

## “The Science of Fire”

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Consider the notion that we cannot live in a state of growth and a state of defense at the same time. Growth, adaptation, *evolution* – these phenomena occur when we operate in energy rich states. Defense, on the other hand, represents an energy poor state. Defense is a state of contraction. It is a physiological and often psychological state of limitation.

In a restorative paradigm, homeostasis is a pinnacle of health. It refers to a constant internal state that is stable, or unchanging. If we are operating from defense, homeostasis is attractive because it offers comfort in stability. Homeostasis is energy neutral. It ensures that you have just enough energy to control for the status quo, but no more. Although a step up from defense, homeostasis will not yield the energy for progress, the extra energy needed to transcend the status quo. In this sense, it too is unlikely to yield growth.

The good news is that *nothing about the phenomenon of life is static*. As biological beings, we constantly exchange energy, matter, and information with the environment. As biological beings, our thermodynamic center exists far from equilibrium. This means we are self-organizing – we dance between states of dynamic balance and fluctuation. Internal and external fluctuations can bring a system that exists far from equilibrium to a threshold, known as a bifurcation. The consequences of bifurcation are significant - they present the opportunity to completely alter modes of behavior.

Homeodynamics is an energy rich theory that accounts for the capacity of living systems to respond creatively to stressors, which leads to new dynamic states. Once a new stressor is encountered, the organism never returns to its previous state, but establishes a new dynamic balance appropriate to the newly integrated experience.

Operating far from equilibrium, the stressors of life introduce bifurcations that we can react to in defense, try to statically control, or adapt to as a new step in our dance - depending on the baseline energy state at which we exist.

Nature, like the biological beings it includes, is self-organizing. Max Planck, the physicist who derived quantum theory, observed that Nature has a tendency to move toward states of increased entropy (chaos/randomness). This might seem at first glance paradoxical, unless we appreciate that increasing entropy corresponds to spontaneous evolution in the system.

Nature “chooses” to favor irreversible processes, because the state resulting from a transformative process is simply more “attractive” than the state resulting from a reversible process.

Reversible processes, those described by classical dynamics, refer to systems at equilibrium. In classical dynamics, since all states are considered equivalent, reversing momentum and reversing trajectories (of all points) will have the effect of going “backward” in time.

Since biological beings and Nature exist *far from* equilibrium, it is not wholly appropriate to apply the concepts of classical dynamics to their behavior. Biology and Nature evolve. Each stressor/bifurcation represents a choice beyond which no return can be made to a prior dynamic state. An *event* has transpired, one that cannot be undone or forgotten by the system. In this way, the notion that we can return to a prior state is not physically, psychologically, or actually possible.

Accordingly, it is time we transform our orientation to health from a restorative model that seeks to bring a person back to a “pre-disease/pre-injury” state to a reorganizational model that empowers a person to grow and evolve to greater levels health and wellness.

Chiropractic is the Science, Philosophy, and Art of things natural. Although thermodynamics is considered the science of fire, the philosophy of fire is nowhere more evident than in BJ Palmer’s declaration, “It is better to light one candle than to curse the darkness.”

The science of fire teaches us many things, but perhaps most importantly that *ignis mutat res*. Fire transforms things. I encourage you to light the fire within your own heart. Realize that you are accountable to the energy state you are in, and that there is a difference between the spark of defense, a static flame, and a roaring fire.