' problem of *Normative vs. Descriptive* statements and conflict between 'values' and 'facts'

- * **Epistemology:** *Epistemic Responsibility* as the necessity to 'know how one knows' in order to act ethically
- * **Epistemology:** *Foundationalism* and *Coherentism* as conflict between vertically hierarchic and horizontally associative orders of knowledge
- * **Organizational Theory:** conundrum of how the local <> global interplay of micro and macro levels of interactions generates a system
- * **Cognitive Theory:** *Computationalist* and *Connectionist* models of cognition as the contrasting metaphors of mechanism and organism
- * **Cybernetics:** *Second Order Cybernetics* of observing mind observing systems and the inherent objective < > subjective interplay of knowing
- * **Linguistics:** *Signification* as an interminable interplay among signifiers that prevents unequivocal meaning in language
- * **Methodology:** *Notational Bias* in methodology as tendency 'a method of description' to define reality through the bias of its terms and concepts
- * **Hermeneutics:** *Hermeneutic Circle*—all parts of a 'text' and their relationships to each other and the whole as required for understanding.
- * **Developmental Psychology:** *Nature vs. Nurture* and the self-organizing developmental interplay between inherent qualities and experience
- * **Economics:** *Free markets* as most vital and productive yet only free when compulsively regulated to preserve competition
- * **Political Science:** *Post-realism* in which 'reality' is regarded as created by global actors joined in global networks of thoughts and rhetoric
- * **Psychology:** Conscious vs. Un/Sub-conscious aspects of mind as separate but also overlapping areas of mutually modifying psychic process
- * **Historiography:** Scientific 'revolutions' as unpredictable, disjunctive shifts in dominant paradigms for reality, rather than consistent development
- * **Art History:** Modern Art as 'visions of vision' whose various styles explore different modes human's use to conceptualize reality
- * **Literary Criticism:** *Reader-Response Theory* as the emergent creation of meaning that occurs only in the reader's mind, not the text itself
- * **Musicology:** Atonal and *Chance Music* as expressing an inherently self-organizing emergence of coherent syntax
- * **Poetics:** Poetic diction as a confounding of ordinary grammar and syntax to reveal unacknowledged, extra-ordinary meaning and experience
- * **Mythology:** *Sacred and Profane* states of being as both opposed and interdependent
- * **Theology:** Polytheism and monotheism as contrasting models of 'divine order' that imply different dynamics of natural process
- * **Religious Studies:** Mysticism as intuitive perception of 'hidden' or extra-ordinary aspects of causation, order, and meaning
- * **Cosmology:** *Big Bang* as scientific version of ancient cultural myth of creation by chaotically self-organizing emergence
- * **Hermeticism:** Alchemy as systematic symbolization of inherently self-organizing transubstantiations of matter and consciousness
- * **Ritual Studies:** Induction of altered states of consciousness as experiential access to 'natural order' that is beyond societal description
- * **Systems Theory:** *Adaptive Systems* as capable of accommodating to changes in both internal and external environments through *Feedback*
- * **Educational Theory:** conflicting goals of promoting individuality and conforming individuals to social norms of behavior, value, knowledge
- * **Gender Studies:** sexual identity as 'constructed' from an interplay of biological, developmental, social, cultural, and individual elements
- * **Social Ecology:** human destruction of ecosystems as consequence of insufficiently complex cultural orientations to natural processes
- * **Aesthetics:** *The Beautiful* and *the Sublime* as the related yet conflicted attractions to 'orderly beauty' and awe's threatening turbulence
- * **Phenomenology:** Subjective experience or 'things of thought' as objective realities that have literal, causal impact on material phenomena
- * **Moral Philosophy:** *Free Will* as incompatible with the concept of a fully deterministic, mechanistic process of causation and reality
- * **Business Management:** *Stakeholder Theory* in regarding all persons impacted by a system or organization as 'legitimate stakeholders'

Examples of Hybridized Terms for Identifying Topic- or Context-Specific Dynamic Complexity

Associating the general concepts of *Dynamic Constellation* with discipline-specific concepts, such as those outlined above, suggests possible combinations of the two groups. This can produce terms more focused upon interactivity and constellative perspective in the contexts of specific fields of knowledge. Such as:

- > **Poetic Constellation:** use of poetic diction's novel word associations and manipulations of grammar to reveal dynamically complex meanings
- > **Pictorial Interactivity:** images as presenting concurrently interactive relationships between multiple elements to perception and consciousness
- > **Rationally Constellating Relativism:** relativistic reasoning that correlates logical inconsistencies as interdependent parts of complex systems
- > **Historical Lateralization:** 'reading' historical development as 'multi-vectored interactive field emergence' rather than sequential linear process
- > **Musical Concurrency:** concurrence in music as both the simultaneous sounding of notes and their overlapping resonance in consciousness
- > **Eco-Coherent Instability:** the necessary role of "disturbance regimes" in maintaining ecosystem vitality and continuity by disrupting it
- > **Ritual Concurrency Induction:** physical and imaginal practices producing sense of concurrently interacting elements of identity or causation
- > **Sociopathic Societal Self-Organization:** inherent role of social disorder in maintaining existing continuities as well as emergence of new ones
- > **Un-Decidable Determinism:** scientifically reductive determination that some aspects of causation are unpredictable, some 'problems' unsolvable
- > **Psychodynamic Complexing:** interactive, interdependent networking of 'psychic factors' that exert sustained influence on identity and behavior
- > **Mytho-Logical Epistemology:** modeling irreducible interactivity with fantastic representations that confound ordinarily reductive expectations

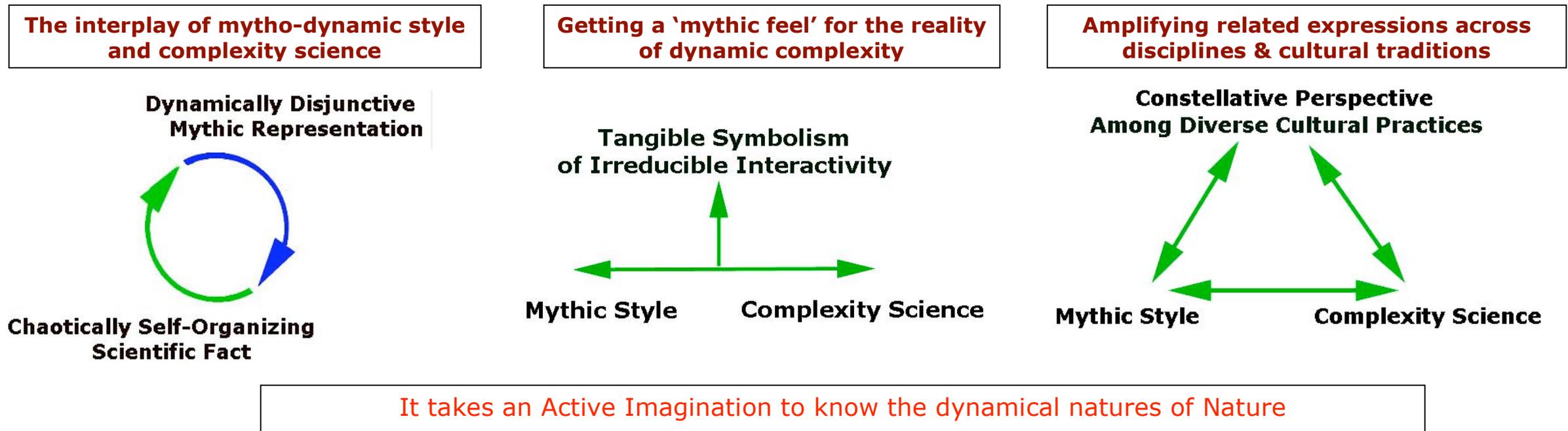
Constellating perspective brings empirical science and imaginal myth together
as complimentary portraits of dynamic complexity

The Surprisingly Mytho-Logical Science of the Art of Comprehending Complexity

As shown above, *Dynamic Constellation's* generalized approach to modeling complexity derives from and is useful in quite different disciplines of study and expression. However, its most potent affects on our overall consciousness derive from the unexpected conjunction of empirical science, symbolic art, and fantastical myth. In the 21st Century, it is scientifically reasonable to state that some aspects of reality are inherently unpredictable and irreducibly interactive. Thus, comprehending dynamic complexity means knowing factually *how it cannot be known in advance*—and, often, neither controlled nor defined as linear process. That view is actually not original to modern science. Wisdom traditions from many pre-modern cultures reiterate a theme about the limits of 'knowing for sure' and 'being in control.' The pre-modern methods for knowing this evident truth involved mythical imagination, artistic representation, the paradoxical language of poetics, and the mind-altering experiences of music, dance, meditation, and ritual. Through such extra-ordinary imagery, language, and psycho-somatic practices, archaic cultures induced shifts in awareness and understanding that can be termed 'mytho-logical.' Notions such as 'the Tao (or 'way of Nature') that can be written is not the Tao'

and 'God cannot be named' indicate comprehension that natural systems are ultimately too complex to be defined. Imaginations of an 'animated world' in which 'things' appear to act with intention, along with polytheistic pantheons of quarrelsome, impetuous gods and goddesses generating conflicted sources of synergistic creativity, compellingly model the tumult of natural systems.

Such 'visions' express what can be termed the 'mythic logic' of concurrent interactivity, chaotic self-organization, and nonlinear dynamics. Thus the 'irrationality' of myth appears dynamically reasonable when related to its analytical counterpart in complexity science—both assert similar dynamical views of complexity. Both myth and complexity science can re-orient human consciousness toward the literal mysteries of interactive reality. In our present 'age of fundamentalist mechanism,' both are required to awaken us from reductive delusion. It is appropriate therefore to speak of the 'art of mytho-logically scientific understanding.' The concepts and practices of *Dynamic Constellation* facilitate this conjunction of archaic and contemporary approaches to comprehending dynamic complexity. Together, they emphasize the shared significance of constellating perspectives appearing across diverse cultural traditions.



Dynamic Constellation in Symbolic Cultural Practices and Wisdom Traditions

Constellation of the dynamic complexity in interactive networks is not new. Human cultures have generated practices for knowing Nature's extraordinary dynamics since prehistoric times. The concepts of *Dynamic Constellation* inspired by complexity science enable us to identify and engage those cultural practices as part of our modern epistemology for realistic knowing. These traditional methods include the used of symbolic

imagination in cultural manifestations such as shamanism, mysticism, religion, the arts, and literature, as well the more abstract reasoning deployed by 'wisdom traditions' such as Taoism and Zen. Such traditions often combine symbolic expressions with rational approaches to engaging the interdependence of linear and nonlinear, sequential and concurrent causation or singular and pluralistic states of being. As 'un-modern' as these approaches to realistic knowing might seem, they actually remain important for their capacity to make complex understanding tangible. These elemental modes of human understanding have been given renewed significance by the empirically based insights of complexity science. Below are some brief suggestions of how these

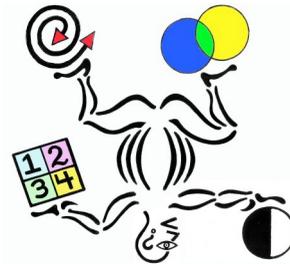
The General Categories:

- > **Mythology:** tales and images of confounding interconnectivity and emergent metamorphosis
- > **Shamanism and Mysticism:** tangible encounters through imaginal experience of encounters with 'extra-ordinary forces of order'
- > **Religion:** contexts for engaging the autonomously emergent coherence of creation as both mysterious and sacred
- > **Wisdom Traditions:** applications of reason to comprehending the paradoxical natures of Nature's dynamic complexity

Some Specific Examples:

- > **Taoism:** in the notion that Nature is guided by a 'force' that cannot be named or described
- > **Yoga:** as practices that expand awareness of mind and body beyond ordinary perspectives
- > **Zen:** in its use of meditation to provide an experiential understanding of non-reductive consciousness
- > **Alchemy:** in seeking to discover the 'inner' or spiritual essence that causes one thing/status to change into another
- > **Astrology:** in configuring the individual life course as a non-hierarchical interplay of earthly and celestial relationships
- > **Tarot:** in offering continually different reflections of how interdependent factors and impulses might be the sources of one's emerging life issues
- > **Sufism:** in the notion that nothing one does defines god, suggesting that whatever 'orders' the world is somehow unpredictable and unknowable
- > **Buddhism:** in promoting an experience of 'no-self' as the more inclusive state of consciousness and capacity for knowing reality
- > **Hinduism:** in representing even the super-natural gods as manifestations of some other impetus that 'self-organizes' the cosmos ("Brahman")

To constellate complexity is to juggle many perspectives and methods all at once



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