

Business for Social Responsibility

Fractal Dynamics and CSR

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About the Author

Pravir Malik is Managing Director of Advisory Services at BSR. He is also the founder of Aurosoorya (www.aurosoorya.com) and the architect behind fractal dynamics as applied to complex organizational entities. Please contact him at pmalik@bsr.org for more details on applying fractal dynamics to address CSR problems or to organize a fractal dynamics workshop. You may also begin to explore CSR aspects of fractal dynamics to a greater extent on the BSR website at www.bsr.org/fractaldynamics.

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- FractalKey: http://www.aurosoorya.org/fractalkey/index.htm
- Level 1 (StressManager): http://www.aurosoorya.com/fractalkey/stressmanager/authorize.php
- Level 2: (EI Builder): http://www.aurosoorya.com/fractalkey/emotional_int_builder/authorize.php

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Fractal Dynamics and CSR

By Pravir Malik, Managing Director, Advisory Services at Business for Social Responsibility

Albert Einstein remarked, *"The world we have created is a product of our thinking; it cannot be changed without changing our thinking.*" What is notable about this statement, besides the implication that solving dilemmas requires a different framing, is that there is a *fractal* embedded in it. "*The world*" is linked to "*our thinking*"—two different layers of reality are connected together by a common pattern. This article probes the use of fractals in "changing our thinking" and begins to apply fractals to some of the dilemmas we face in the field of corporate social responsibility (CSR).

Why Fractals?

Fractals are patterns that repeat themselves on different scales. A common example is broccoli, where the base-pattern (floret) repeats itself to determine each subsequent level and the final shape of the broccoli. The discovery that Nature has designed many structures, including the most trivial, across physical reality with such economy and foresight has placed significant shaping power into the hands of engineers and scientists.

Recent research conducted by systems-based solution center Aurosoorya (summarized in my "An Introduction to Fractal Dynamics" in the October 2004 issue of the *Journal of Human Values*), indicates that a vast range of dynamic phenomena in life, including individual behavior, functioning of teams and organizations, market dynamics, movement in economies and even movement of encompassing systems such as the environment and society similarly display fractal dynamics.

Do complex organizational structures also exhibit fractal properties? If so, there are a couple of significant implications.

First, study of fractals in organizations involves self-similar patterns across different scale. Here, scale can be thought of as the different layers that comprise an organization, including the individual, the team, the corporation itself, the markets in which the corporation operates, the environment and the societies in which the corporation is involved. Examining self-similar patterns in these layers inevitably thrusts us into the heart of CSR, which focuses on the practical interaction between these layers.

Second, since a fractal is perhaps Nature's most efficient manifestation of a system, fractal representation of organizations could provide a powerful and efficient systems framework to represent and address complex organizational problems that are common in the field of CSR.

Applying Fractal Dynamics to CSR

What is unique about a fractal system is that the base-pattern (such as the floret of broccoli) determines the structure of the entire system. *Discover and change the base-pattern, and the entire system can change as a result*. In Aurosoorya's research, an organizational base-pattern that determines the nature of an organizational system has been identified. This pattern, referred to as the *organizational-fractal*, is characterized by progression through three phases:

- The *physical phase* can be thought of as a range of experience where organizations, individuals and markets are viewed as unchangeable.
- The *vital phase* can be thought of as a range of experience where experiment, often of an assertive nature and involving diverse flows (even flows of emotion), is the most important motive.
- The *mental phase* can be thought of as a range of experience where organization around ideas and by the intellect is the most important motive.

Each subsequent phase provides the controlling entity with greater degrees of freedom to shape reality. If the base-pattern of an organization exists at the physical level, then the entire resulting system will also tend to exist at the physical level; circumstances may not be viewed holistically, and externalities and hidden costs to the organization will be high. As the base-pattern progresses through the vital and the mental phases, the entire system progresses, and externalities and hidden costs are reduced. This is significant given that a major thrust in CSR is about reducing externalities and hidden costs.

As an example, in the energy industry there are three primary strategies: extraction, efficiency and development of alternatives. It is easy to think of these strategies as unrelated, but on closer examination they map onto the organizational-fractal: "extraction" (maximizing energy from a "fixed" world) maps onto the physical phase, "efficiency" (optimizing the "flow" of extracted energy) maps to the vital phase and "development of alternatives" ("out of the box thinking") maps to the mental phase.

Some insights derived from the realization that these strategies are part of a single fractal-system include:

- There is a sequential reality to the emergence of the fundamental strategies. The most active strategy may today be extraction, but it will tend towards efficiency and then on to development of alternatives.
- To continue with a strategy that is at a lower level creates externalities that will become the force that propels the industry to a higher level.
- Failure to act on externalities not only blocks but, in the longer term, substantially retards progress. To go against the nature of the seed (or the progression through the three phases) is to destroy the springs of vitality.
- What is at the physical level represents the past; what is at the mental level represents the future.
- The parts of an industry or organization that have created progressive strategies have likely done so by creating conditions that have allowed the base-pattern to shift from physical to vital to mental.

- The base-pattern is the most important element in proactively shifting an organization or industry toward the higher levels. The key problem is how to facilitate the movement of the base-pattern from physical to vital to mental.
- Thought at the individual level must change. There is an infinite amount of energy all around us—in the atom, from the sun. The scarcity is in our thoughts, which may be stuck at a physical or vital level and are unable to envision possibilities that lie beyond these levels.
- Subsequent layers (for example, teams, organizational culture or approach to market) should be designed to encourage movement from physical to vital to mental at that layer. But of critical importance is the design of those layers to facilitate base-pattern movement and to become more receptive to shifts that occur at the base-level.
- Unlike the base-pattern that is found in fractal systems across physical Nature, organizational base-patterns, and thus the entire organizational-system, can be changed.

What Is Next?

Fractal dynamics provides insight into some fundamental questions about the future of CSR. How might the field of CSR evolve? Will there be a need for CSR? How can a progressive and sustainable economy be established? How can corporate attention shift from current compliance-based practices of establishing codes of conduct to a fundamental corporate repurposing based on truly addressing human, social and environmental needs?

It is perhaps of little surprise that fractal dynamics was intuitively grasped by such effective individuals as Gandhi and Einstein many decades ago. Gandhi is known to have stated, "*Become the change that you wish to see in the world.*" This statement is imbued with fractal reality: by changing the base-pattern ("*Become the change…*"), the subsequent levels of an organization, and its entire interaction and approach to the market, environment and society, are also fundamentally changed.