The Chaos of Health and the Linear Loops of Illness

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I propose that all biological systems oscillate from a *chaotic core* to *states of linearity* and each condition is detectable by the interval of measurement applied. Health resides within bioinformational fields of *oscillating coherence* contained by unstable horizons. Illness occurs when the state of linearity disconnects from its chaotic core and begins to loop in isolation.

The linear state of a heartbeat is determined as a function of the *time interval* applied to measure the cardiac rhythm. Since the interval is a per-minute measure, seventy-two beats per-minute is considered normal and it has linear predictability. But if the time interval of the measurement decreases, the linearity destabilizes as it approaches the heart's chaotic core.

Similarly, blood pressure, levels of leukocytes in the blood and other biological recordings of linear states, would reflect increased chaotic activity if the *space interval* of measurement (i.e. volume) is reduced. Organs and other biological systems appear exclusively linear because the time or space intervals chosen to measure them are not reduced sufficiently to reflect their chaotic core. Just like mind and body should not be selectively divided into psychosomatic and organic pathology, health and illness should not be restricted to a linear model by the time-space intervals of measurements used to establish normal *linear limits*.

I argue that biological systems maintain health in a continuum of oscillations between chaos and linearity. When the linear spectrum disengages from its chaotic core, it isolates from the bioinformational field coherence into endless loops of self-destructive replications. While health maintains a delicate balance between the novelty of chaos and the predictability of linearity, illness is a fixation of isolative loops that disrupt the cohesive balance necessary to sustain life. Health is *cooperative chaos* and illness is *isolative linearity*.

A comprehensive theory of biology should explore health and illness beyond the linear states of living systems. I present a biological model of oscillating coherence that sustains equilibrium between chaotic novelty and linear predictability. Conventional biology is selectively linear because the observational tools chosen to determine function, measure intervals of activity that do not detect the chaotic core of living systems. The concept of a chaotic core with linear states can be applied to understand the transition from health to illness. Panic attack disorders and fibromyalgia will be discussed as examples of how a theory of oscillating coherence can be applied to treat disease.

Key Words: Oscillating Coherence, Cooperative Chaos, Isolative Loops