



## Phase Transitions

The original concept of a Phase Transition referred to changes in physical state.

Such as clouds turning to rain. Ice melting. Water becoming steam.

Complexity Theory absorbed that definition and expanded on it to include a wide range of transitions.

With the demarcation being whenever the overall behavior of a System changes; emerges with an alternative pattern; breaks with the symmetry of what had gone on before; depending on the parameters set, Phase Transitions are happening all around us all the time.

We learn. We grow. We heal. We become responsible.

We stir cream into our coffee. People fall in Love.

Sensitivity to Initial Conditions describes how such Phase Change is possible.

Agents of Complex Adaptive Dynamic Systems are Free.

Their response to information they encounter is not determined.

A single small act can meet with resonance. Become reiterated.

Cascade upward, downward, sideways, throughout the Networks.

Changing the overall pattern of the System.

Phase Transitions often happen when a System evolves to the Edge of Chaos.

If the Adaptations that the new environment requires are met, the System can continue to evolve.

But if contradictory forces obstruct the Changes called for, Agents risk System-wide failure.

A major Bifurcation, a Phase Transition, offers a possible course of rescue.

Complexity Theory sees Phase Change happening not as imposed from without, or coming down from above; nor controlled by any central or external management;

But rather as effected by the Agents themselves, those who make up the System, Self-Organizing as they exercise their Freedom, producing the redemptive strategy.

The Story about Ourselves and our World needs re-telling.

Defending the Self-as-Separate Narrative doesn't make sense anymore.

Eating Others — whether vegetable, fungus or animal entails a Responsibility.

The Truths we hold to be Self-evident imply a Moral code.

At the Heart of our Physical and Biological Being we find we're made of Love.

It's not too much to expect the unexpected of Ourselves.

Wonder yet unseen.