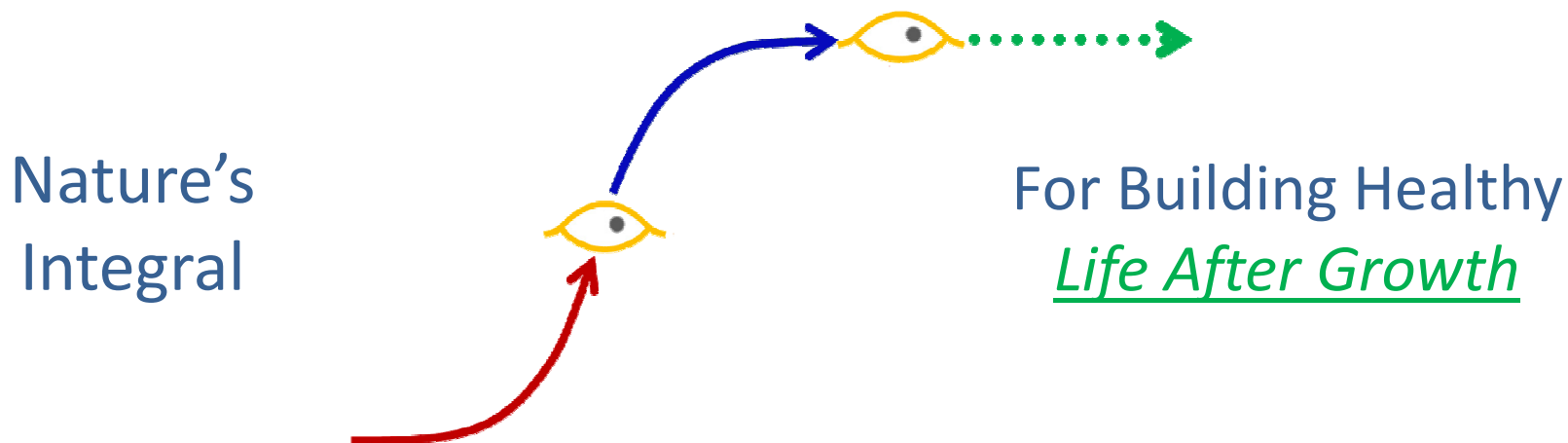


The Path to Natural Growth



If you have questions, do ask then when they come up.

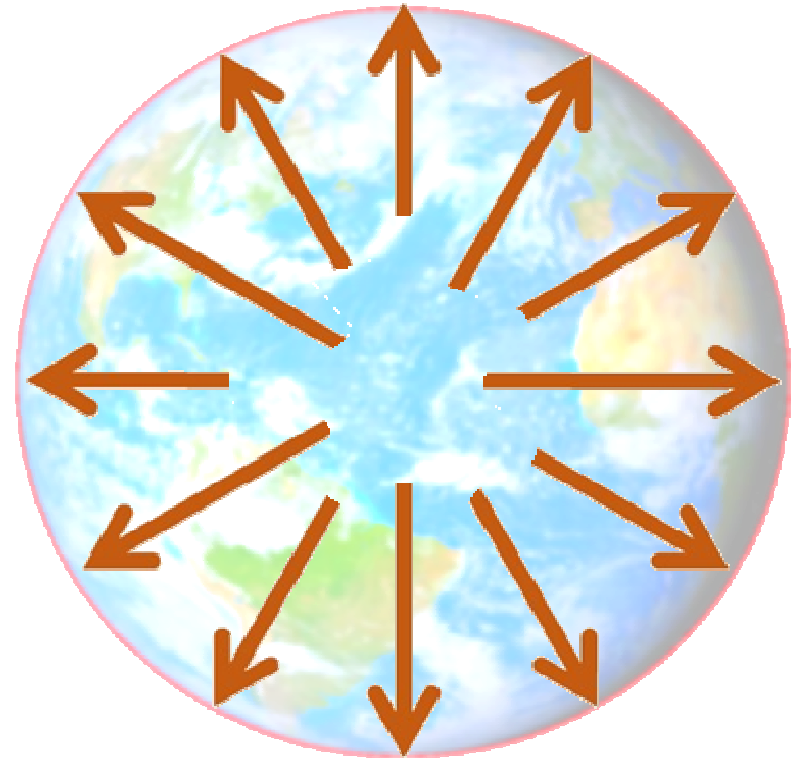
We started with

A Tranquil Earth



And made it a

A World Under Pressure

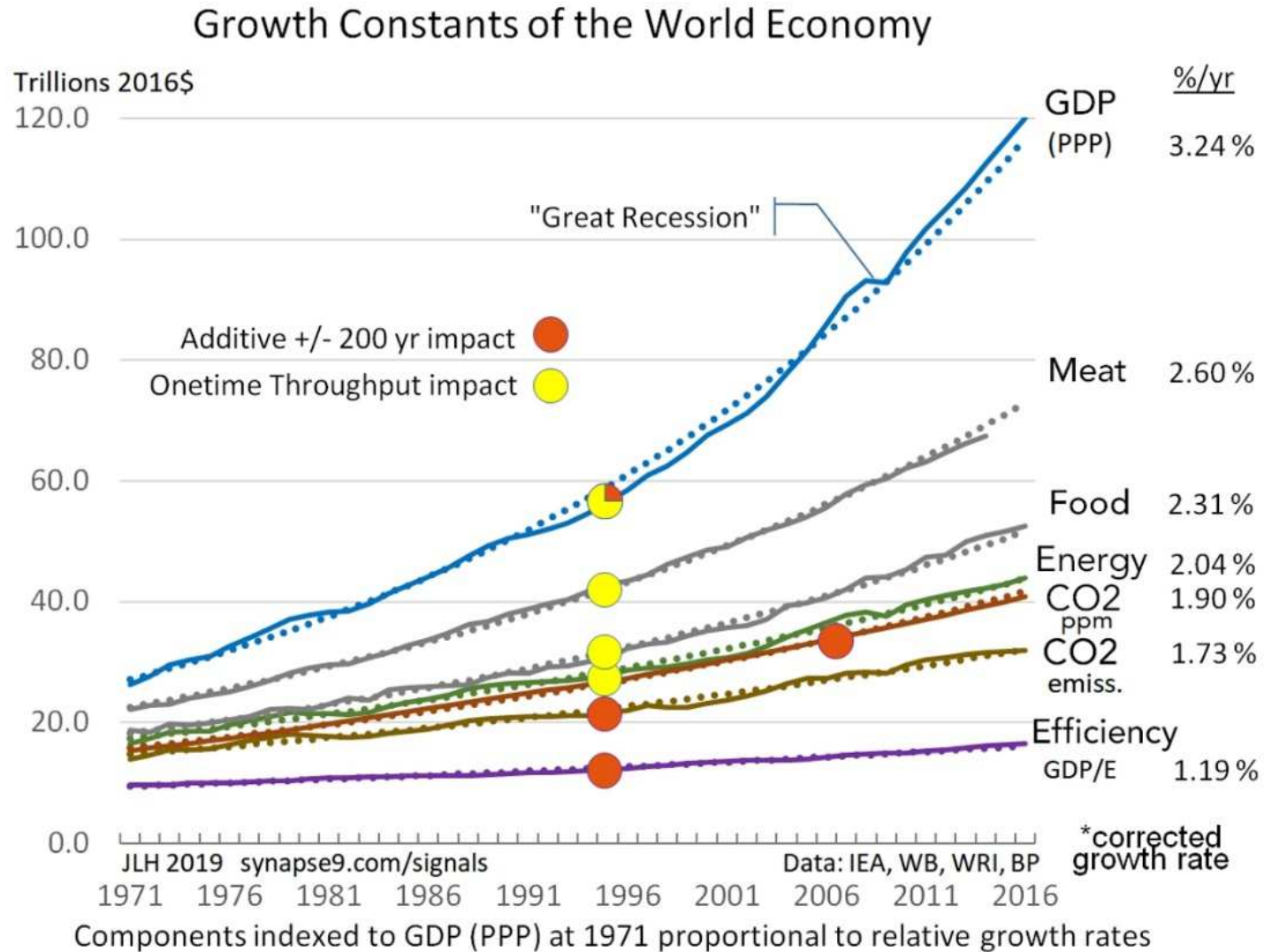


By our culture and economy demanding ever increasing performance from nature and humanity

40 Uncontained World Crises – Growing with Growth

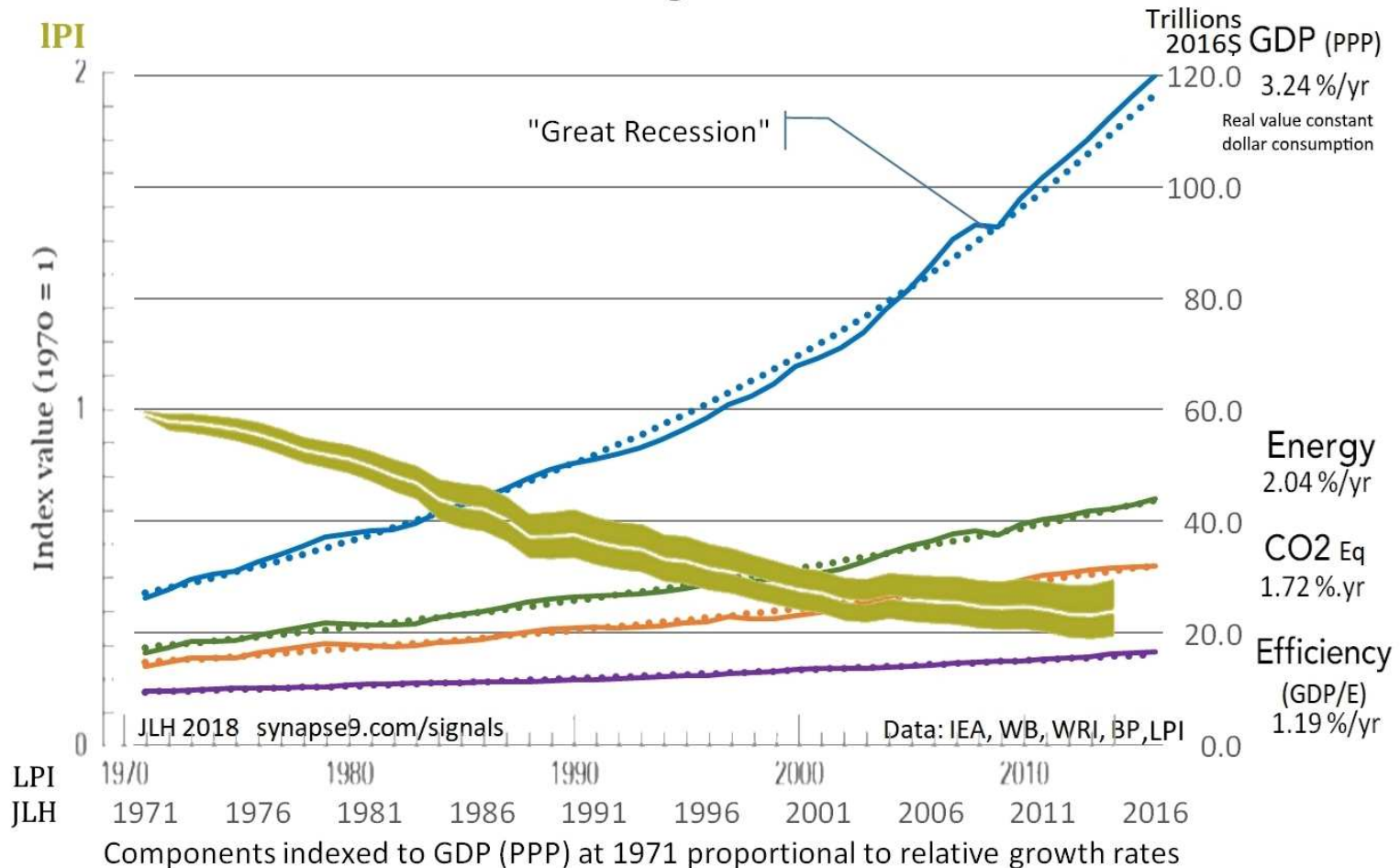
<u>Environmental:</u>	Chemical pollution	Climate crisis
Invasive Species	Habitat loss	Biodiversity loss
Resource depletion	Deforestation	Water crisis
Ecological Disruption	Resistant Diseases	Plastic waste
Ocean dead zones	Overfishing	Ocean acidification
<u>Economic/Societal:</u>	Lack of decoupling	Solution failures
Excess population	Disruptive change	Sectarian conflict
Sovereign debt	Traumatic Stress	Growth imperative
Traumatic Migration	Native culture loss	Animal extinction
Distressed regions	Economic inequity	Cultural conflict
Digital vulnerability	Competitive inequity	Slow Recoveries
Information overload	Communication silos	Disaster costs
Infectious diseases	Governance failure	Societal instability
Ageing Infrastructure	Social media threats	Rising suicide

Global pressures growing with no goal but more

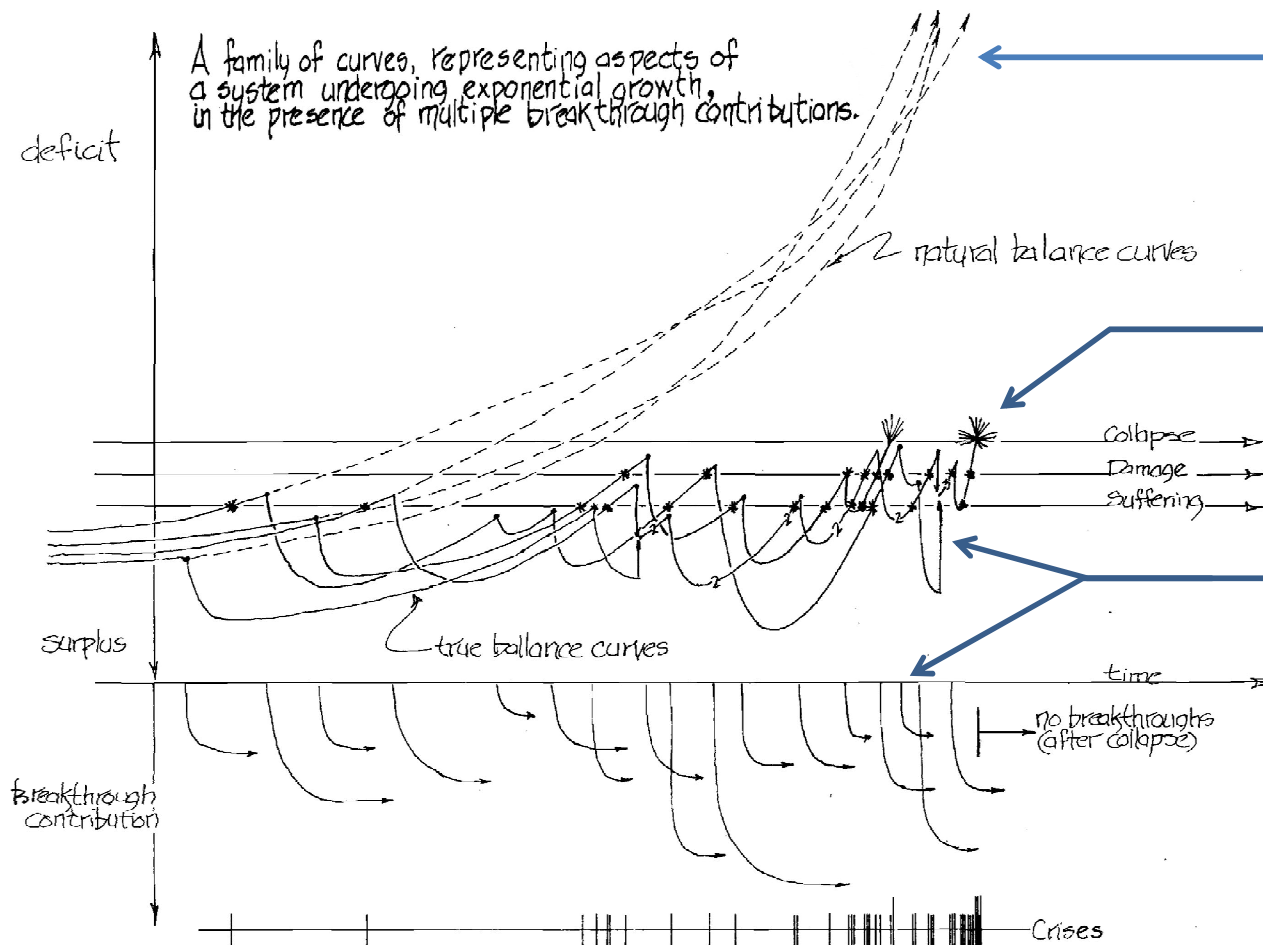


Globally Vanishing Vertebrate Populations

Growth Constants of Global Economic Environmental Pressures
and the Living Planet Index



A View of Boundless Growth From 1979



Total Delivery of Goods

System Failures

Innovations limit demands on nature & society, but more and more briefly, as crises hit faster and harder

Innovations limit demands on nature & society, but cannot keep up

The main issue is that growth is an organizational process

- Building things up
step by bigger step
- Makes them prone to failure if not restrained



It's like bankruptcy, when demands exceed capacities thing fail

The real risk is pushing organizations past their organizational limits

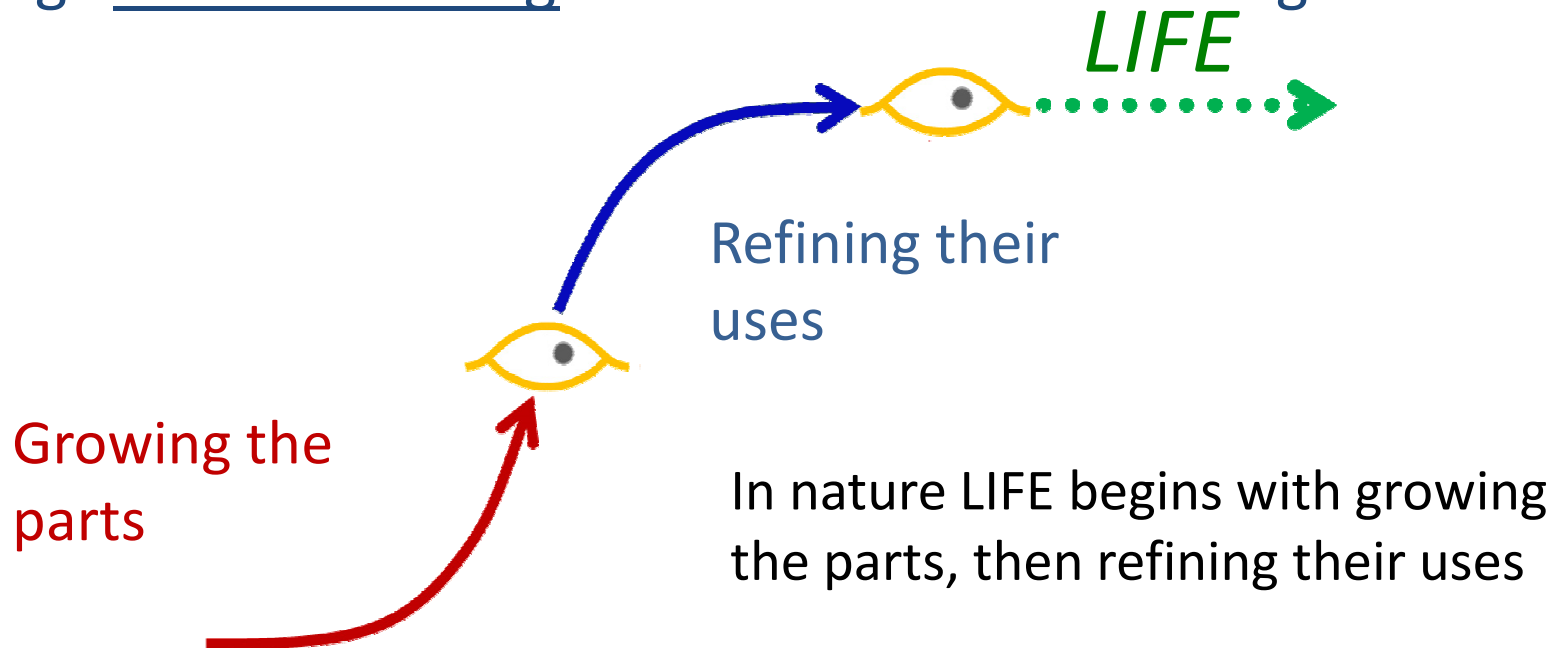
- Walking by bigger and bigger steps
- Talking faster and faster
- Innovation changes how we live faster and faster
- You lose coordination, and tumble in a disorganized fall
- You become tongue tied and incoherent
- Your adaptation each time is more shallow, and we don't see how others are coping too.

Each case lets you watch the breakdown limit approach

The alternative is 'Natural Growth'

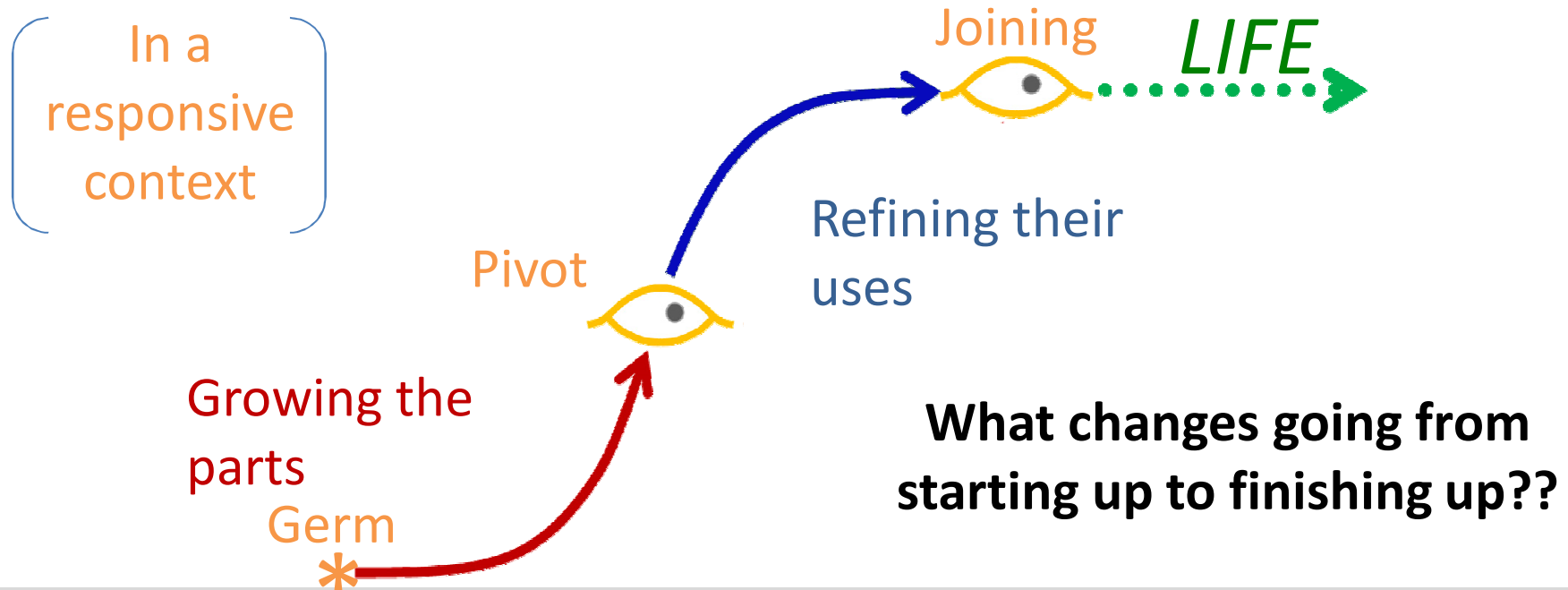
Limiting growth to perfect the design

- The '**Natural Growth**' plan is system biomimicry
- Based on nature's most successful growth transformations
- To climax growth at the system's peak of success, not failure
- Using "natural steering" more than "direct management"



Study familiar growth transformations you already know about

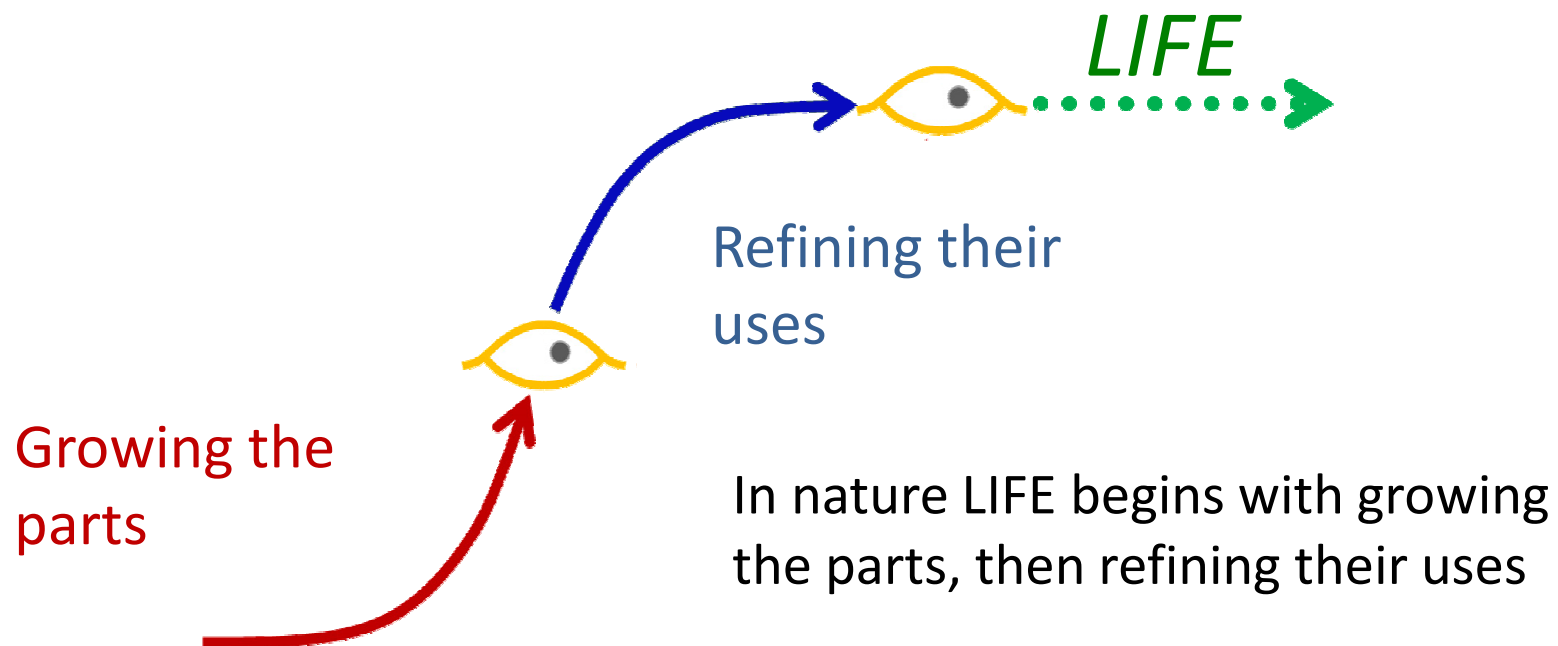
- Making lunch
- A relationship
- Biological development
- An office project
- A family business
- Climate & Cultural storms



“Steering a system” is done by

The parts of the system

- What in economic growth feeds on itself, to the point of destroying its own foundations?
- Why don't businesses seem to have that problem as much as the economy as a whole?

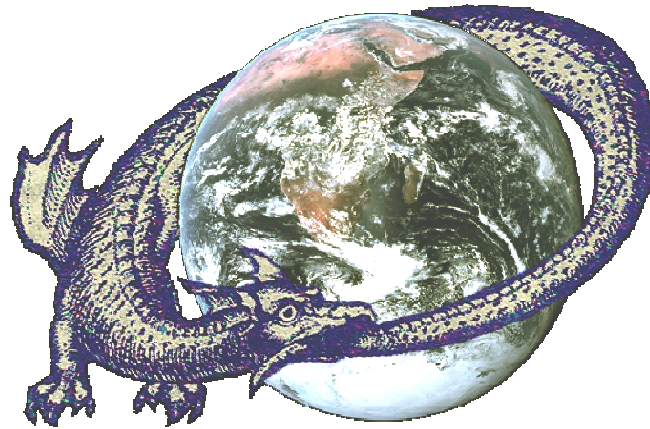


What I see as the crux of the problem

Making whole what we built?

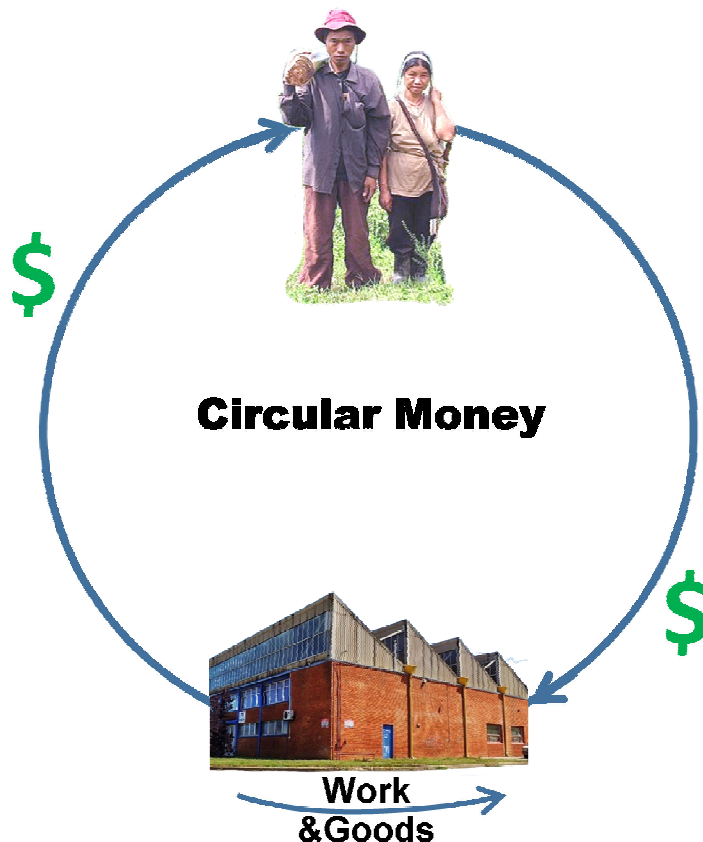
- Organizing world society around government, financial and social institutions for maximizing growth.
- Achieving business and personal success using “compound investment” of profits to create more operations to make more profit
- Letting those structures feed a “***spiral money***” economy creating growing conflict between making earned income and hoarding unearned income.
- rather than develop a thriving “***circular money***” economy

Some see it as “the circle being broken” Ouroboros feeding on its own tail



- World society, government and financial institutions maximize growth at all costs.
- Built on a “***spiral money***” economy from hoarding unearned income.
- rather than secure the “***circular money***” economy of earned income.

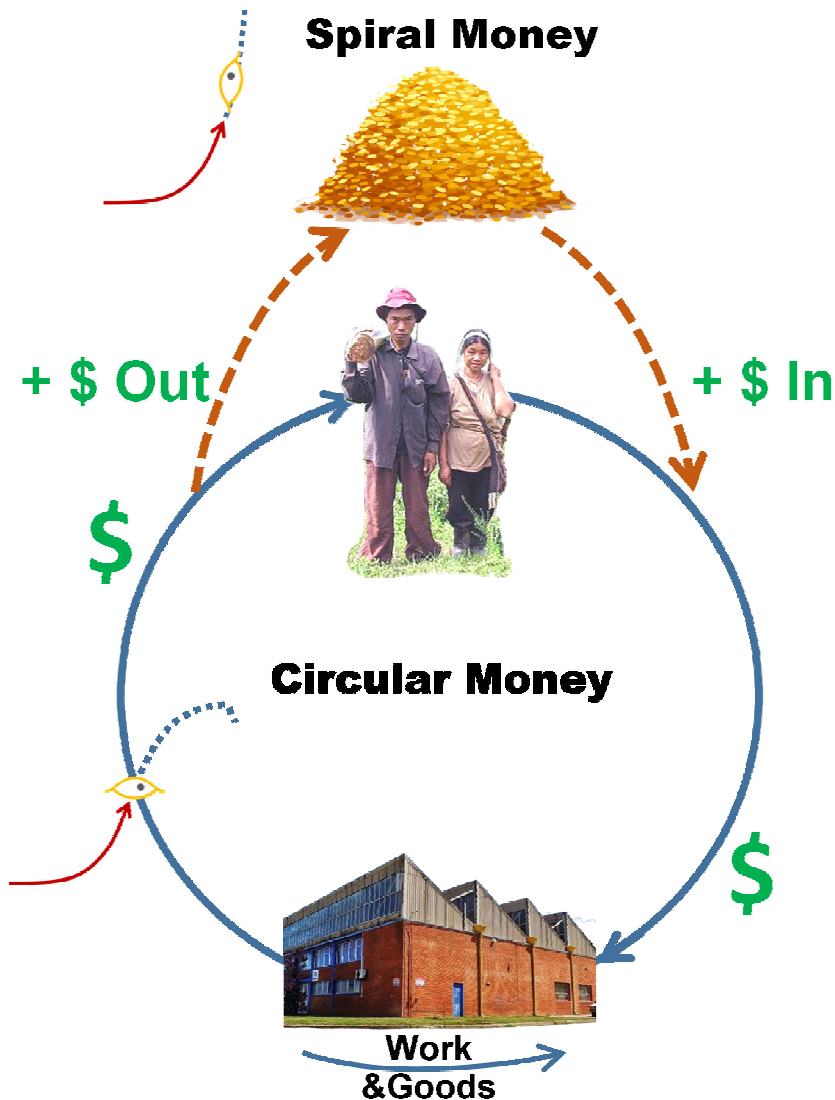
The simple form of the circular money economy



- People exchange work for money (lt. side) and exchange it for goods (rt. side).
- Materials and money moving in opposite directions around the same circle.
- A very stable model that grows slowly without *finance* to create innovation markets.

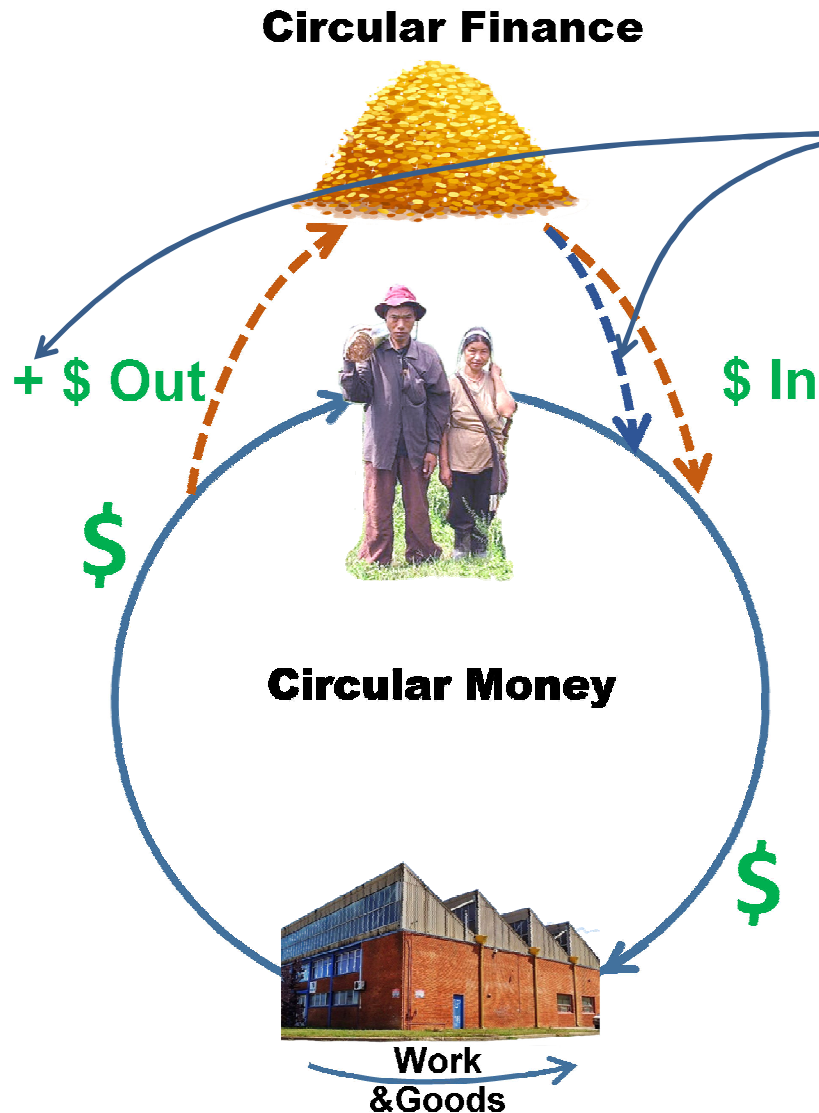
Finance then maximized money growth

(why we go broke unless we multiply wealth for the rich)



- **Finance** grew to dominate by selecting whatever grew fastest, like compounding.
- Profits invested in more operations multiply profits.
- The **circular money** economy is driven to grow as fast as it can making it unstable,
- especially when driven to ignore dangerous **societal and planetary limits**.

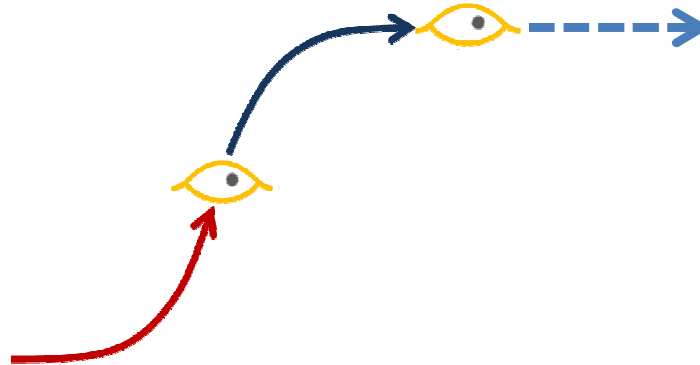
Circular finance for stable high-profit economy



Not hoarding the profits stops the spiral

- Profits returned to finance, but spent on perfecting our world, restores the balance.
- A way to thrive without growth makes growth a variable of true choice.
- Instead of imperative growth, imperative refinement leaves a stable high profit economy with improving “decoupling.”

But why would the Owners of the Earth
choose to care of the Earth??



We are all in it together, and all see the threat!
+plus+

Profit

Fiduciary Duty

Desperation

Love

Practical Need

Inspiration

Pride

Transformation

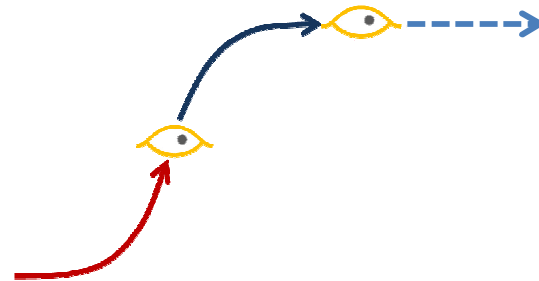
Regulation

Thanks so much for having a look



- We've been missing nature's most liberating step of securing early achievements rather than pushing growth toward profound collapse.
- It seems to be time to make that step.

And because... on Nature's Path **the Mountain Top of Physical Growth** is the Real Beginning of Life



HDS Natural Systems Science

- Contact - sy@synapse9.com Site - <http://synapse9.com/signals>
- Slides - <http://synapse9.com/SDinteg/PathToNatGrowth.pdf>
- Papers - http://synapse9.com/pub/2018_SysThinkingForSysMaking.pdf

Following 15 extra slices are borrowed from another presentation

This is also Keynes' "the Widow's cruse"

- From JM Keynes' use of the biblical story in 1 Kings 17,
- About **Elijah** visiting a very poor widow
- Promising her an inexhaustible bowl of flour and jug of oil
- If she would invite him in and give him what she had.



It was to illustrate how the rich can spend
all their profits, and never run out...

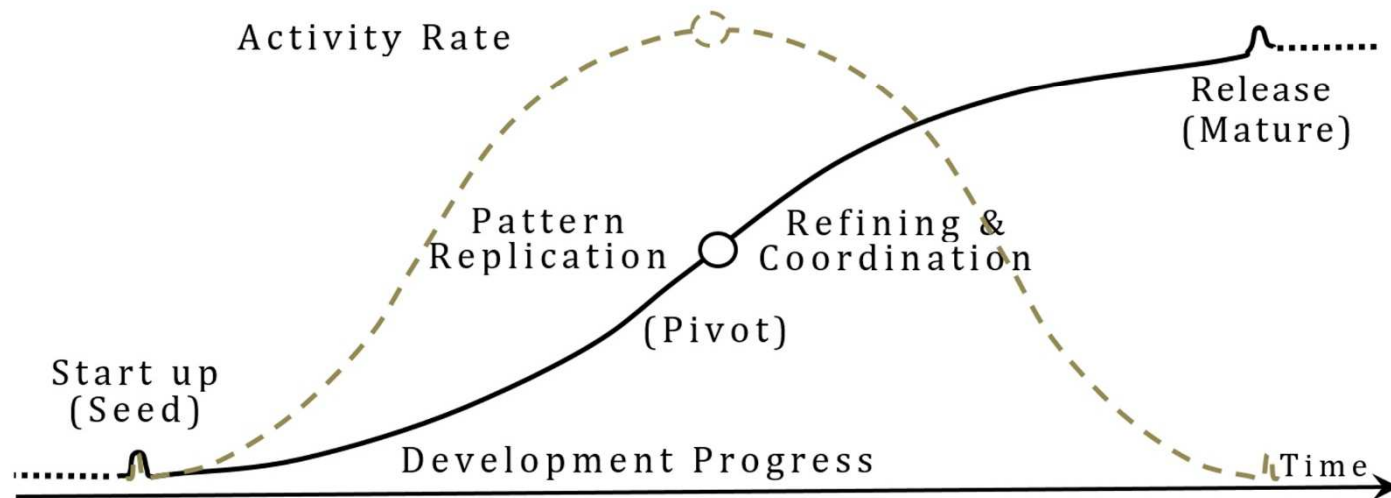
- As long as what they spend their profits on
- Increases the value of the world creating their wealth,
Instead of diminishing it....



Life Stories Combine Rising and Falling Action with Development

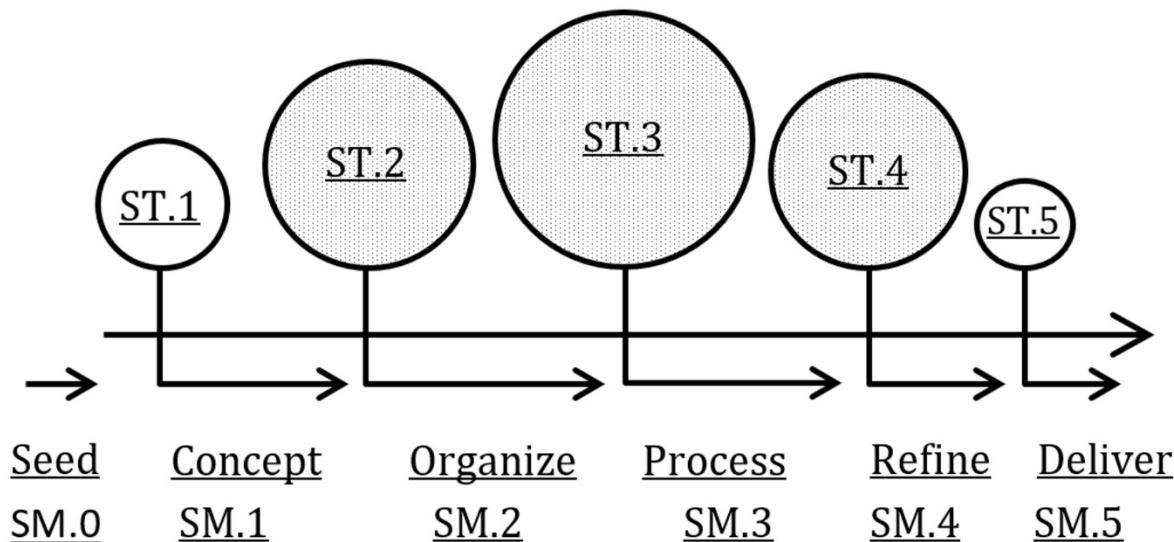
The Natural Life Story Arc / Growth & Development

Awakening	Rising Action	Climax	Falling Action	Resolution
(dynamic)	Pos-Feedback		Pos-FeedForward	
(stages)	Individuation		Maturation	
			Resilience	
			Life	



The Story of Development in Accumulating Stages of Work And Review

- Stages of Review & Planning to Guide the Work -



- Stages of Action for Doing the Work -

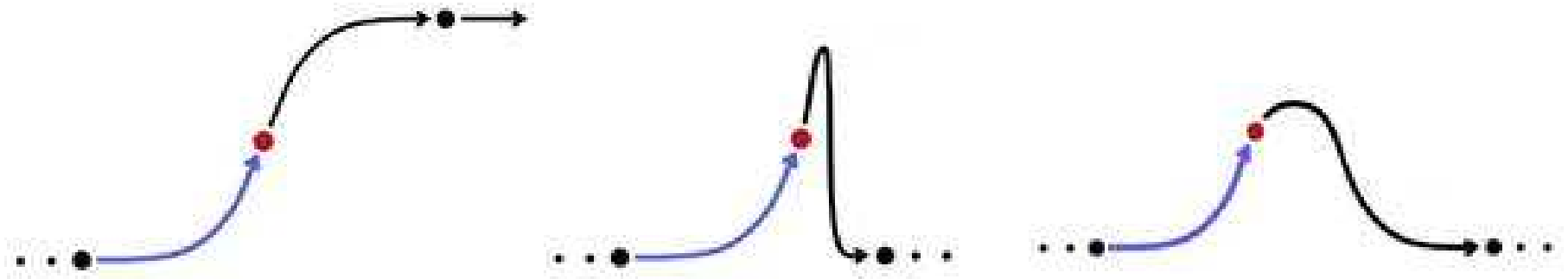
Repeated ST Topics

- Context & Forces
- Internal & External relationships
- Longshots & Balance
- Next Directions
 - Then Social Sharing

Repeated SM Work

- Match Teams to Tasks
- Explore & Select Options
- Produce Solutions
 - Then Presentation

Many shapes, One Set of Development Arcs



Growth to stability

Growth to instability

Growth to exhaustion

We can think of sustainability in terms of simplified life stories, with three main arcs:

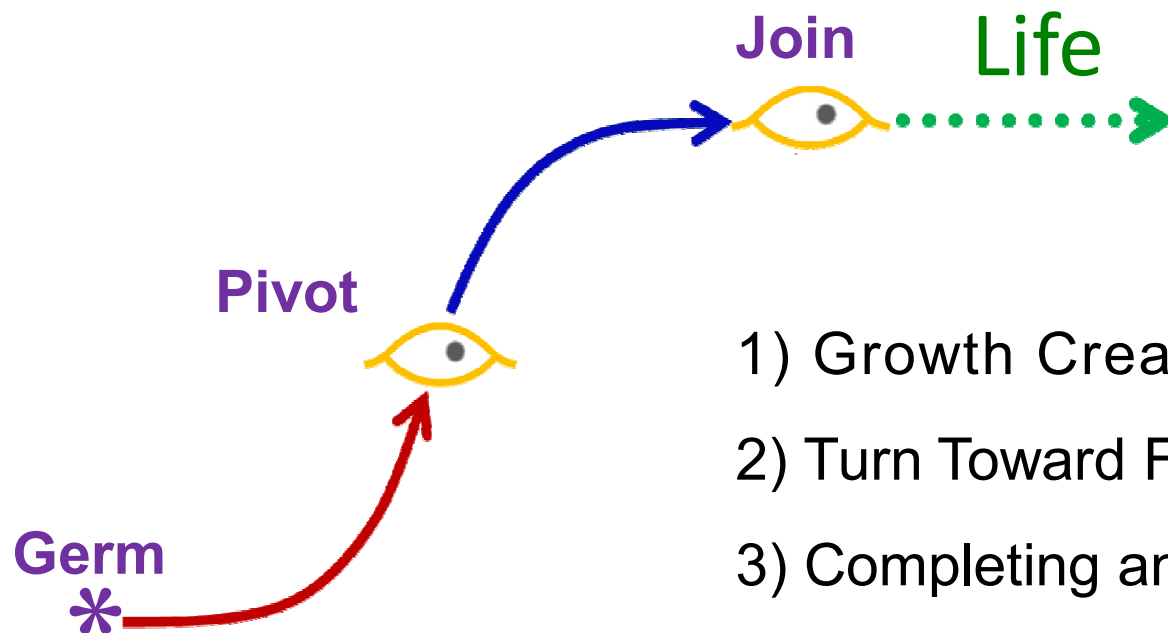
(A) “take-off”

(B) “blow-up” or

(C) “peter out.”

Each *begins* with growth, and how each ends that matters

“Nature’s Integral”, One Master Pattern of LIFE

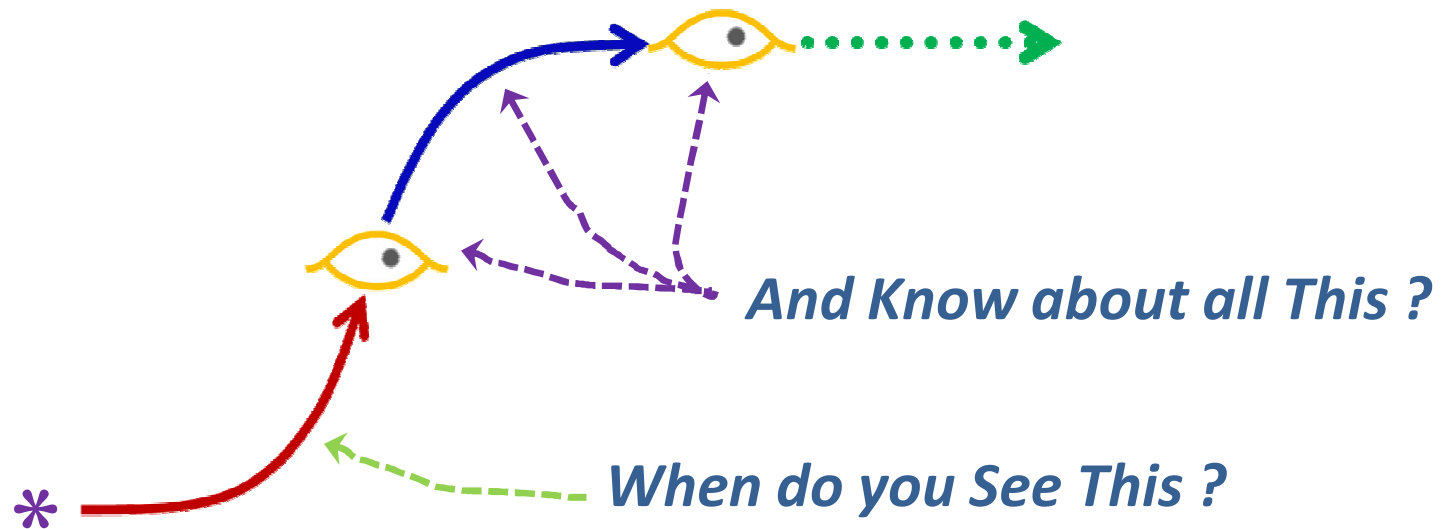


- 1) Growth Creating a New Life
- 2) Turn Toward Future Relationships
- 3) Completing and Adapting the Design
- 4) Connecting with a New World

Individuation

Maturation

Participation



- *When do we see **Gestation** and know what to do?*
...Lots of places
- *It's not a small step, but for things that matter...??*

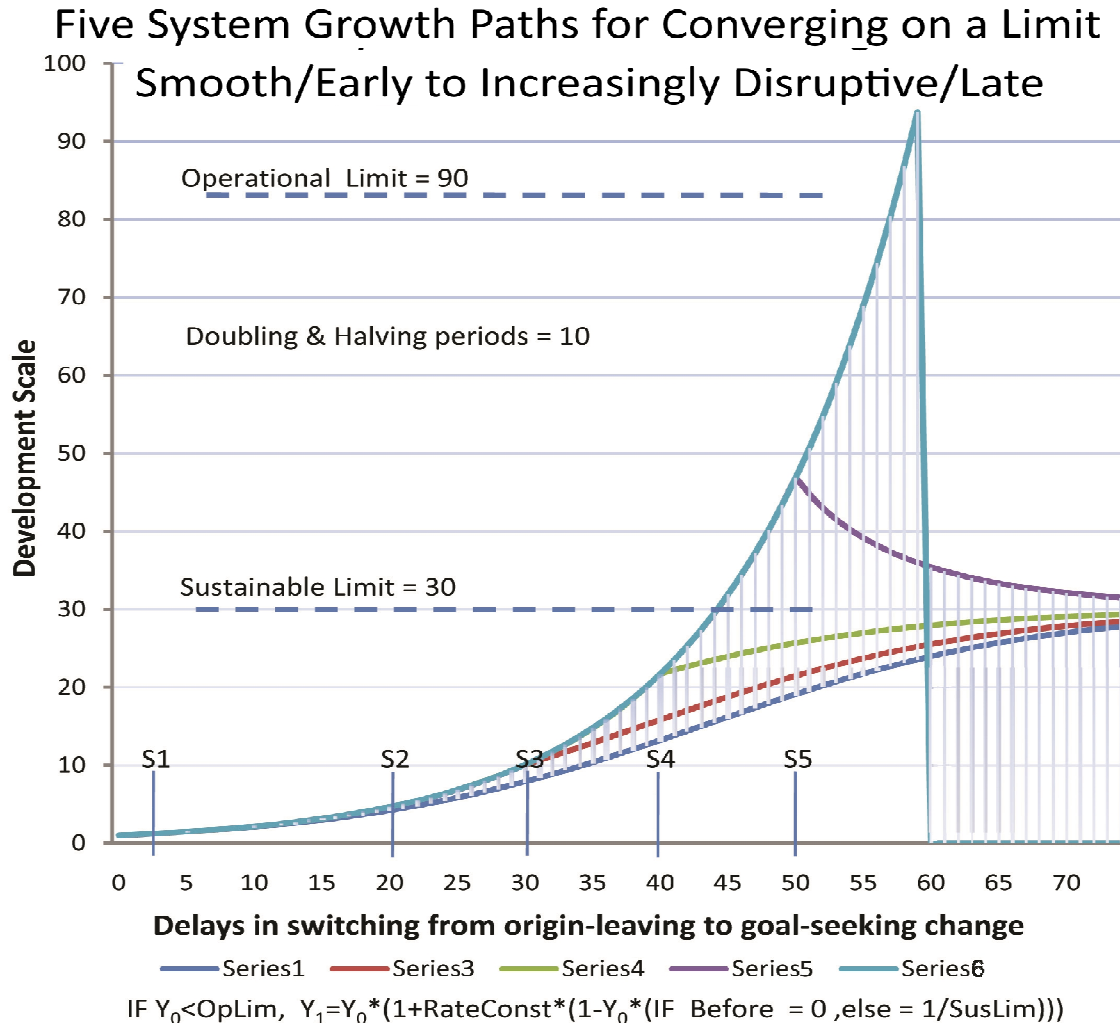
Measures to Track Regional & Global Thresholds of Strain

- Degree of Disturbance
 - Rate of change
 - Thresholds of Sustainability
 - Rate of Approach
 - Time to Respond
- Protecting
Common
Resources

Ways to Allocate the Capacities and Constraints

- Estimate likely thresholds
 - Set as-of-right allowances, and
 - Legitimate grandfathered uses
 - Tax others for pushing thresholds
 - Use tolerable pressures
 - Adjust thresholds with experience
- Applied
Regionally
and
Globally

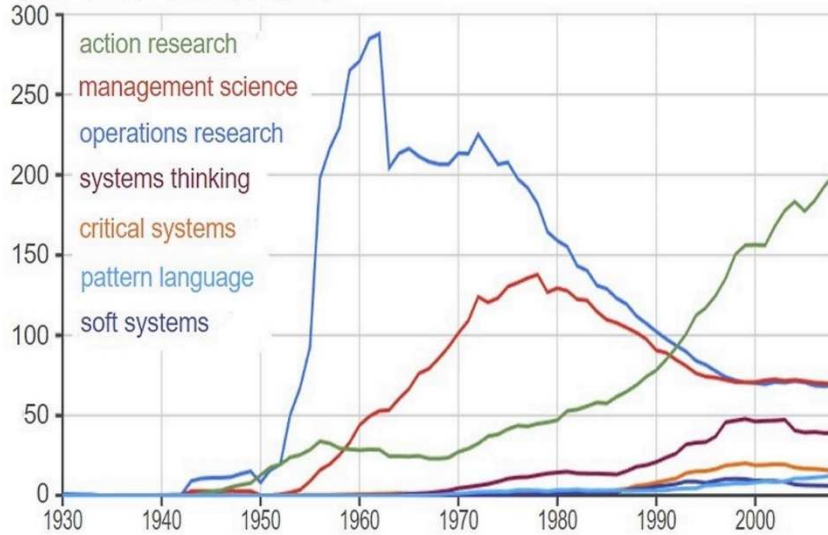
Responding early doesn't change the end, only responding late does.



Emerging Paradigms Engaging with the Whole

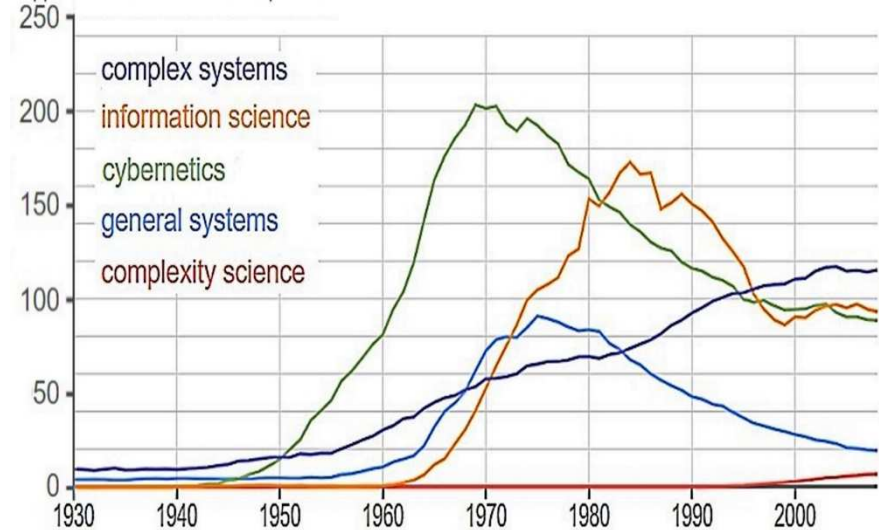
Google Ngrams: Terms of Soft Systems Sciences 1930 - 2008

Appearance in scanned books per 100 Million



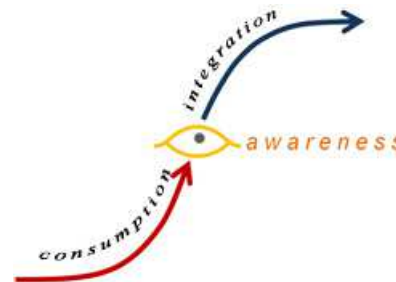
Google Ngrams: Terms of Hard Systems Science 1930 - 2008

Appearance in scanned books per 100 Million



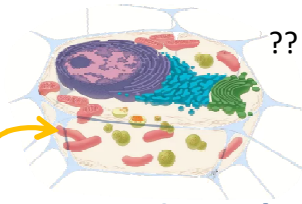
And in emerging paradigms of

- Business relations
- Family relations
- Neighborhood relations



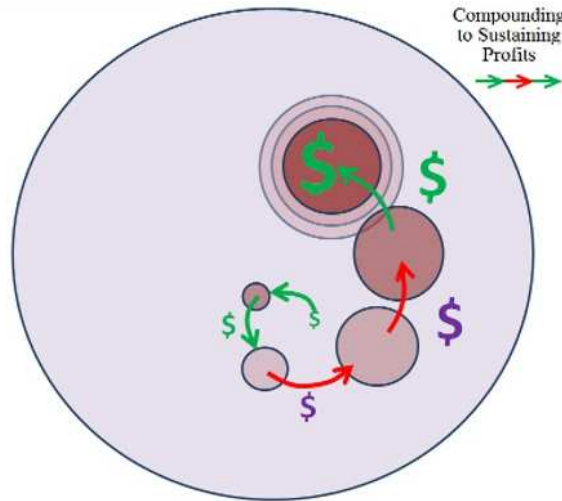
And emerging paradigms of

- Ecological organization
- Economic organization
- Climate organization



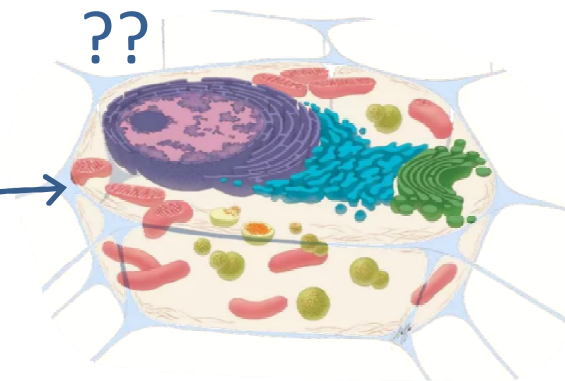
We don't need to lose our arts of control,
but revive and expand our arts of
recognizing life's wholes

Growth indicates a
developing whole



Centers indicate
developed wholes

Let's work through a list of places to look for them



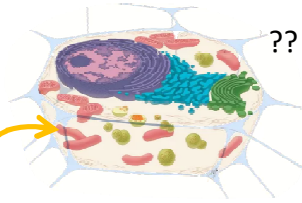
- BUT WHAT'S A **CELL** TO KNOW:
About The Life Of Its Body??
About The Bodies Of Others??

OR... A **Body** To Know About Their Cells Or
The Cells Of Another??

The answer is...

Nature's Designs Seem To **KNOW THEMSELVES**.

Only Human Minds, Relying on Information, Remain So Unconnected!

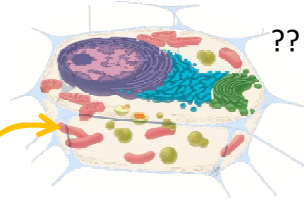


NATURE is Wholes within Wholes, with
 “wholeness,” a pervasive communication of
 ALL a system’s parts AT ONCE

Wholeness IS A KIND OF EMPATHY
 that **PARTS HAVE FOR EACH OTHER**
 resulting in “**WHOLE SYSTEM SELF AWARENESS**”

- But **Our Faculties** for it need to grow,
- Like plants pushing through the cracks
- In a HUMAN made world of deterministic rules

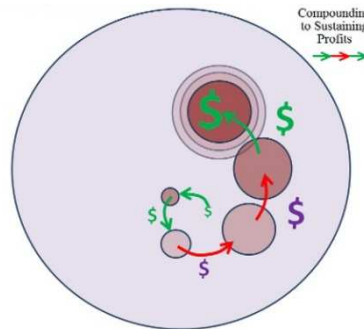
So what do we do??



Where you find centers, you also find growth

Signs of Growth

- Beginnings that surprise
- Changing Scales
- Bursts of development
- Increasing steps
- Happening
- Contagion
- Blossoming



Finding Centers

- Concentrations
- Hubs and Hives
- Networks
- Crossroads
- Borders & roads
- Organization
- Their Hum
- Wanderers

Familiar Wholes We Develop Engagements With

In Business

- Product markets
- Producer markets
- Supply tree
- Regional community
- Employee community
- Business culture, managerial, operational, social, divisional, occupational, personal

Home and society

- Family
- Individual Family roles
- Culture and Community
- World view silos:
 - Economic
 - Professional
 - Religious
 - Political
 - Class, Classmate, Race

