

***Our World's Economic  
Evolution:  
Breakdown or Breakthrough ?***

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# Plan

- Choosing Our Future
- How?
- Why?
- Conclusion

# Choosing Our Future

*“The best way to predict the future is to invent it”* (Alan Kay)

- All our large scale systems (education, healthcare, economy, money, cities, energy, transport, etc.) have been invented or perfected for the industrial age.
- They are all out of date, and will need to be changed...during our life time.

# Example: Choosing Our Future

Stefanie => Green Cities?

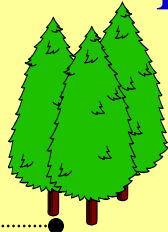
## Requirements:

- Reducing energy consumption by 80%
- Grow in the cities 70-80% of food needed
- Invite biodiversity back
- High quality of life for all
- Perpetual learning environment for all

# Money as a Motivation System

- None of this will happen with today's money as predominant mass behavior motivation system.
- Prevailing Hypothesis: Money is “value neutral”
  - Money is a passive medium of exchange that simply facilitates exchanges.
  - The type of money used doesn't affect the type of *investments* made, the *kind of transactions* performed, the *relationships* among users.

# Example: types of investments made



10 years

\$ 100

Physical Reality  
(Tree Metaphor)



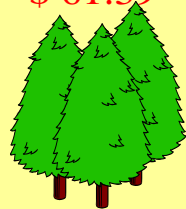
100 years

\$ 1,000

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Currency with Positive  
Interest @ 5%/year

Value discounted to today:



\$ 61.39

## Financial Viewpoint



\$7.60

**Consequence: all financially motivated choices are  
programmed towards short-term thinking**

# Three Simple Questions

## ***1. Who creates National Money?***

- The Governments?
- The Central Banks?
- Someone else?

## ***2. How is National Money Created?***

- By the Printing Press?
- By Debts with the Banking System?

## ***3. How is the money monopoly enforced?***

- By law?
- By taxes?

# Definition of Money

- ◆ Economic Textbooks always define money by its *functions*:
  - ◆ Unit of Account
  - ◆ Medium of Exchange
  - ◆ Store of Value
- ◆ Our working definition:

Money is an *agreement* (usually unconscious) within a *community* to use something as a *medium of exchange*.

# Plan

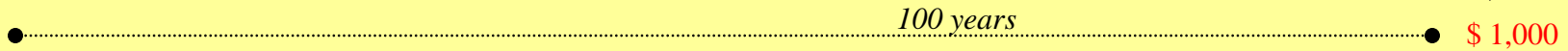
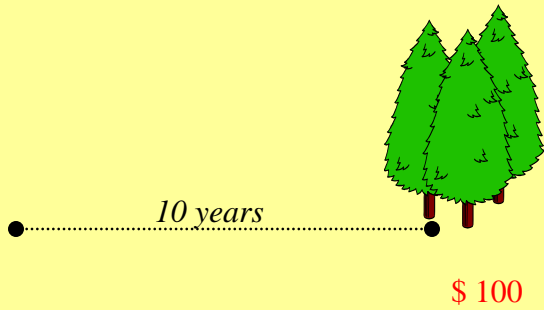
- Choosing Our Future
- How?
  1. Terra
  2. Boons
  3. Social Purpose Currencies
- Why?
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# My Proposals

- We need an ***Ecology of Currency Systems*** each with specific aims, functioning as ***complements*** to national bank-debt moneys.
- Includes for example:
  1. **Terra**: a **global currency** that is nobody's national money, and that makes thinking long-term profitable
  2. **Boons**: **Intentional city currencies** empowering local governance with the financial means to realize their citizen's vision
  3. **Social purpose currencies** to address poverty, aging population, wellness, learning, and other transition issues.

# Terra as Global Currency

Physical Reality  
(Tree Metaphor)



Currency with Positive Interest @ 5%/year

Value discounted to today:



## Financial Viewpoint

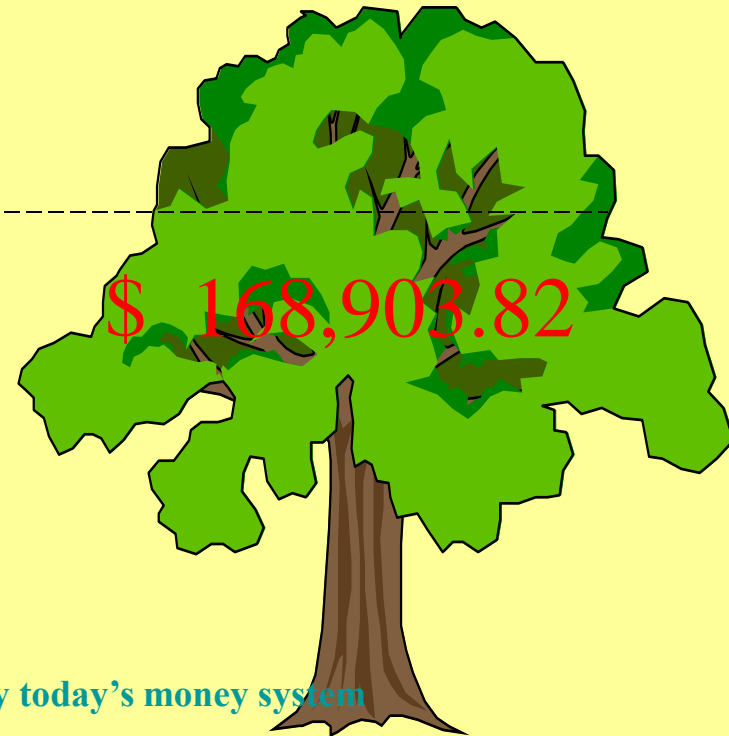
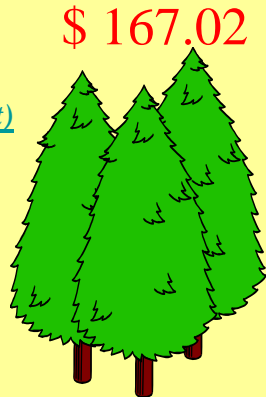
\$7.60



Currency with Demurrage @ 5%/year

Demurrage = time-related charge (opposite of interest)

Value discounted to today:

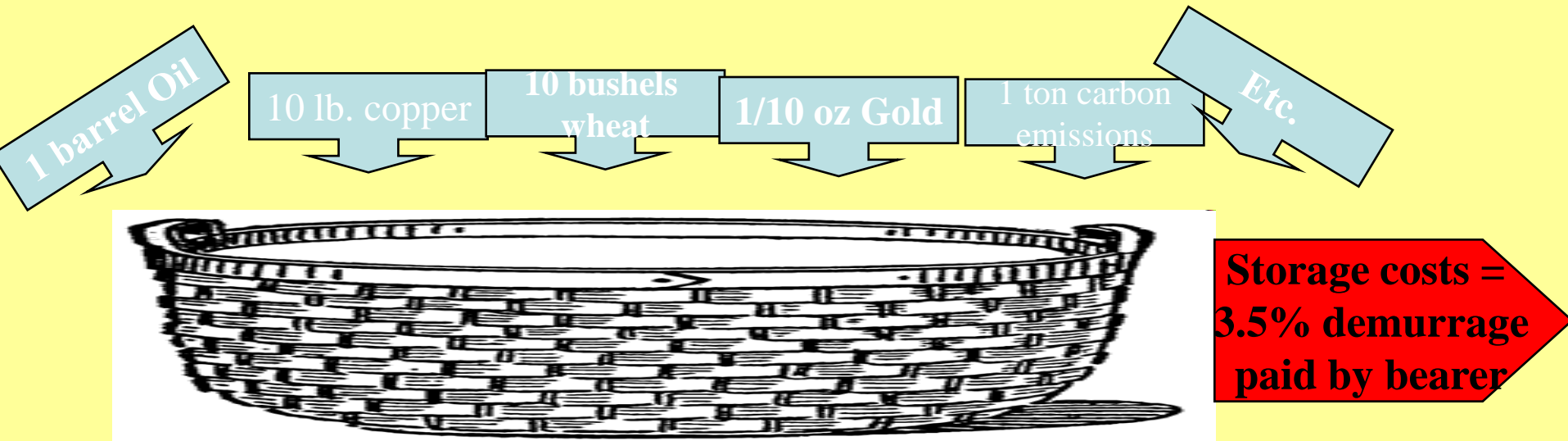


⇒ Short-term thinking is *not* intrinsic to human nature, but created by today's money system

⇒ NB: Historical Precedents: Dynastic Egypt, "Age of Cathedrals"

# Structural Solution

**Terra** = standardized basket of dozen key internationally traded commodities & services



↓  
**4 x Less Volatility  
than US\$**

↓  
**Inflation  
Resistant**

↓  
**Fully Backed  
=> Robust**

# Structural Solution (2)

## Issuing Mechanism (Example)

- ◆ **Terra Alliance issues electronic Terra as inventory receipts for commodities sold to it by producers.**
  - Example: oil producer sells 1 million barrels of oil to Terra Alliance, gets credited with Terras at market prices, and can use Terras to pay suppliers...

# Win/win Solution

## Benefits

- Terra is standardized countertrade  
=> **No need for new international treaty...**
- **Terra is countercyclical**  
=> **stabilizes world economy**
- **More stable and predictable international currency that is nobody's national moneys**
- **Systemically less Short-termism**

# Plan

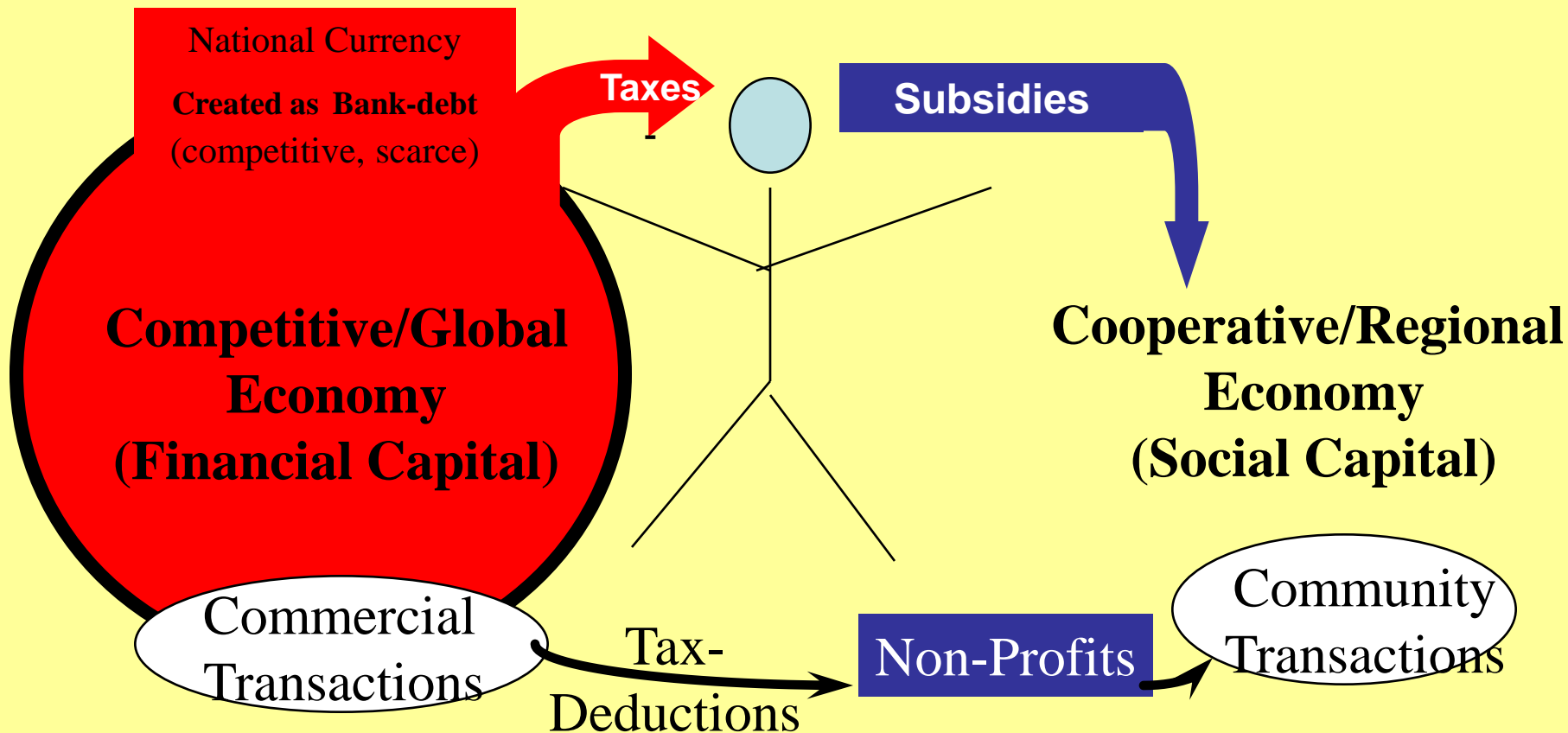
- Choosing Our Future
- How?
  - Terra
  - Boons: What governments should do
  - Social Purpose Currencies
- Why?

# Boons

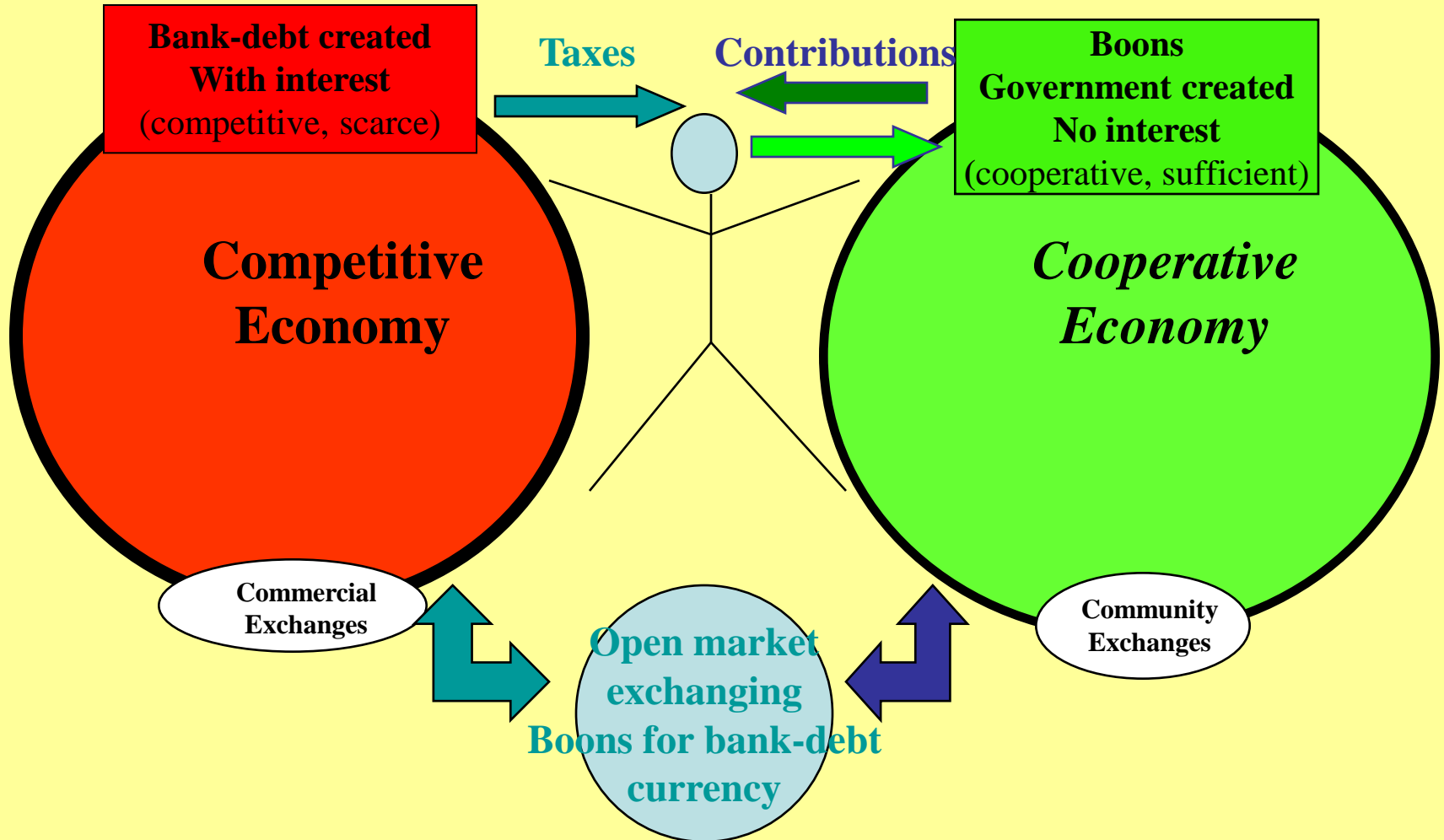
- City government requires both taxes (in conventional currency) and contributions (in cooperative currency).
- Solves government budgetary constraints for functions such as: social, learning and labor components for environmental issues.
- Makes it possible for everybody to develop their gifts, and choose different lifestyles (or mix of lifestyles).

# System View

## Living with the Single Bank-Debt Currency



# Solution: Empowering Complementary Currencies



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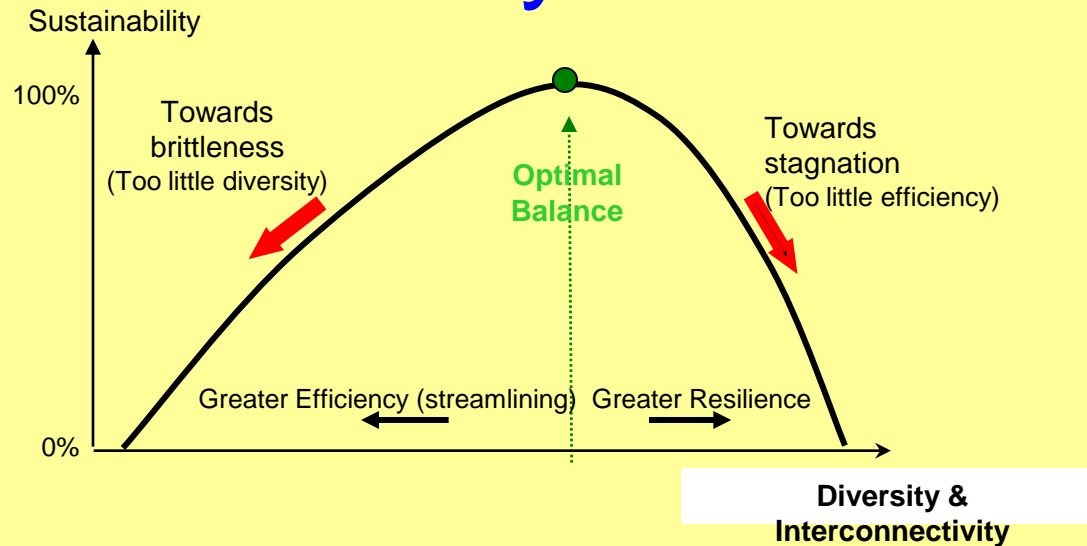
# Plan

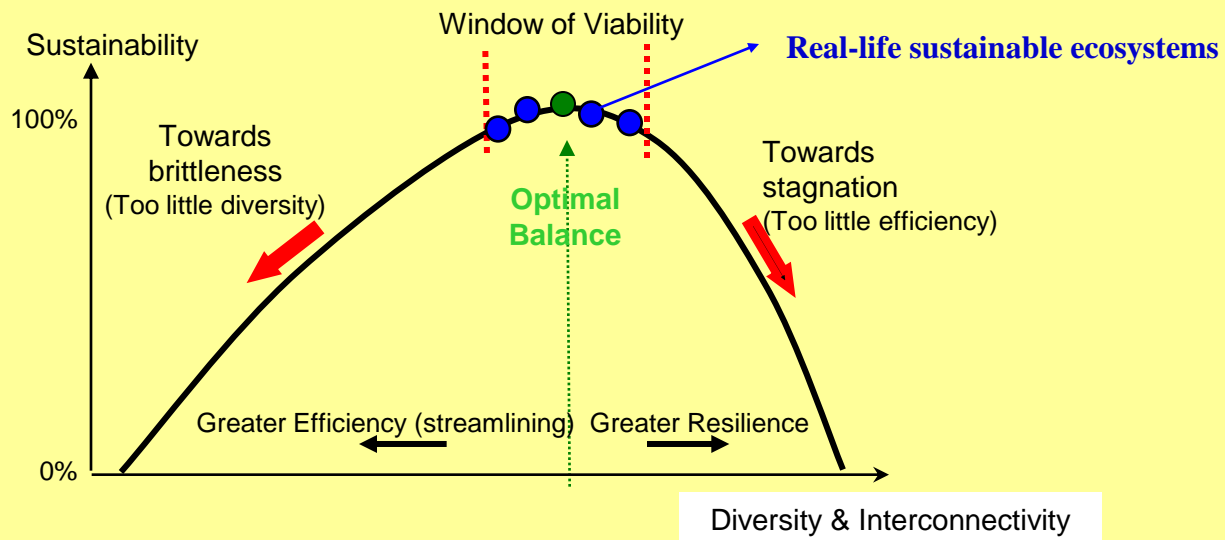
- Choosing Our Future
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- Why?
  - Scientific Reason
  - Three Other Reasons
- Conclusion

# Sustainability of Complex Networks

- Robert Ulanowicz 25 years of ecosystems flow data. Natural ecosystems have in common to be sustainable. What else do they have in common?
- Sustainability of complex network results from appropriate *balance* between ***Efficiency*** and ***Resilience***, emergent properties from 2 ***structural*** variables of complex networks: ***diversity*** and ***interconnectivity***
  - Lower diversity and interconnectivity allow for higher efficiency.
  - Higher diversity and interconnectivity allow for higher resilience

# Sustainability in Natural Ecosystems

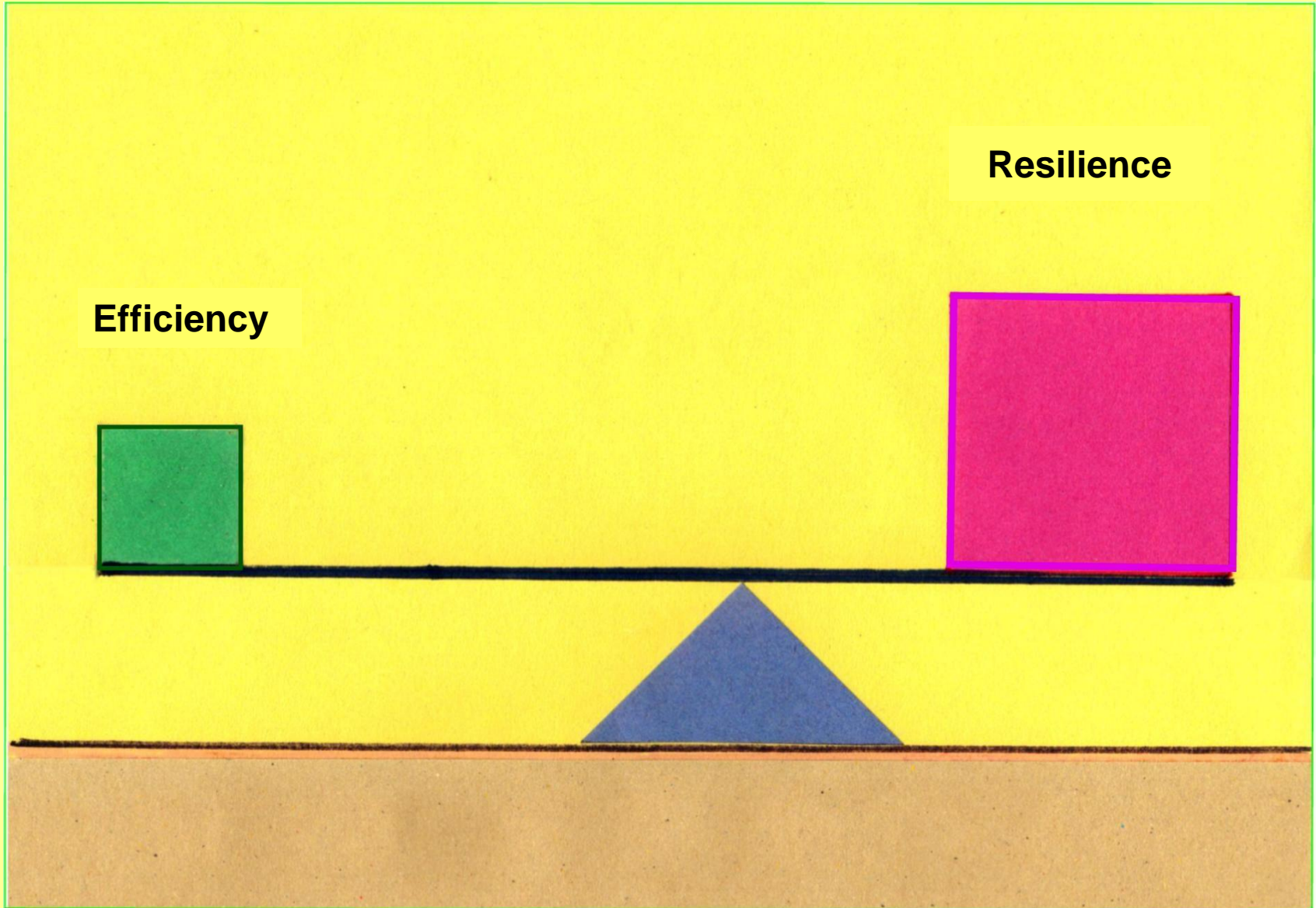




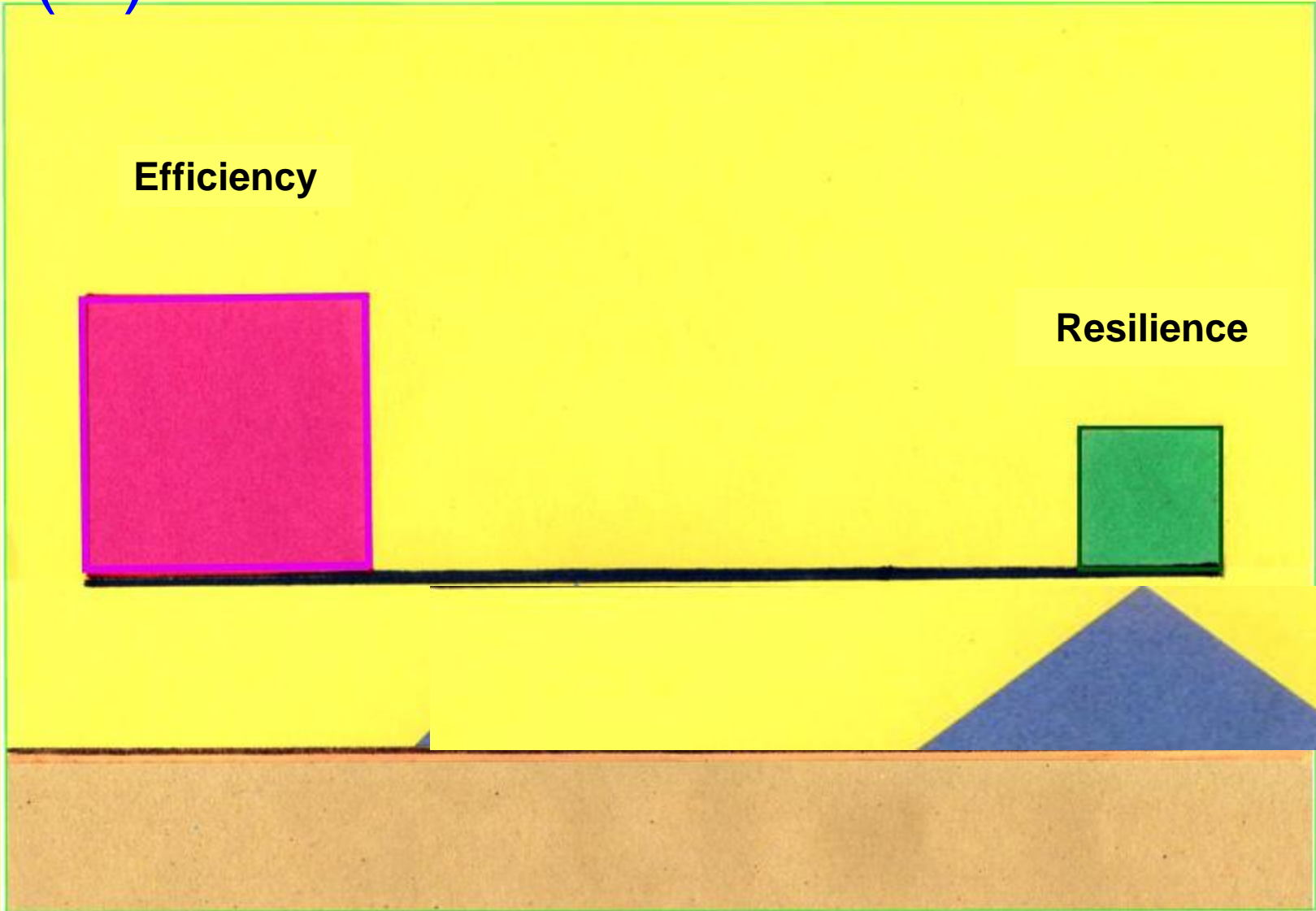
# Complex Networks

- ***Diversity*** and ***interconnectivity*** are 2 ***structural variables*** => applies to all networks with similar structure, including money system!
- Structural variables are independent from *what* is being processed in network
  - *biomass* in an ecosystem,
  - *electrons* in electrical circuit,
  - *information* in immune system,
  - ***money*** in an economy...

# Balance in Natural Networks



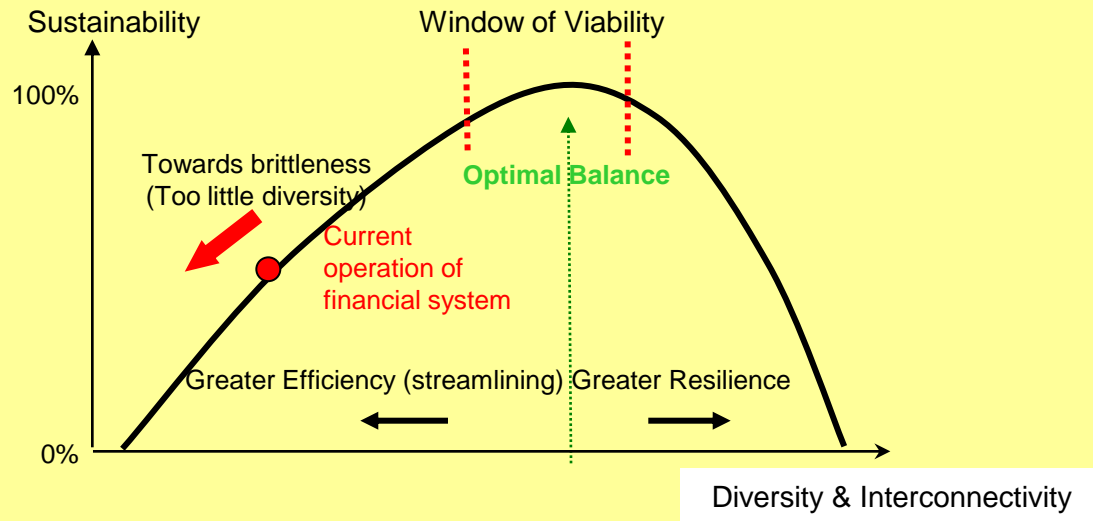
# (In)Balance in Our Financial Network



# Symptoms of Systemic Monetary Instability ?

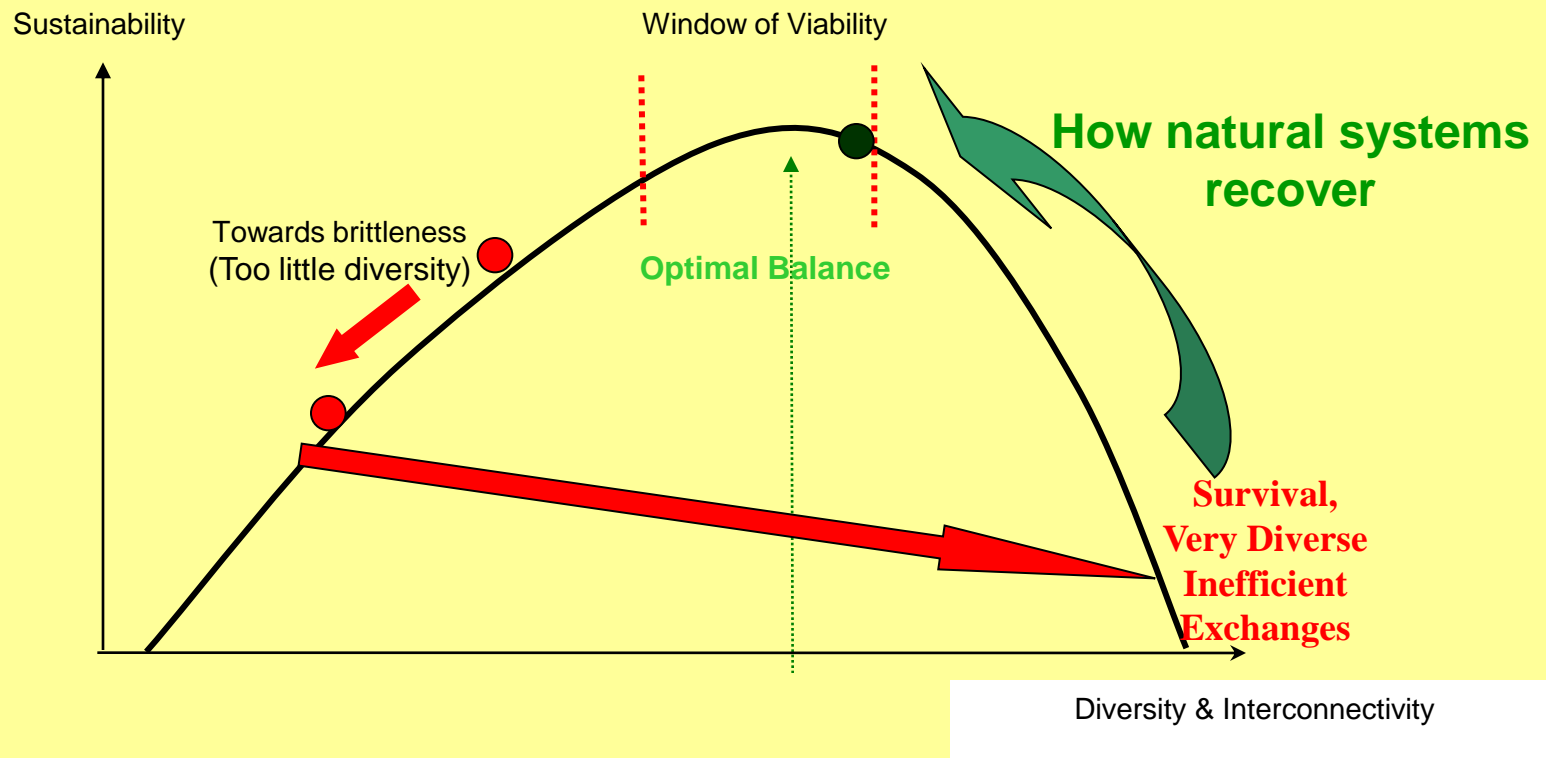
- On-going financial crisis is the biggest, but not the first such crisis:
  - World bank identified 96 previous banking crises and 176 monetary crises in recent 20 year period
  - Such crises are a remarkably “hardy perennial” (Kindleberger)
    - 48 well documented major meltdowns between 1637 and 1929.
- My claim: financial system is ***structurally*** unstable
  - “Monoculture = accident waiting to happen”

# Application to Monetary System



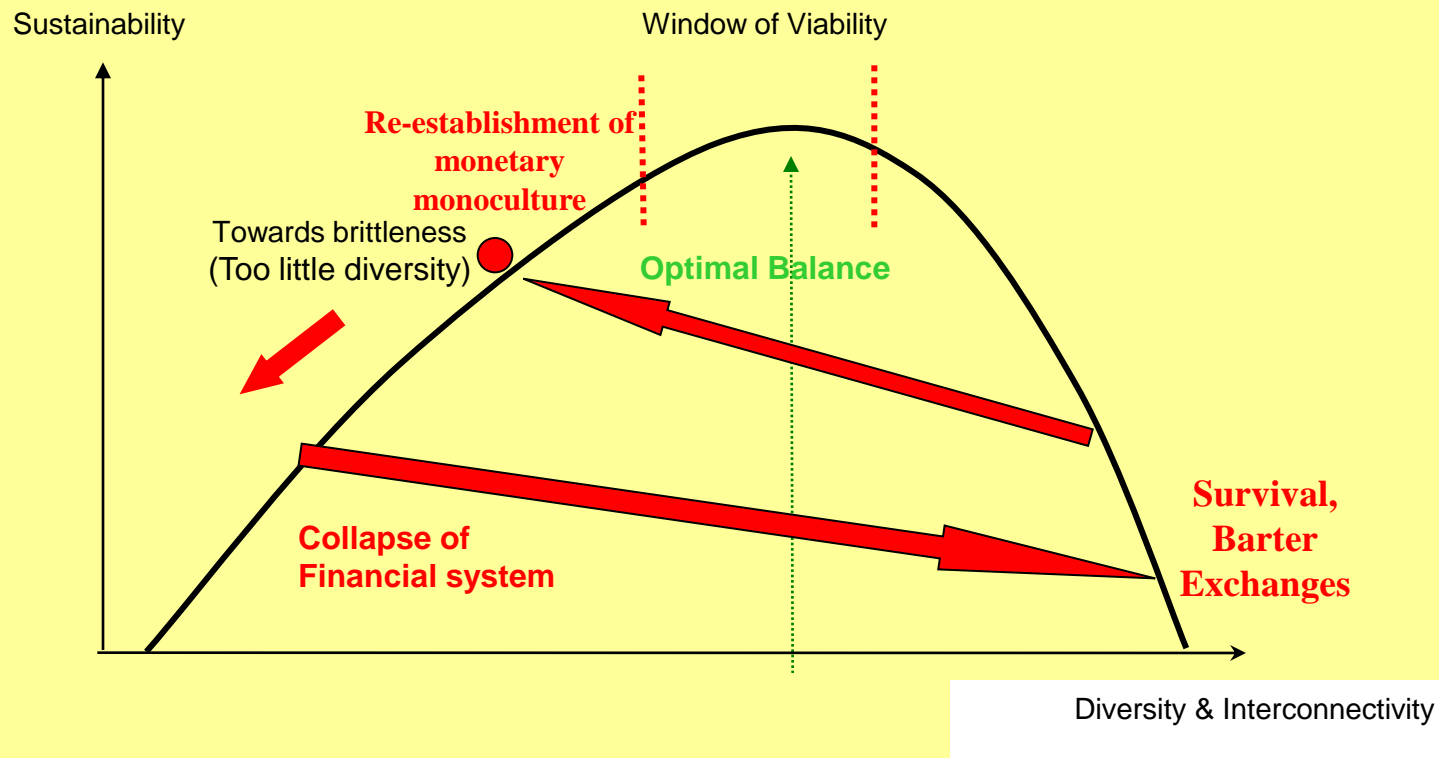
# After a Crash

## Recovery in Natural Ecosystems



# After a Crash

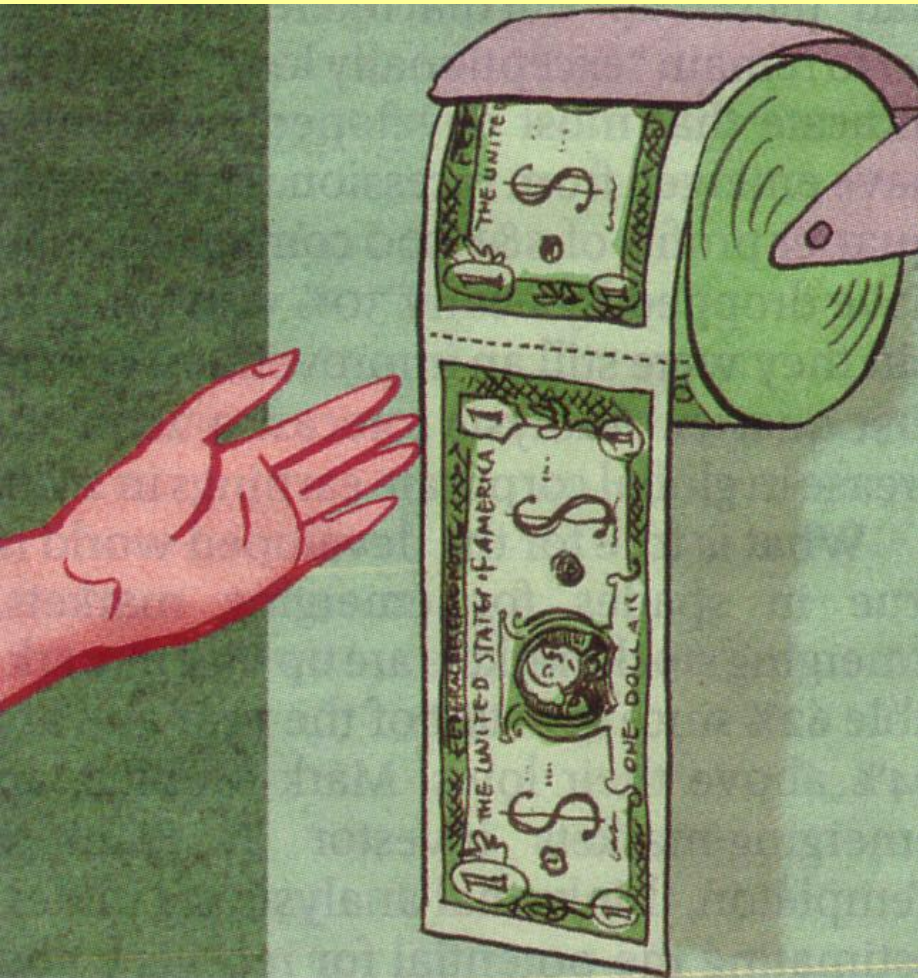
## Reinstating Bank-debt Monopoly



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  - Scientific Reasons
  - Other Reasons
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**2d Reason: the existing system is now  
in process of systemic failure...**



*The Economist*

26 Septembre 2009

# 3th Reason: Value Shift Patriarchal vs. Matrifocal

- **Patriarchal Societies**

***Monopoly of centralizing***  
Currency with interest

=> Great for Industrial  
Revolution

- But Promotes:
  - Booms & Bust cycles
  - Concentration of wealth
  - Destroys community  
(incompatible with gift  
economy)

- **Matrifocal Societies**

***Dual*** Currency Systems

- Patriarchal one for long-distance
- Different type of currency (bottom up) for local exchanges
- Promotes:
  - Economic stability for centuries
  - General well-being for the “little people”
  - Builds and sustains community

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# Conclusions

*“Money is the crowbar of power”* (Nietzsche)

1. Monetary systems are the most powerful tool to induce mass behavior patterns, or mass behavior changes...
2. Significant monetary changes occur only after the collapse of the previous system
3. *“Be Prepared”*: Chaos theory predicts that we will soon have to choose between a breakdown and breakthrough...

Are YOU willing to do something about it?

# Follow up

- ◆ [www.lietaer.com](http://www.lietaer.com) Supporting documentation
- ◆ Email contact: [blietaer@earthlink.net](mailto:blietaer@earthlink.net)