### A Universal Experience - Emergence to Engagement

# Learning to Use More of The Commons Total Supply Existing User Shares Creating More Supply = Efficiency in Depleting Resource Before Diminishing Returns System Growing as a Whole MOST PRODUCTIVE ROSPER THE LONGEST INTENSIFIED COMPETITION FOR DECLINING 100 YEARS ? After Diminishing Returns **Layers Growing Apart Timely Response Smooth Adjustment** rences in changing growth paths - Early or Late Multiplying yourself to Approaching a balan FY<sub>0</sub><OpLim, Y<sub>1</sub>=Y<sub>0</sub>\*(1+RateConst\*(1-Y<sub>0</sub>\*(1F Before = 0 ,else = 1/Si **Delayed Response** Disorderly Adjustment "Models Learning Change"

#### As a Development Process In an Environment



Develop from Seed to Integrating With the Whole ,,, Opportunity & Risks

## Internal and External Growth & Development Quantitative - then - Qualitative Or = Constraints

Cheaper Resources
Cascading Discovery
Growing Freedom
Increasing Control
Self-Identity
Liquidity & Surplus
Consuming Environ

Expansion

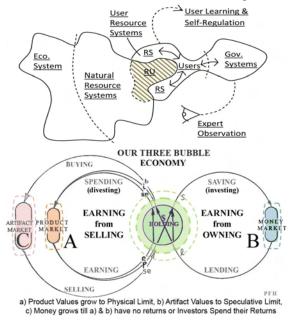
Resource Balance
Learning to Explore
Maximizing Freedom
Compatibility, Integration
Self-control, Refinement
Liquidity & returns
Discovering Community

Depleting Resources
Learning Difficulty
Erupting in Conflicts
Resistance, Instability
Rules, Complication
Rigidity at Collapse
Break up in Disputes

Efficiency in Interaction

Conflict

#### As a Cell of Relationships In an Environment



Multi-Tier Regulation after Elinor Ostrum Stakeholder networks communicate to learn whole system responses, and assure responsible investment.

after J M Keynes
Anticipating constraint
switch from investing
savings to multiply
savings, to spending
returns on other values.

Stable Free Markets

Creditor fiduciary duty in using proceeds of selforganization of others.



#### Systemic Risk - Anticipatory Forensic Methods

Plan for the worst enough to see it coming in time.

- Ask What regulators afraid they can't prevent.
- 1) The economies lending themselves more money than they are able to produce or lend themselves?
- 2) Having dependency on depleting resources drive costs to the point of widespread insolvency?
- 3) The need to manage a global bankruptcy and a settlement between creditors for the world economy due to #1 or #2?

Total credit = Total debt

- How to manage a global bankruptcy
- 4) Gradual Bankruptcy, requiring creditors to spend earnings for targeted economic stimulus if the economy owes more than is can earn.
- 5) Exempt earnings from or in critical sustainability investment as exempt.
- 6) Treat assets saved from earned income as a higher class than savings from unearned income.

Find shape & location of developing systemic behavior

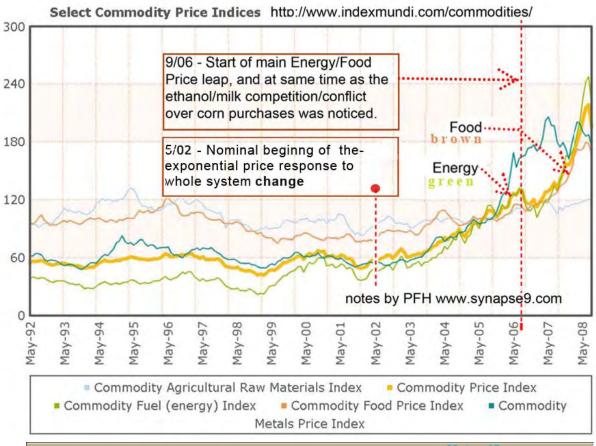
- Continuity tests of time-series data
- 7) Step variance test (rule out random walk)
- 8) Smoothing Sensitivity Test
- 9) Derivative smoothing and Dynamic mean
- 10) Compare smoothing independent sub-series
- 11) Map zones of regular proportional change

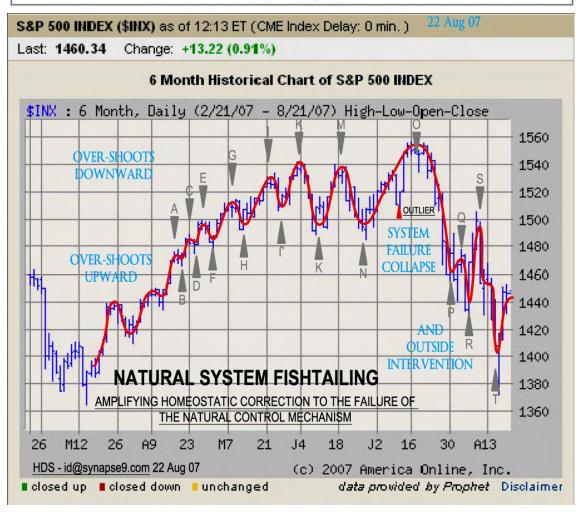
Early signals of emerging systemic dysfunction

- Types of systemic collapse to look for
- 12) Where nature doing something complex simply
- 13) "Fishtailing" market fluctuations (like 2007 S&P)
- 14) "Law of limitless price" as markets shift from "costplus pricing" to "necessity & speculative pricing"
- 15) Diverging parts of once coordinated systems
- 16) Changing environment character, conflict, hoarding, etc., cultural numbing to approaching dead ends.
- Notice nature taking over

Distinguish information from organization

- 17) Idea of nature as information a cognitive design
- 18) Nature as cellular processes cognitive dissonance





### The Ecology of Mankind - Energy Budget

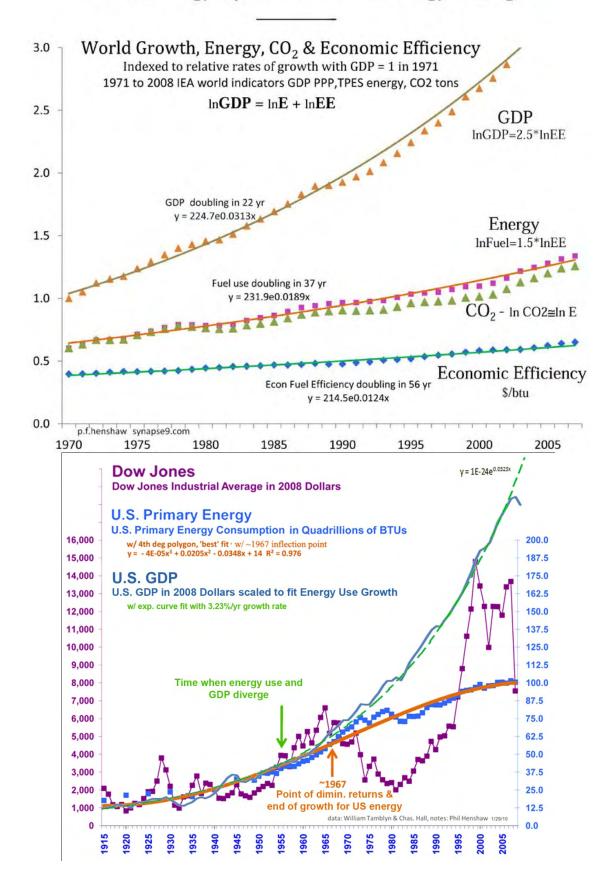


Figure 1: Shadow Bank Liabilities vs. Traditional Bank Liabilities, \$ trillion<sup>4</sup>

With Overlay of US GDP unInflated from 2008\$ GDP

by 60yr average rate of 4,21%/yr

US gdp tot overlay

Us gdp tot p.henshaw synapse9.com

Supply 1999 - Expon. (US gdp tot) y = 1E-60e<sup>0.0736x</sup>

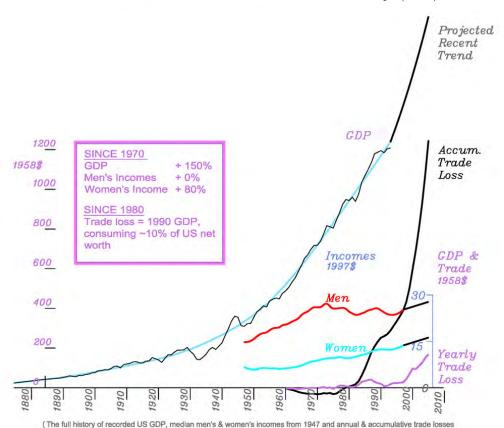
Source: Flow of Funds Accounts of the United States as of 2010:Q1 (FRB) and FRBNY.

1985 1990 1995 2000 2005 2010

Traditional Bank Liabilities

**9**0

Shadow Bank Liabilities



from 1960, all in constant \$, dotted line trends are projected beyond the data collected) ...phil henshaw - id@synapse9.com

### Ownership Is A Closed Money System

creating value expands wealth & markets, with money printed to limit inflation

