

# Understanding Nature's Purpose in Starting all New Lives with Compound Growth

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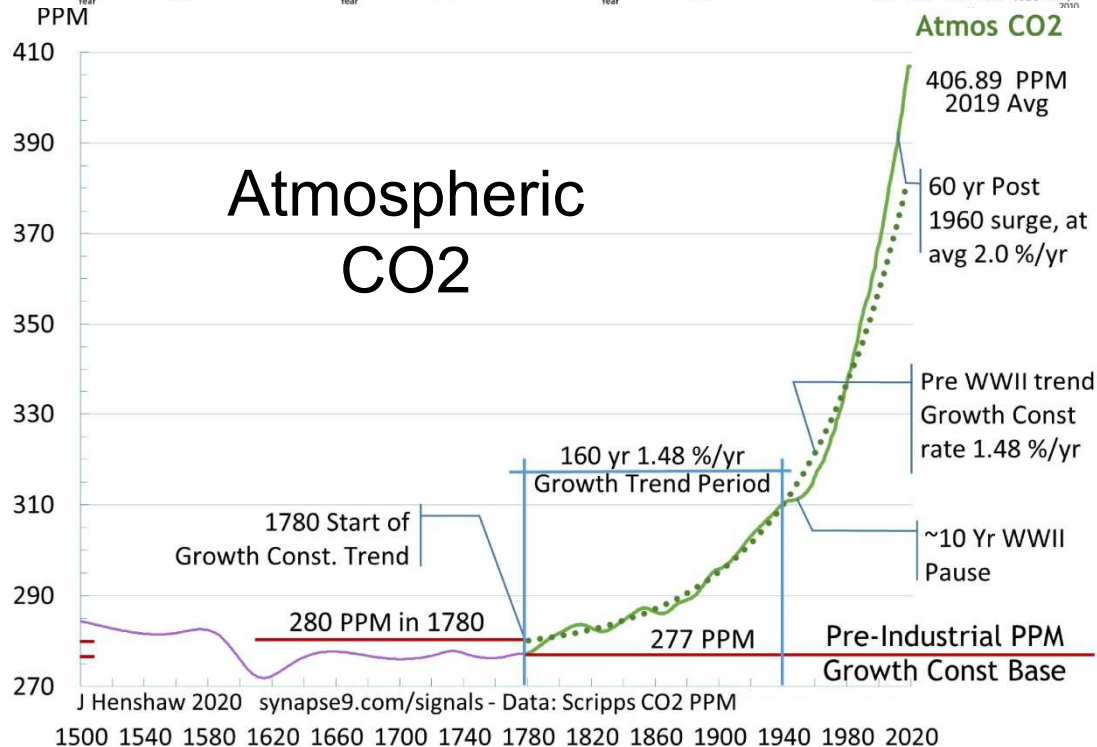
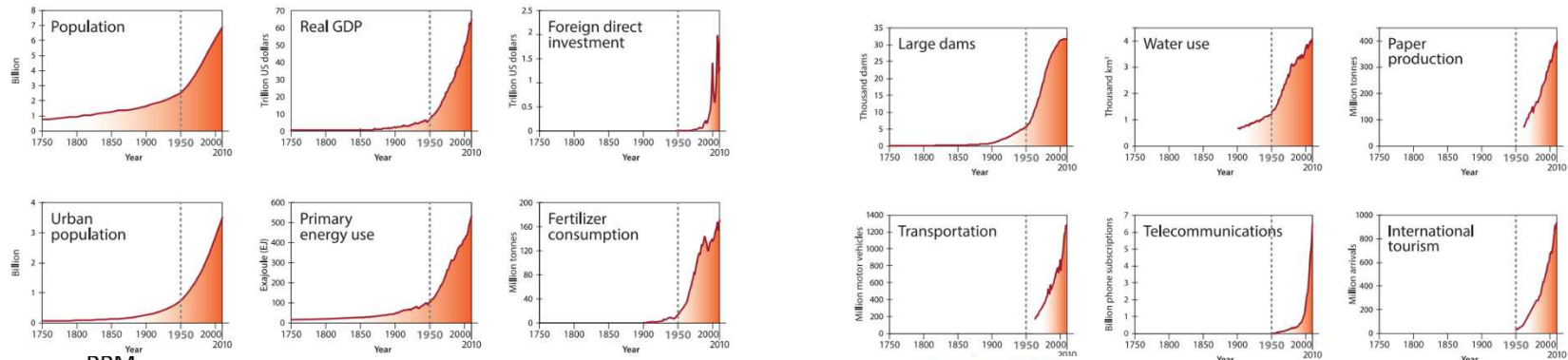
New Science for Individual Systems:  
choices for Future Society

*A general systems view and practical guide*

ISSS 2021 - Paper and Slides

<https://synapse9.com/ISSS-21>

# • The Great Acceleration of the Anthropocene



Life built  
around ever  
more rapidly  
accelerating  
increases in  
rearranging  
nature and  
our own  
lives

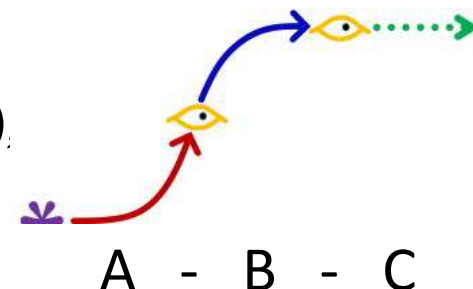
- *We seem to need a whole new life...*

*Why haven't we studied how nature starts all new lives with compound growth??*

- *Science doesn't study that.*
- *It's too complicated, and you can't change nature*
- *We only care about the profits from growth*
- *We care about the success of new lives, but we have our own languages for that.*

- Compound growth of natural systems

- Signals the start of *individual new lives*,
- Natural complex adaptive systems (NCAS).
- Developing by growth, plan A to B to C



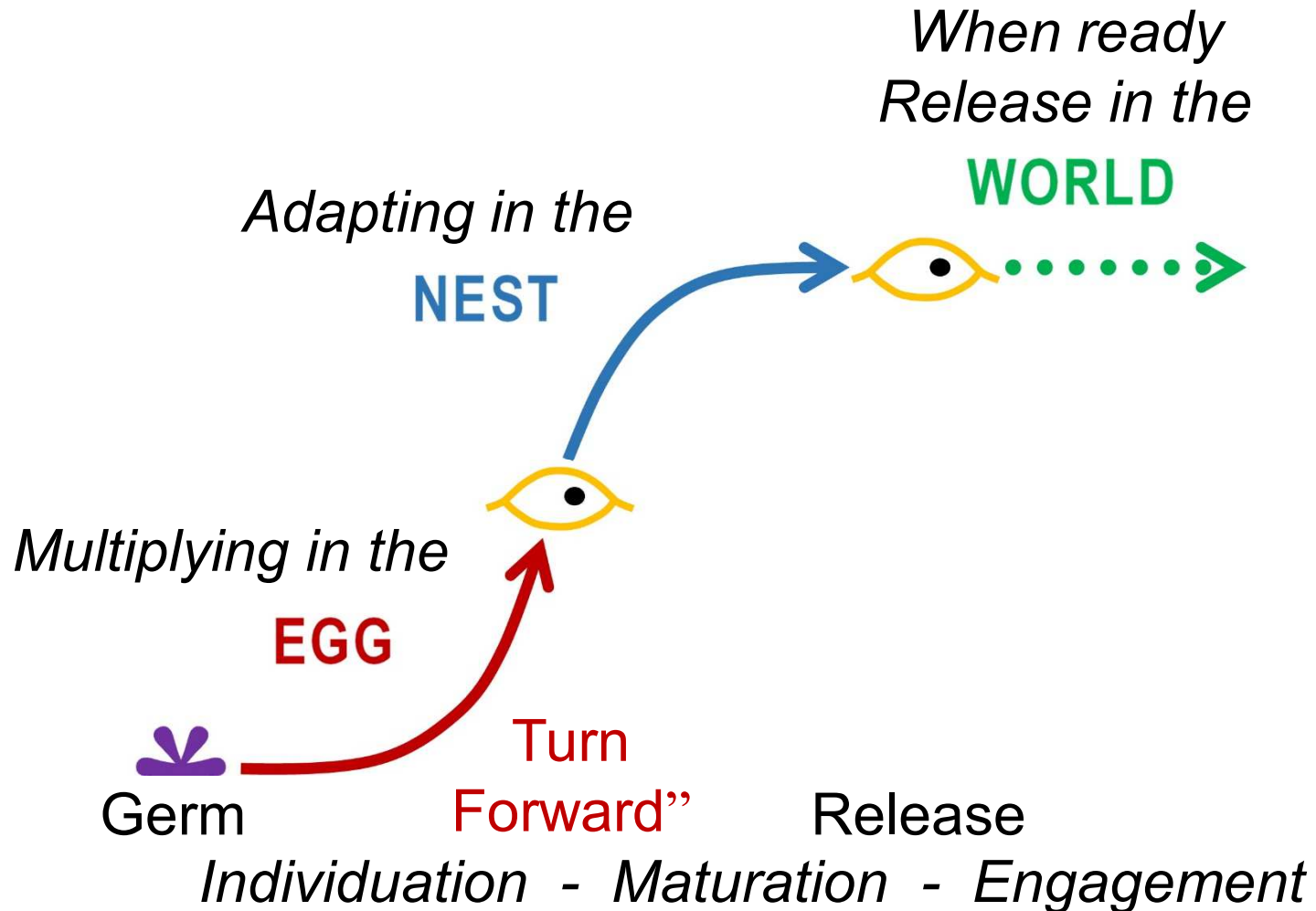
- A universal pattern of milestones

- Teaches a useful new *natural systems science*
- For understanding *new lives* of all kinds:

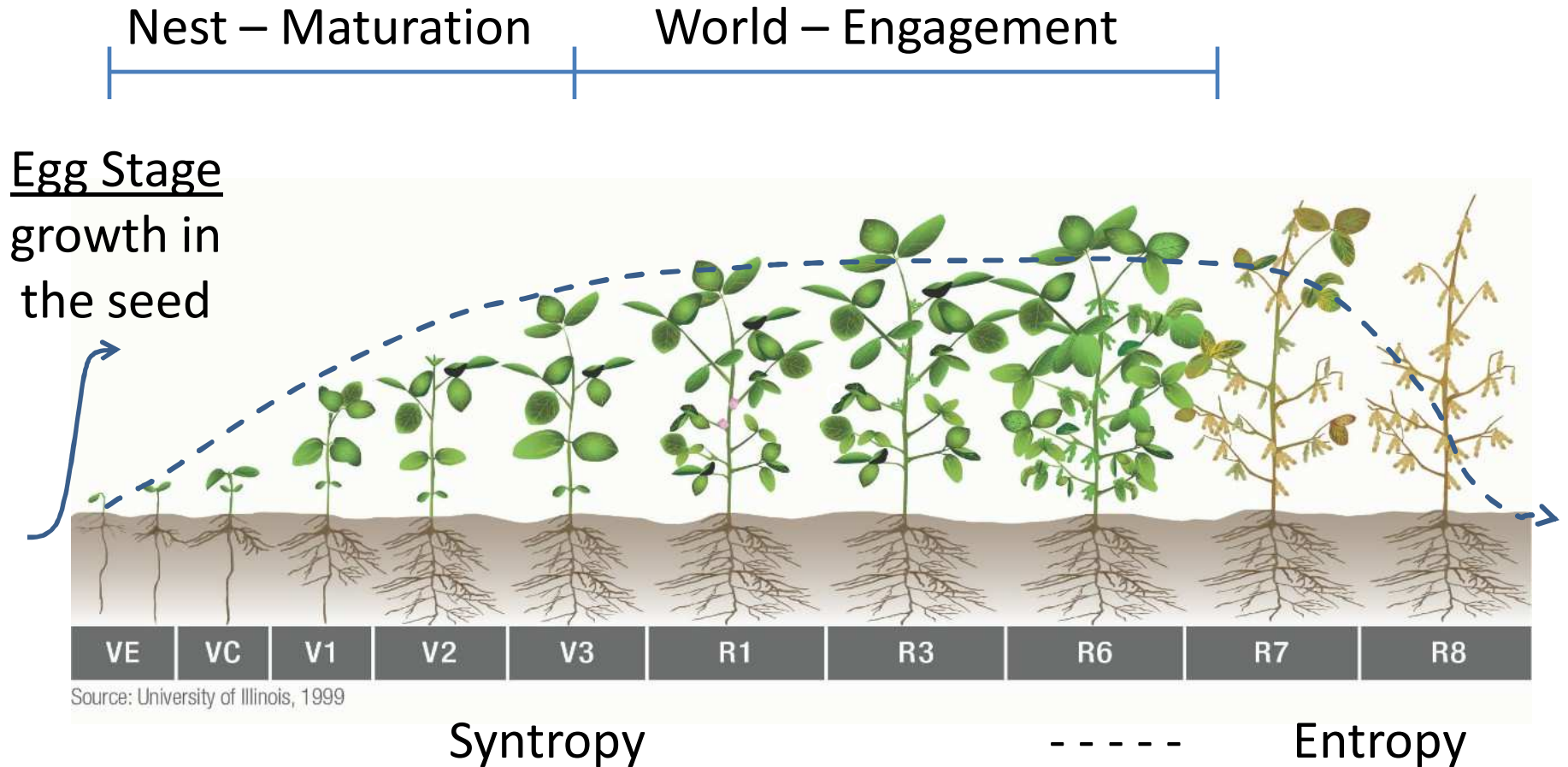
plants, animals, ecosystems, weather systems,  
civilizations, economies, communities, businesses,  
cultures, societies, social groups, personal relationships,  
work habits,  
home, office, and artistic projects, etc.

- A common language for all *new lives*

*Natural Growth* or *Egg, Nest, World*

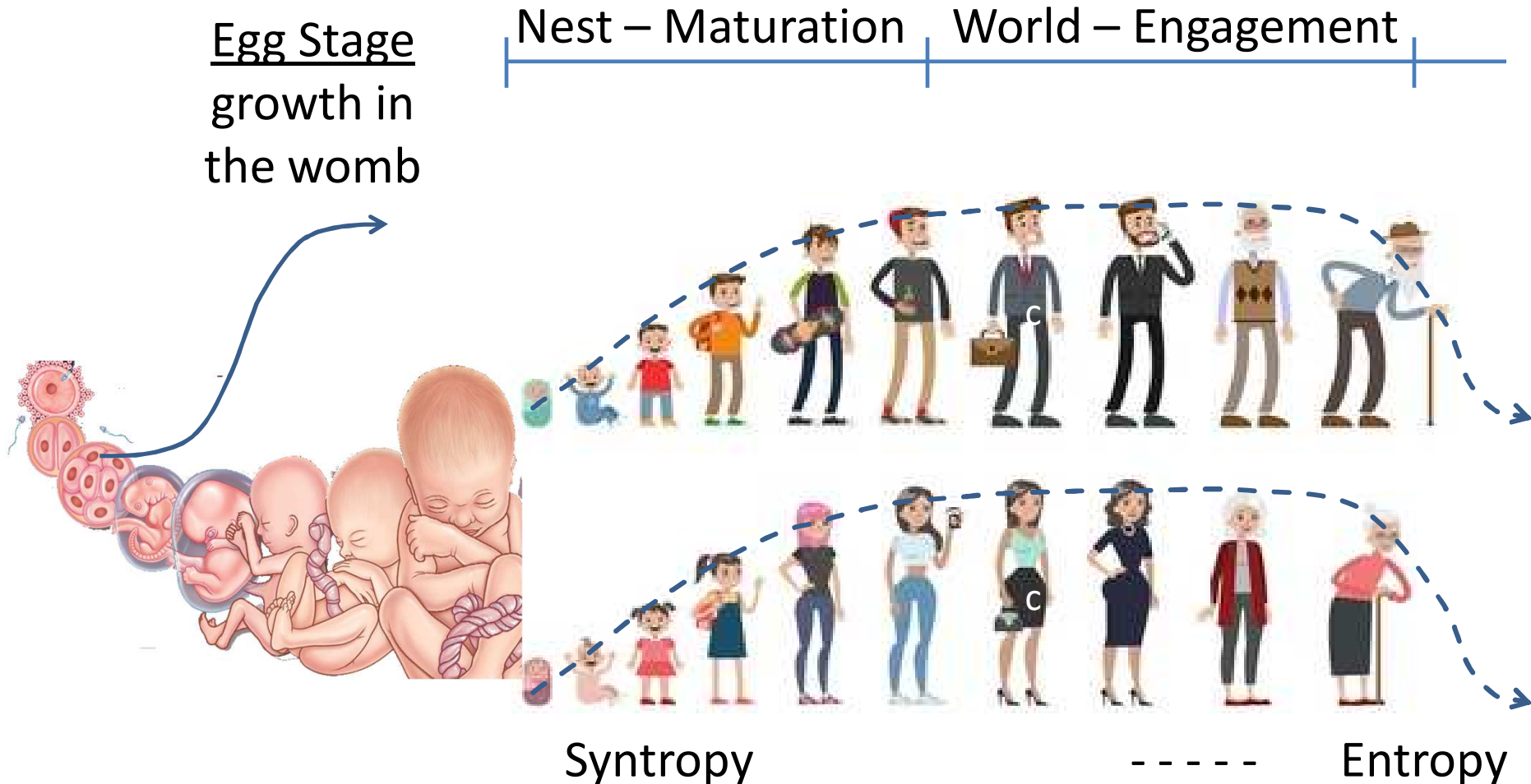


- Stages of New Lives of Plants



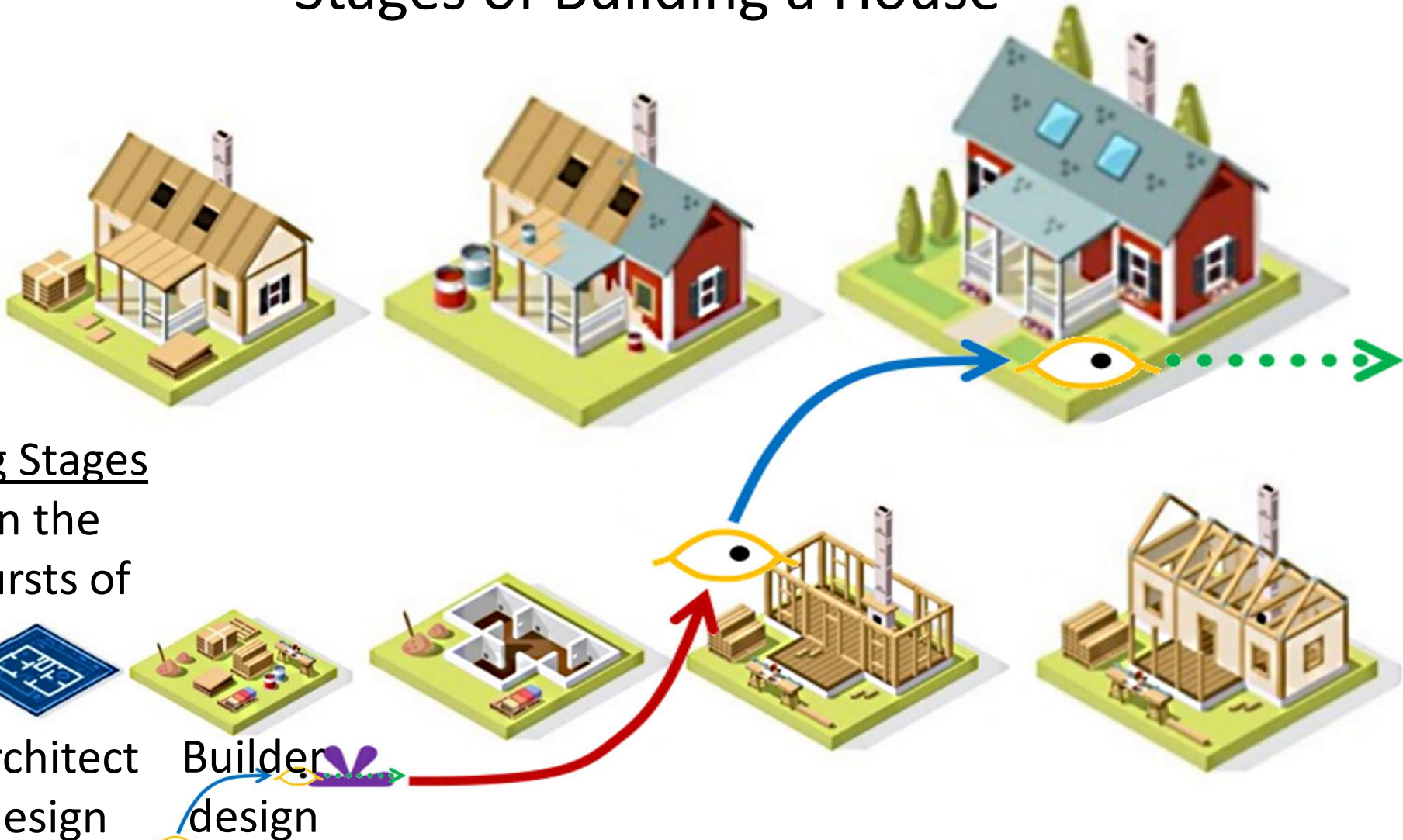
# • Stages of New Lives in Humans

- One cell to a Trillion
- Then x 22 in 1100 months





- Stages of Building a House



Egg Stages

in the  
bursts of



Architect  
design

Builder  
design



- Family dinner

(Germ), Egg,  
& Individuation

1. Startup – The idea, planning,  
assemble main ingredients and  
check omissions

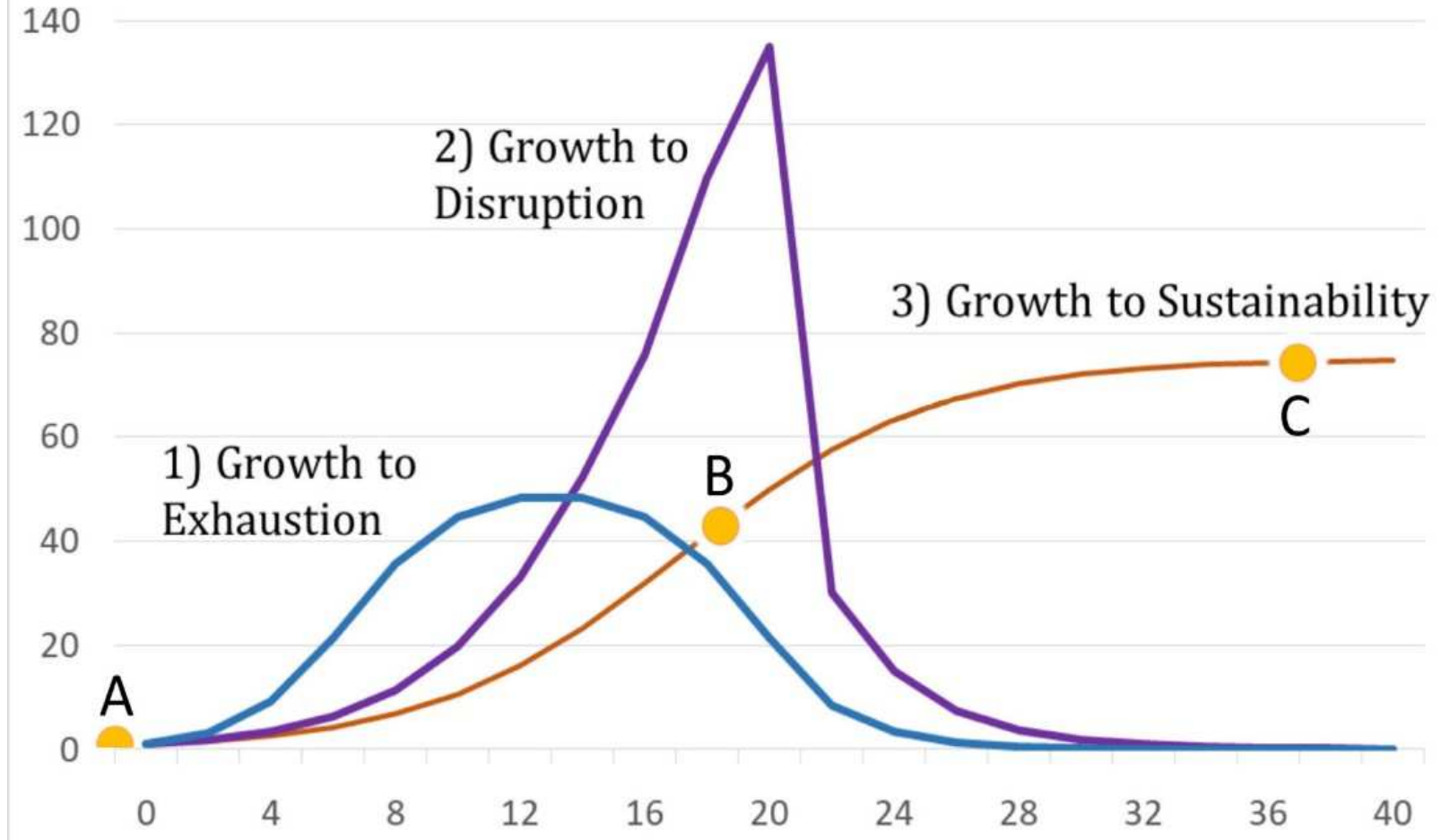
(Hatch), Nest,  
& Maturation

2. Turn Forward – set to time the end  
and add the details, start cleanup  
and get help from others

(Release), World  
& Engagement

3. Serving – and Enjoyment

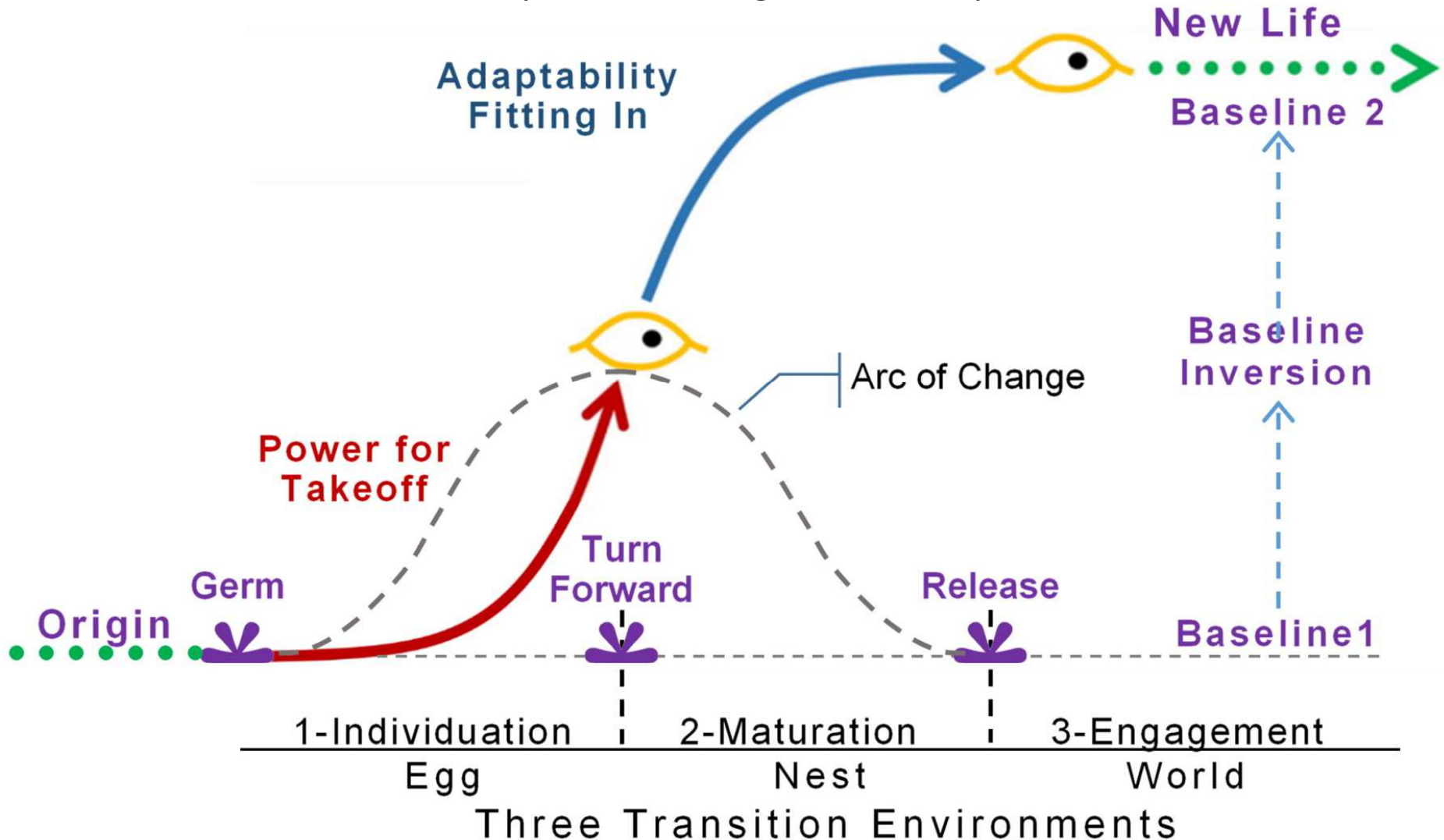
- Three degrees of growth sustainability:



1. No adaptation, 2. No restraint, 3. Adapting to new life

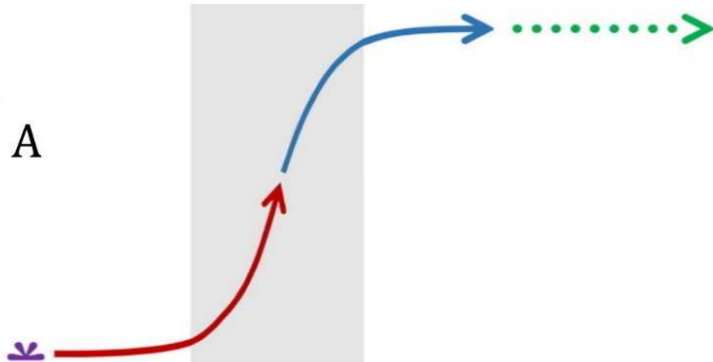
- **Milestones of New Lives:**

3 Pivotal events, 3 Feedback periods, 3 Organizational phases, 3 Environments



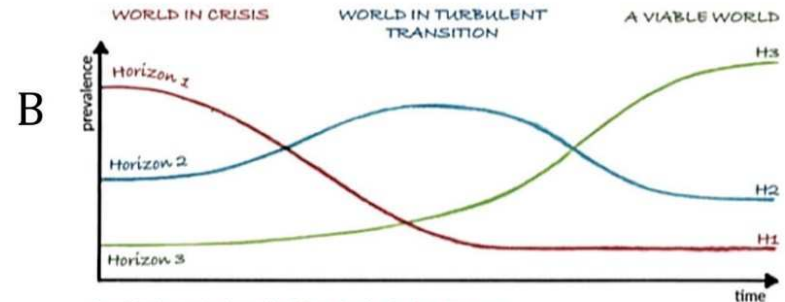
# • Related whole system transformation models

## Familiar Long Struggle & Breakthrough



## Sharpe, Three Horizons Framework

THREE HORIZONS FRAMEWORK APPLIED TO THE TRANSITION TOWARDS A REGENERATIVE CULTURE

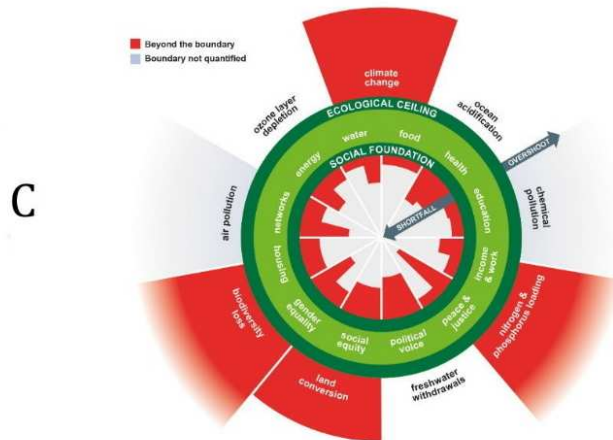


Sustaining innovation keeps 'the lights on' and maintains status quo.

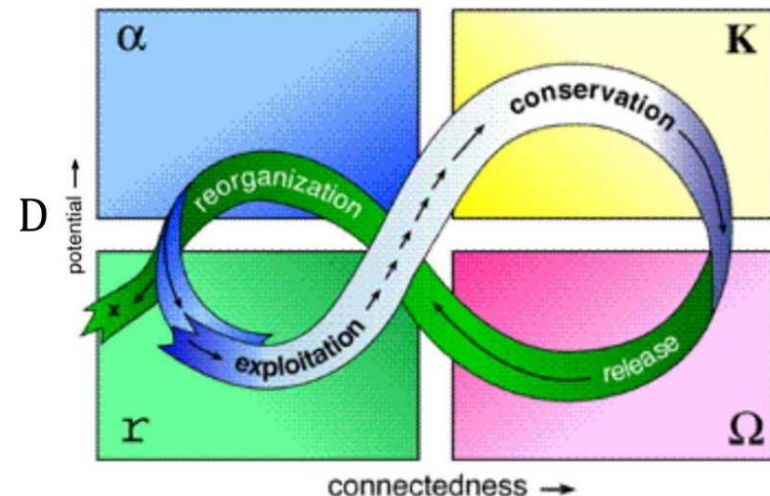
Disruptive innovation identifies opportunities to change the scope of what is possible.

Transformative innovation facilitates the transition towards regenerative cultures.

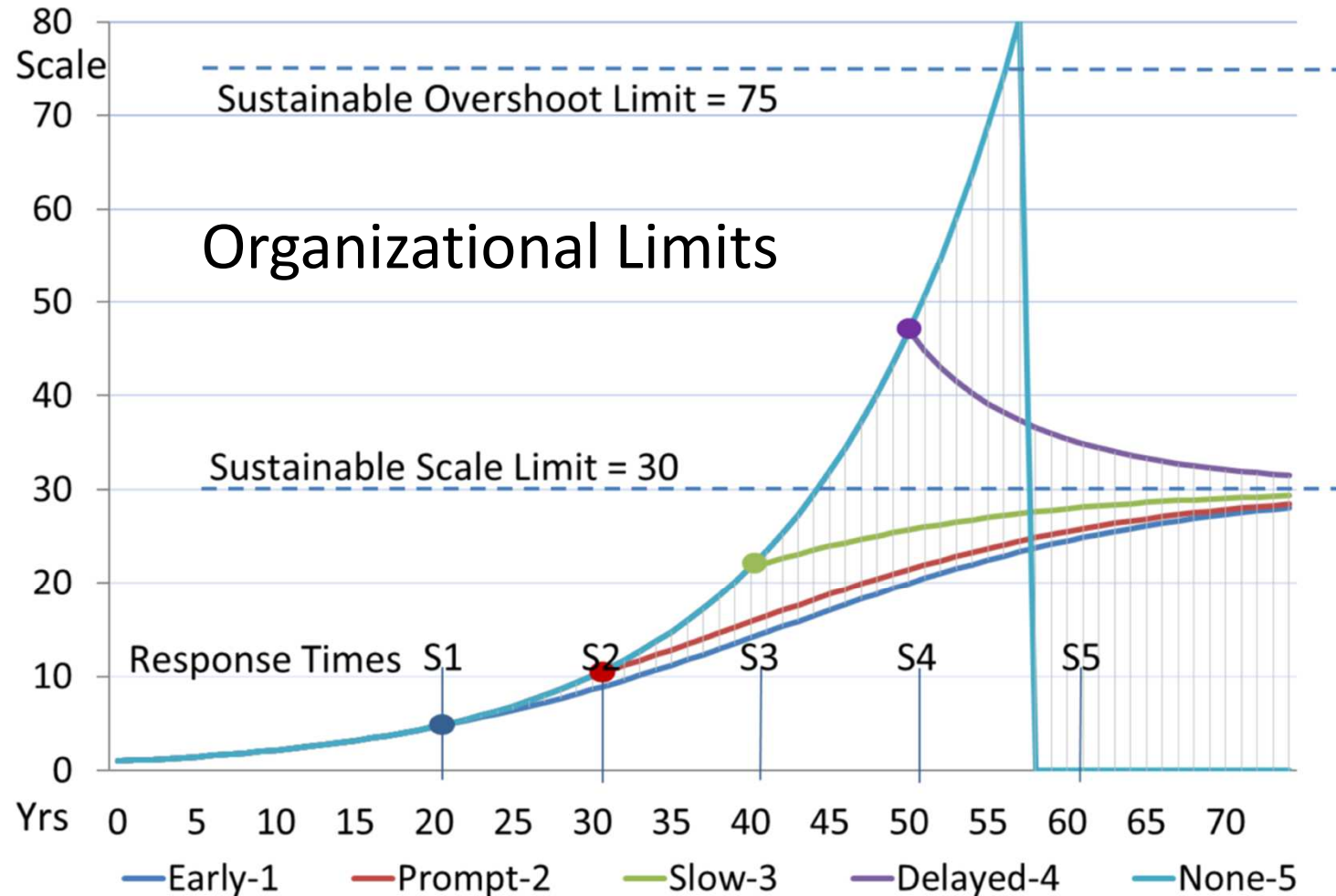
## Reworth, Doughnut Economics



## Holling, Panarchy Adaptive Cycle

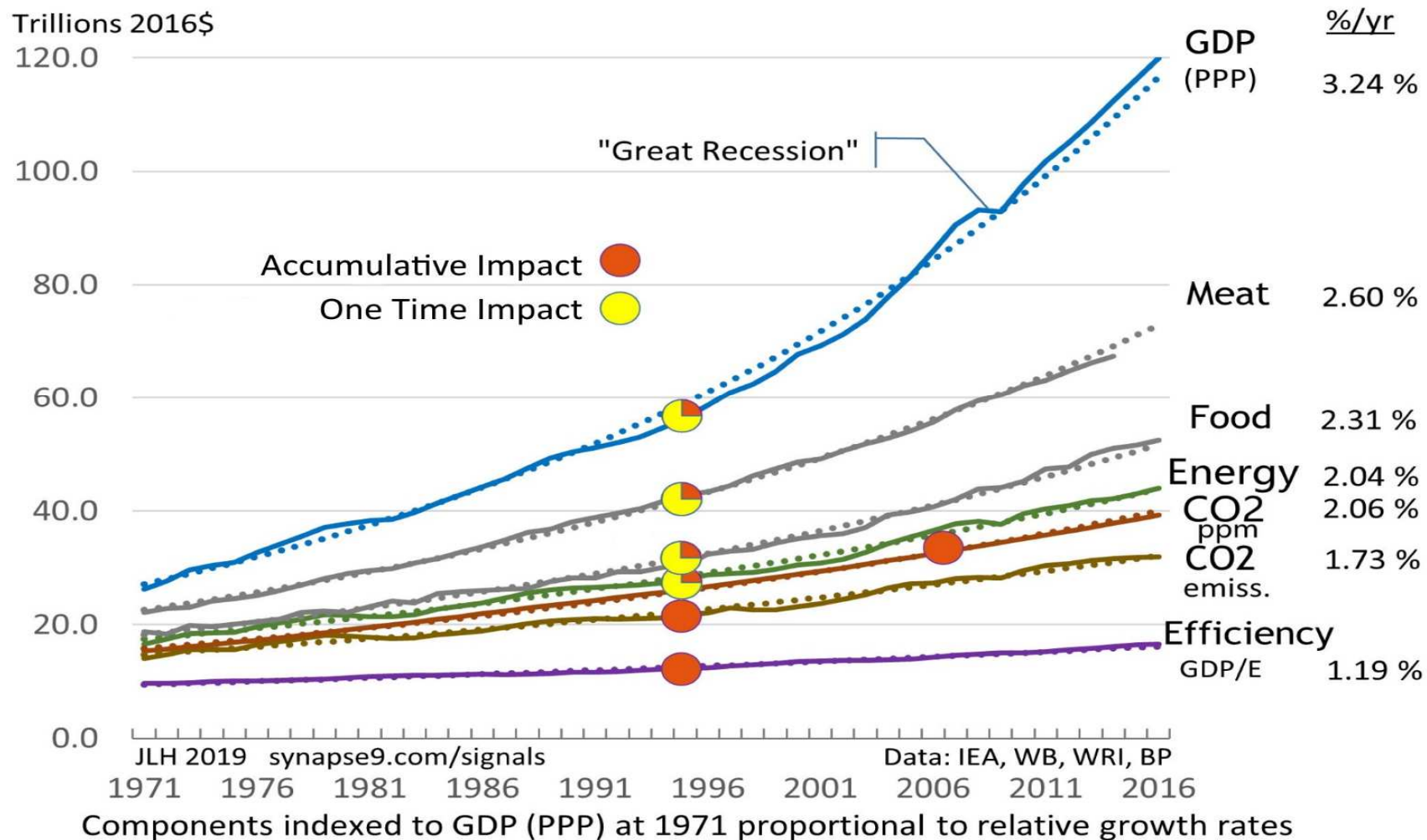


- Delayed response to approaching limit



Increasing delay; more disruptive of failing response.

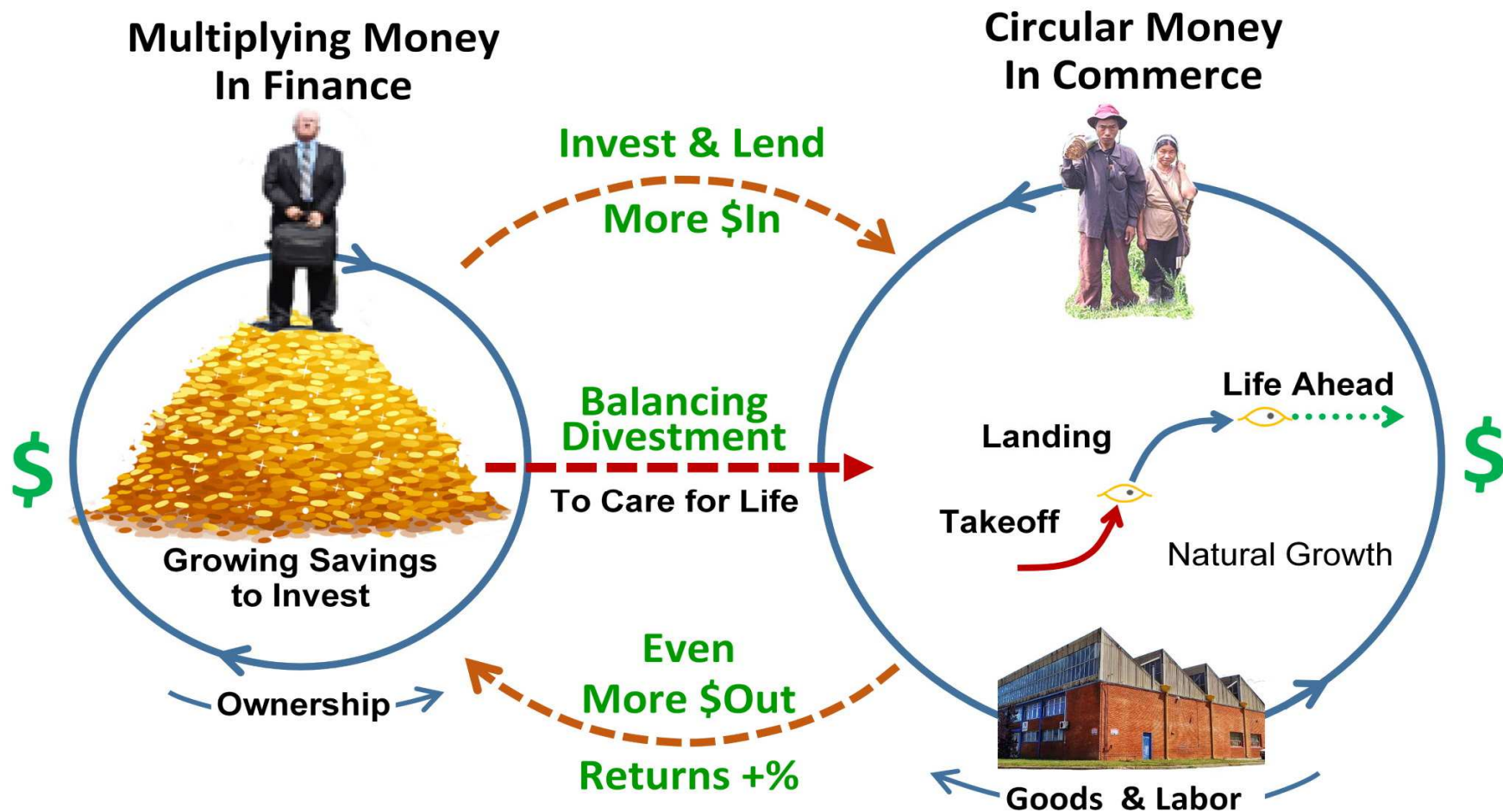
# Growth constants of the world economy



## Growth constant coupling of World GDP and impacts



- Financial Divestment to Rebalance Finance and Commerce



Maximum “carrot and stick” driving growth



- Openings

- Diverting investment to non-profits is a strategy for wealthy donors, that might be globalized.
- People are hungry for new information and new choices, to steer their lives in the right direction.
- Natural climax would preserve a profitable and creatively evolving world economy.

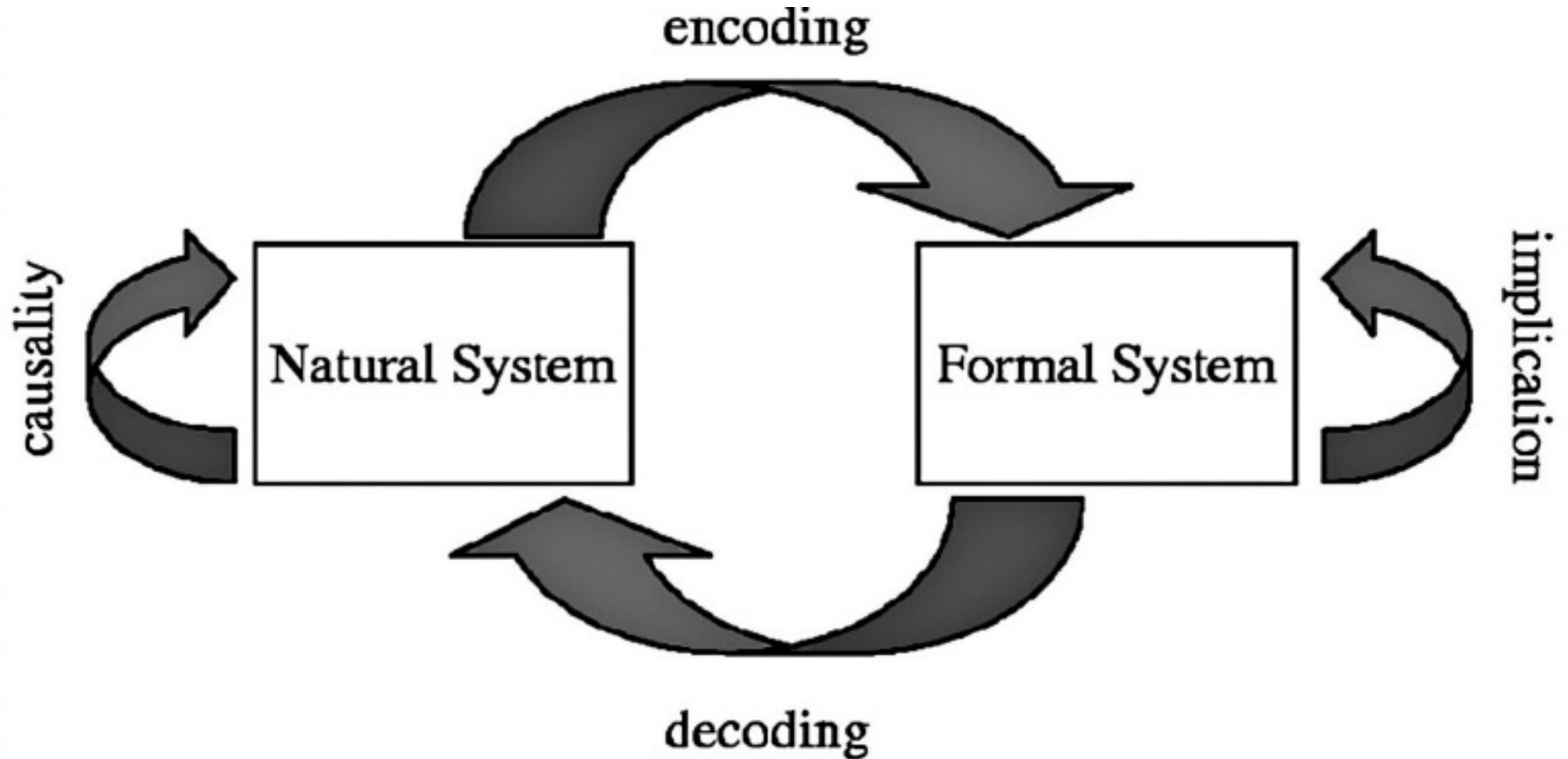
- Barriers

- Discussing the financial “carrot and stick” driving resource use and productivity demands, is taboo.
- People are not well-informed, and our divided cultures seem unaware we all speak in “foreign” languages.

- Possible Societal Openings?
- People might understand
  - The Earth *needs* a new life, and nature's method of starting new lives might be a real option.
  - A carrot & stick approach to growth is dangerous, now forcing people to run ever faster to fall further behind.
  - We are trapped in a tragedy of the commons, depleting our assets for temporary gains in income.
  - A well-informed planetary sense of community is needed but requires finding a planetary language. Could it build on nature's way of starting new lives?

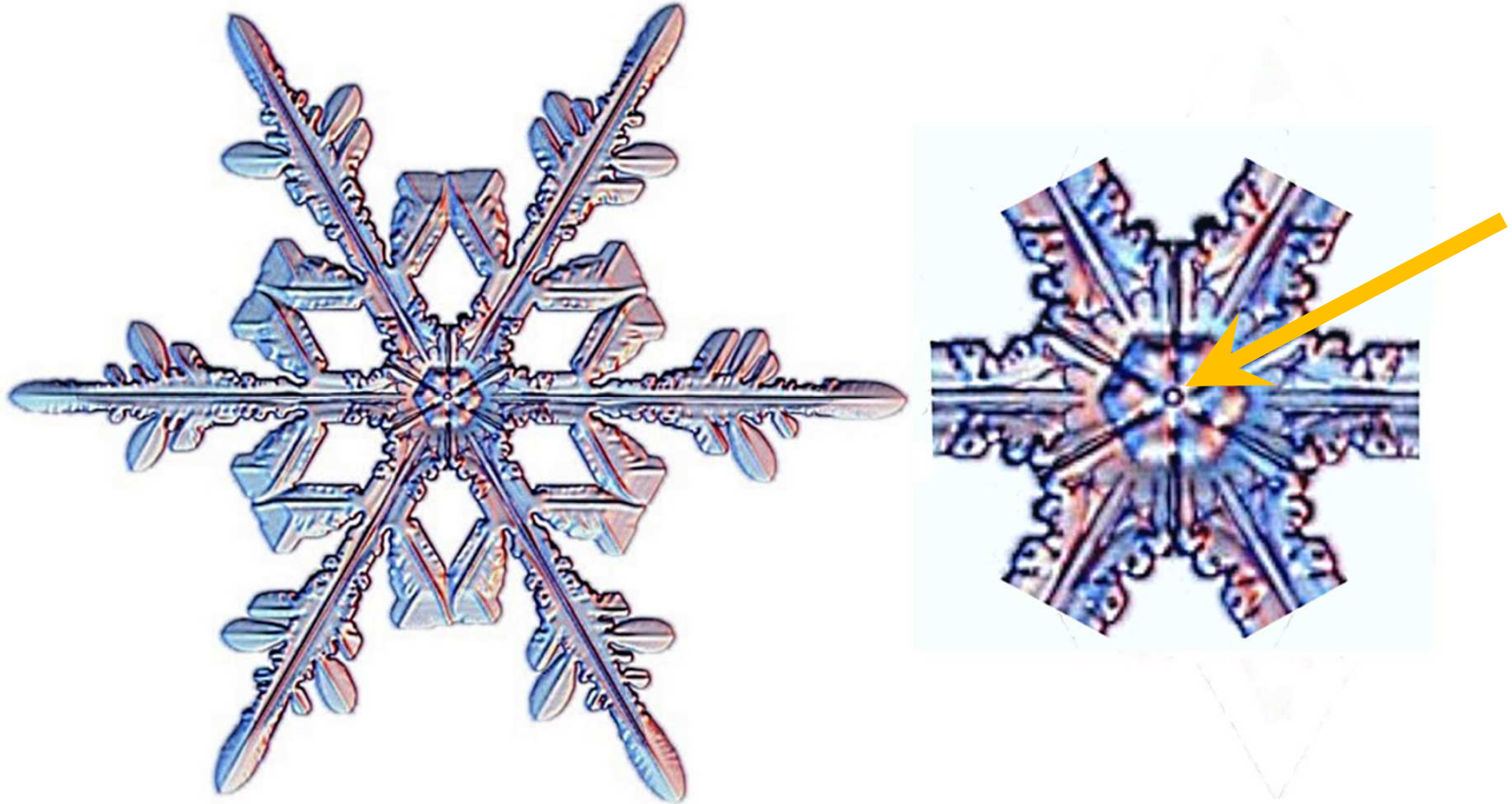


- Robert Rosen's model of science



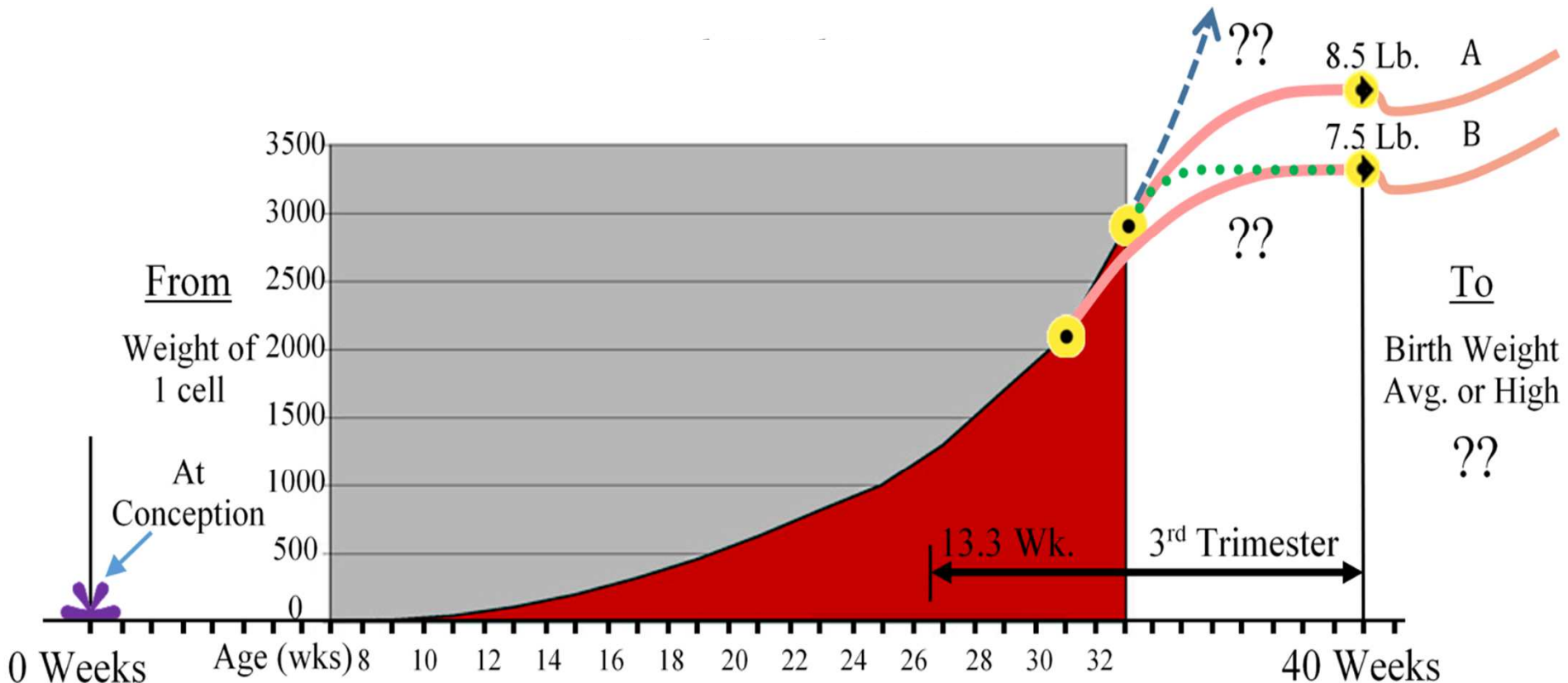
Finding, Encoding and Decoding natural patterns to test  
our theories of nature

- A Snowflake and its central kernel



The crystal builds up from a tiny central dot. The filigree “entangled” within the first crystal.

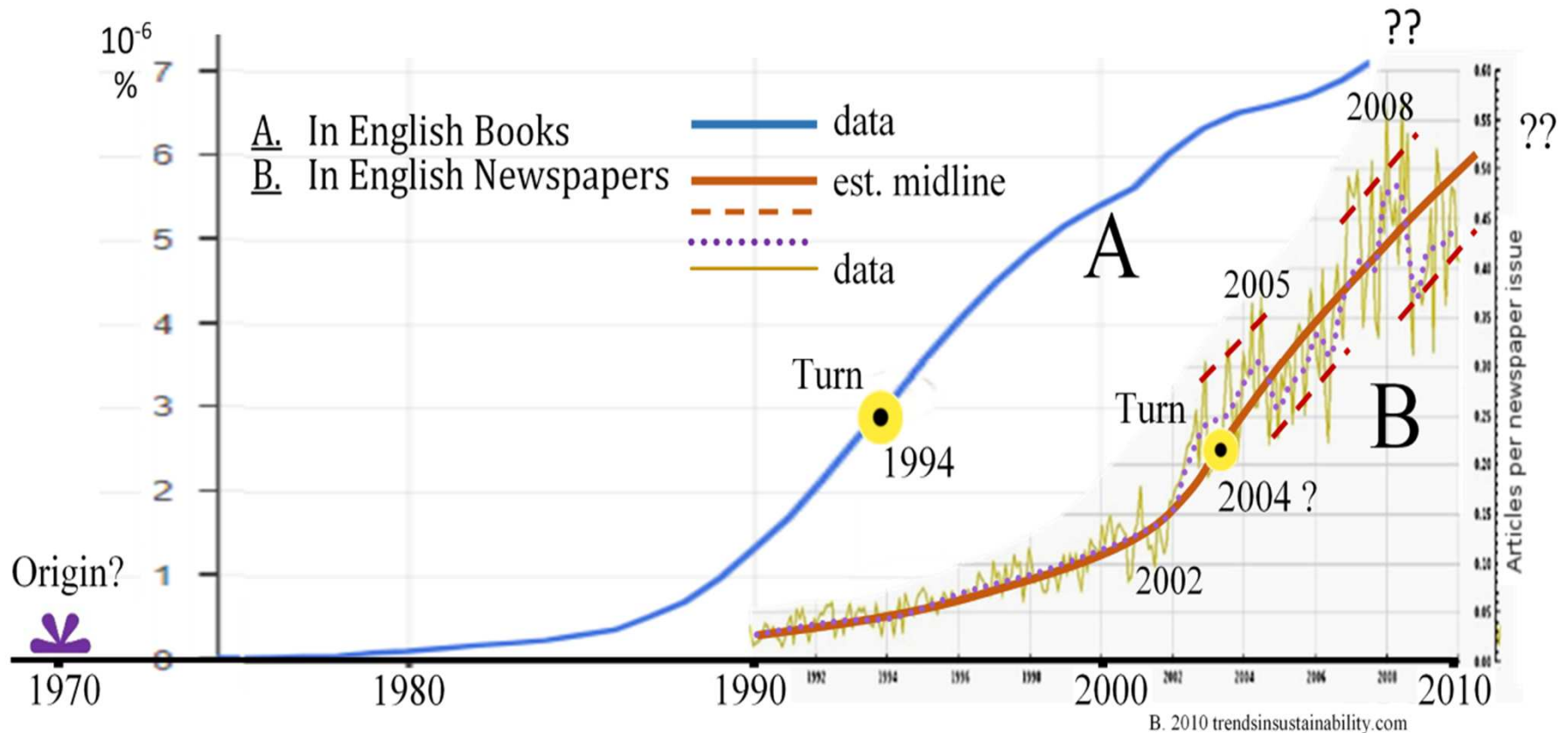
- Fetal Weight data: 8 to 32 weeks



## Case Study I.

Human Gestation based on partial data for fetal weight.

- Growing publication on Sustainability

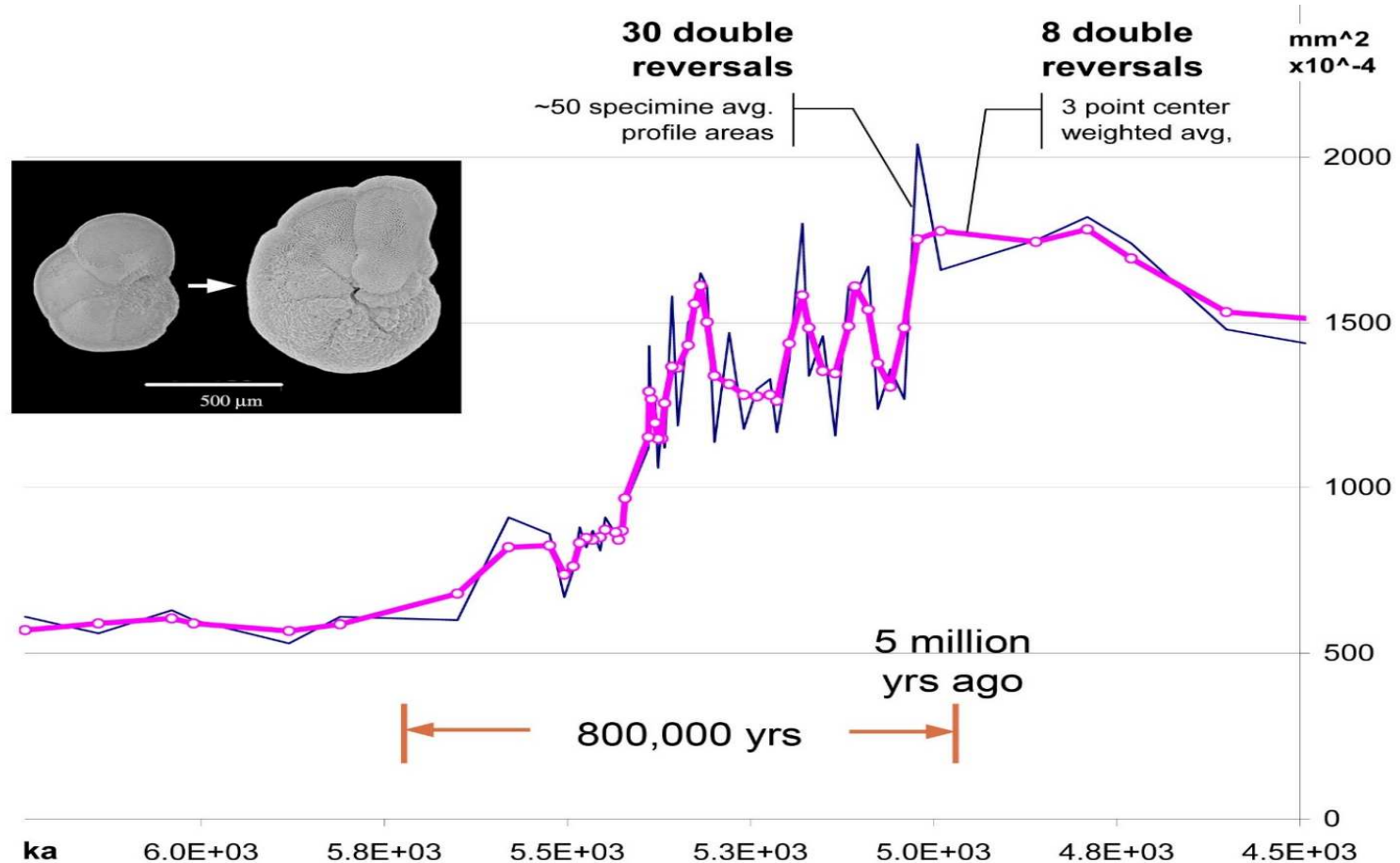


## Case Study II

## Data on English book and newspaper publishing



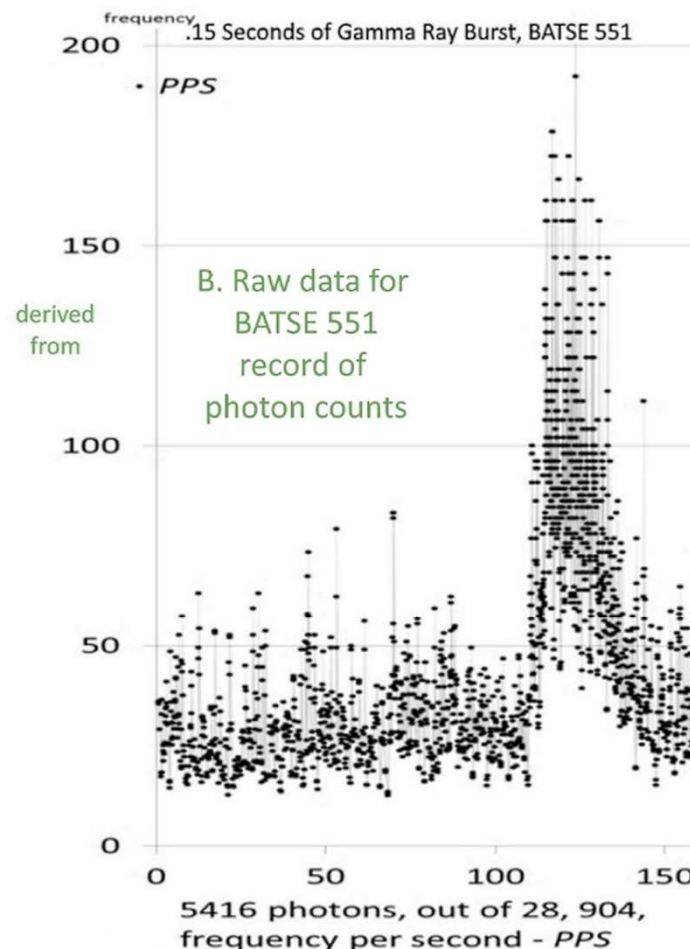
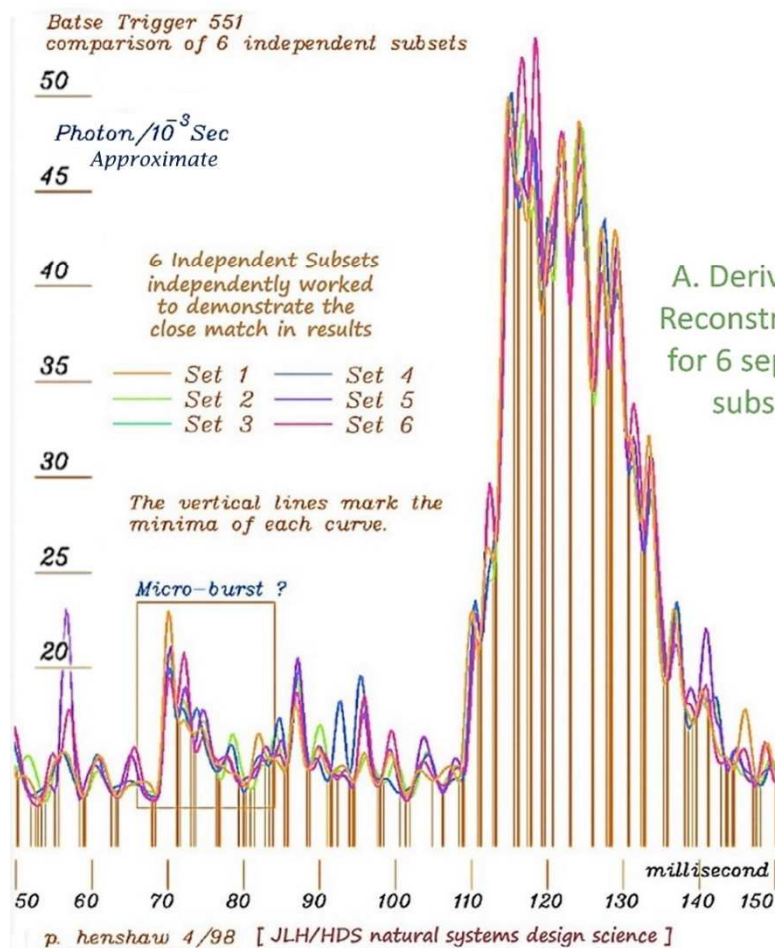
- Million-year plankton speciation



### Case Study III

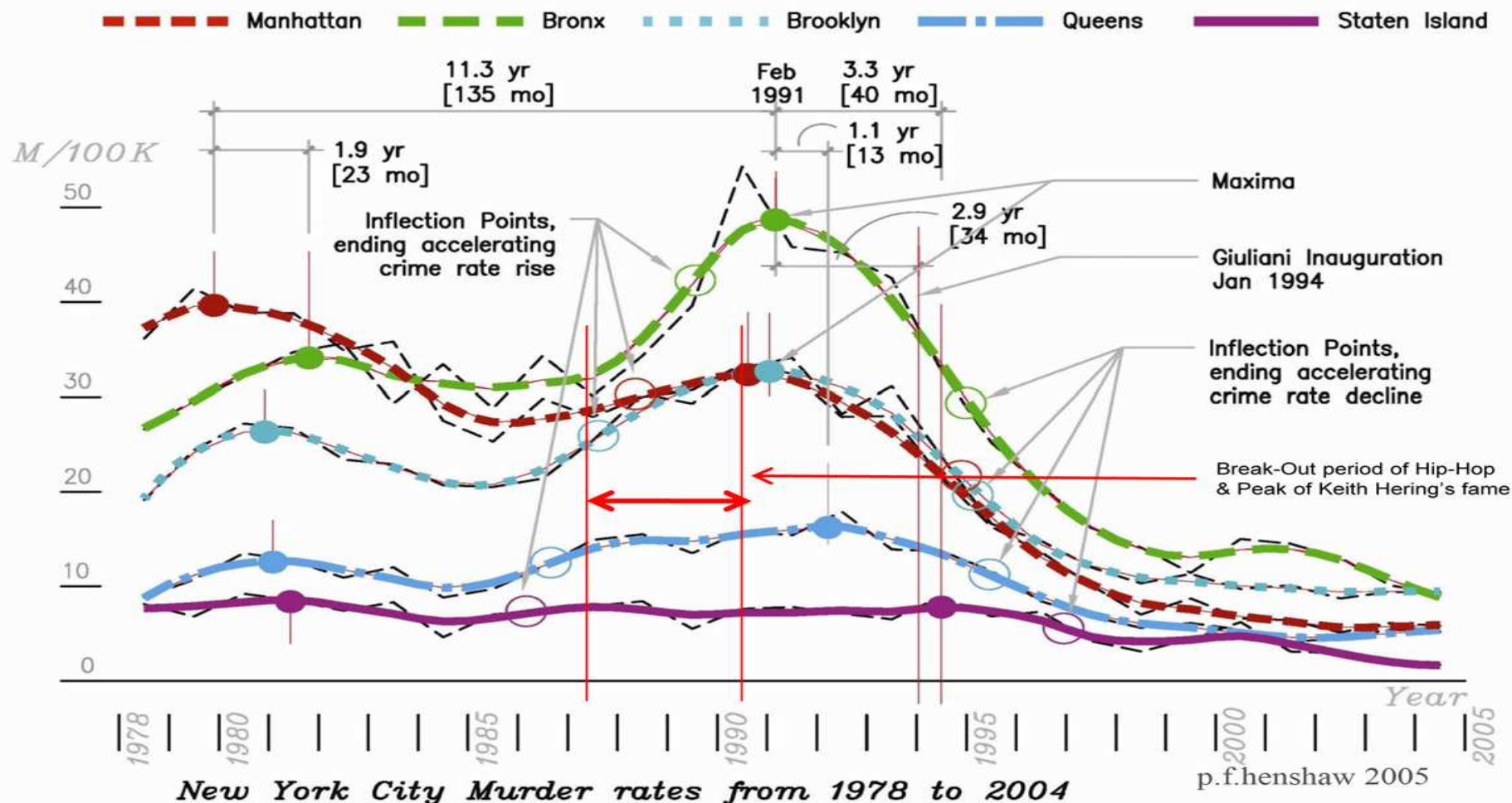
*G. tumida* plankton speciation – great spurts in size, differ from stability before and after.

- Intricate hidden continuities in Gamma Ray Burst



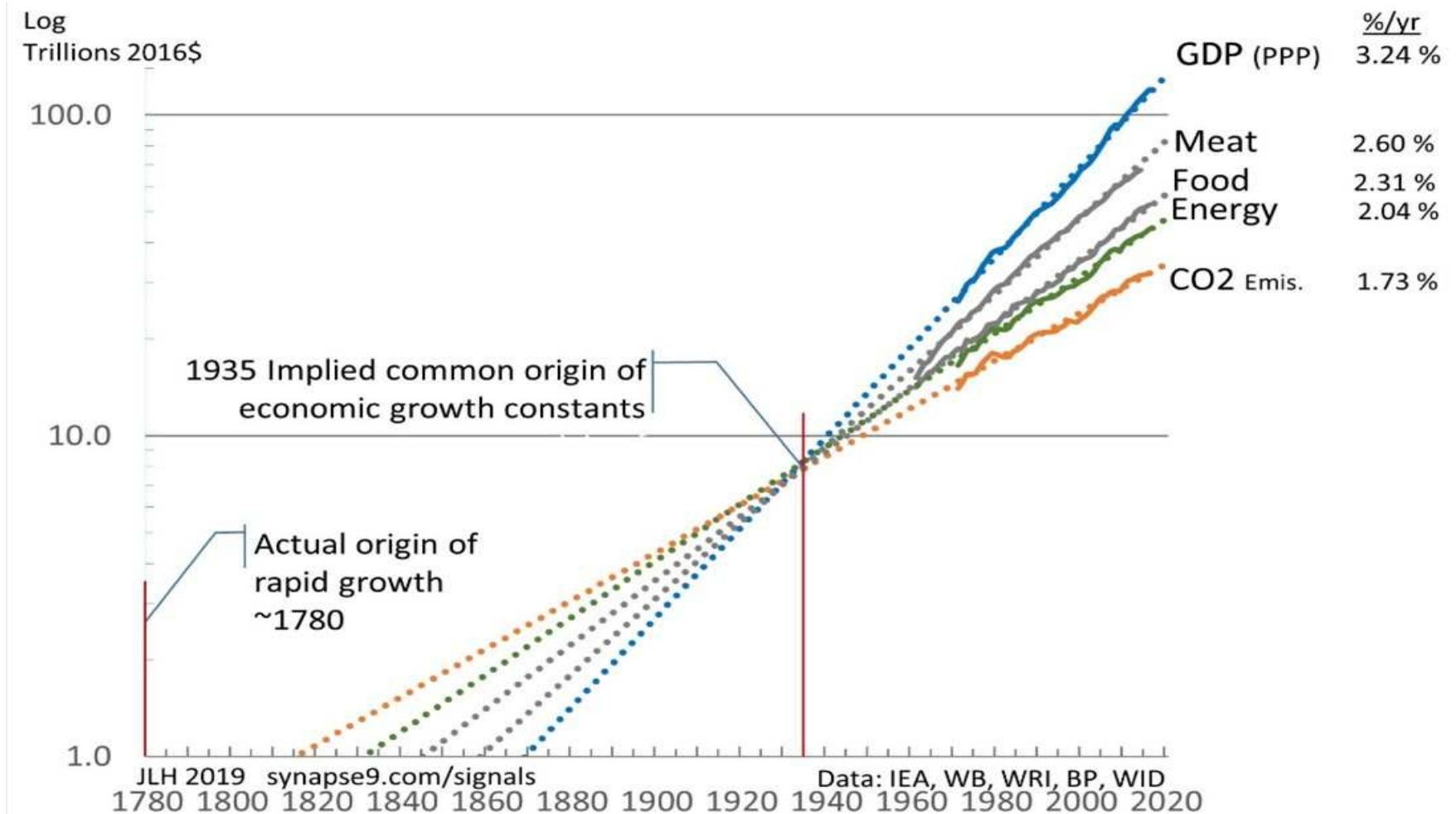
Derivative continuity of six data partitions (lt)  
of Gamma-Ray Burst data (rt)., connecting the dots.

- Collapse of the Great NYC Crime Wave



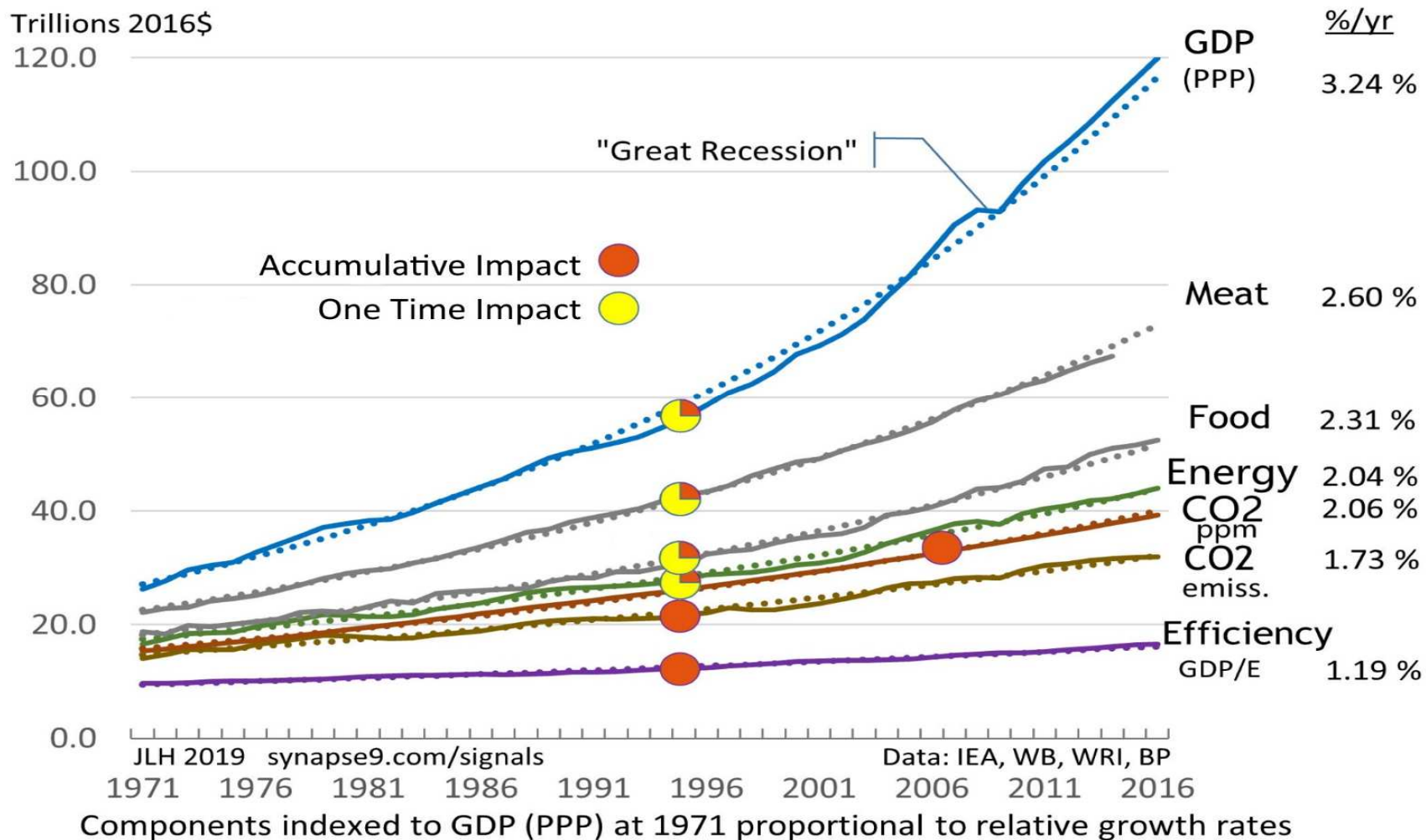
NYC Murder Rates by County showing waves of drug culture violence, collapse starts in 1990.

- GDP Growth constants, shown homeostatic



Projected 1971 to 2016 growth constants intersect in ~1935 as evidence the raw data was homeostatic about the trend.

# Growth constants of the world economy



## Growth constant coupling of World GDP and impacts

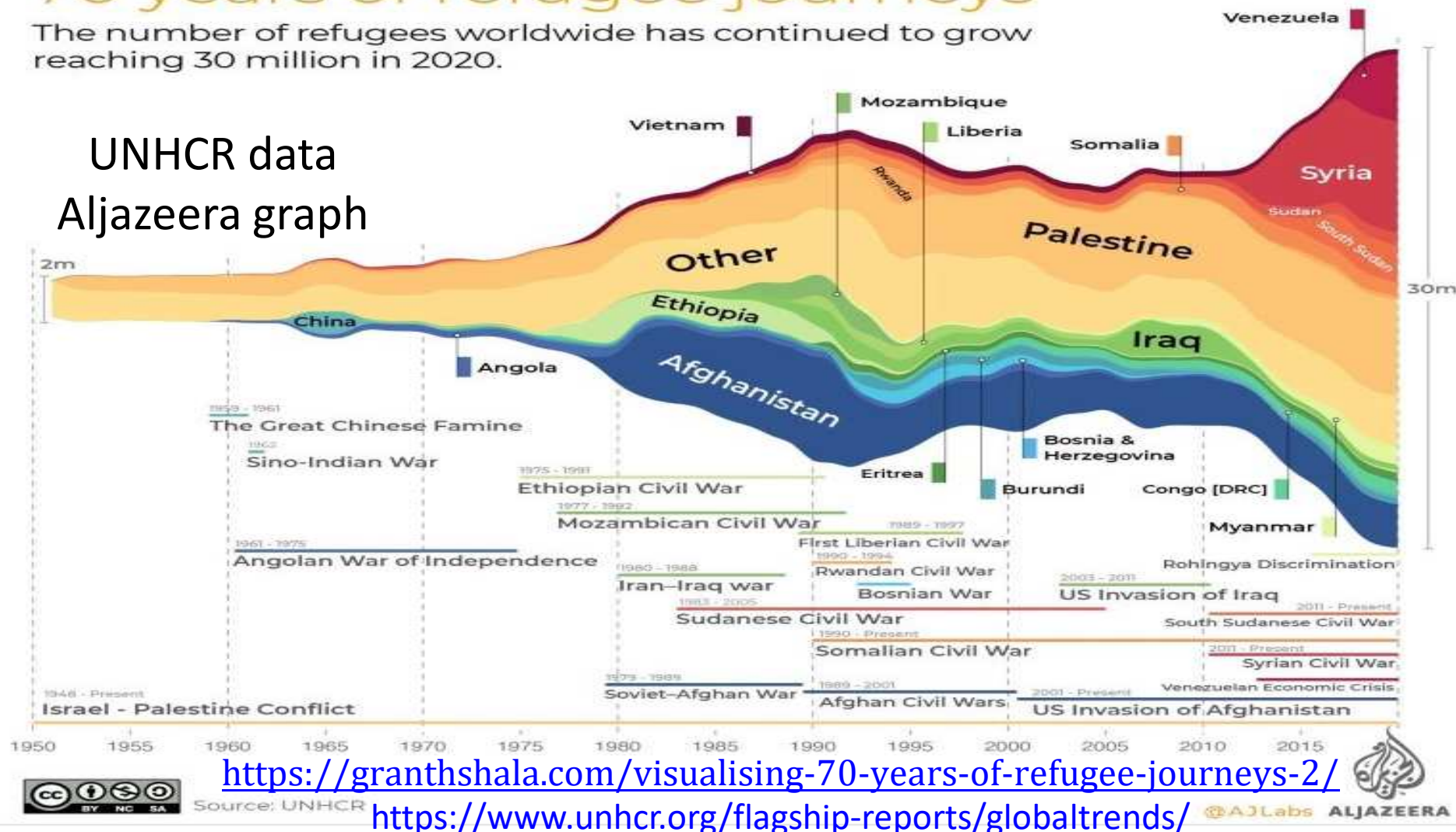


- The 1950-2020 World Refugee Wave

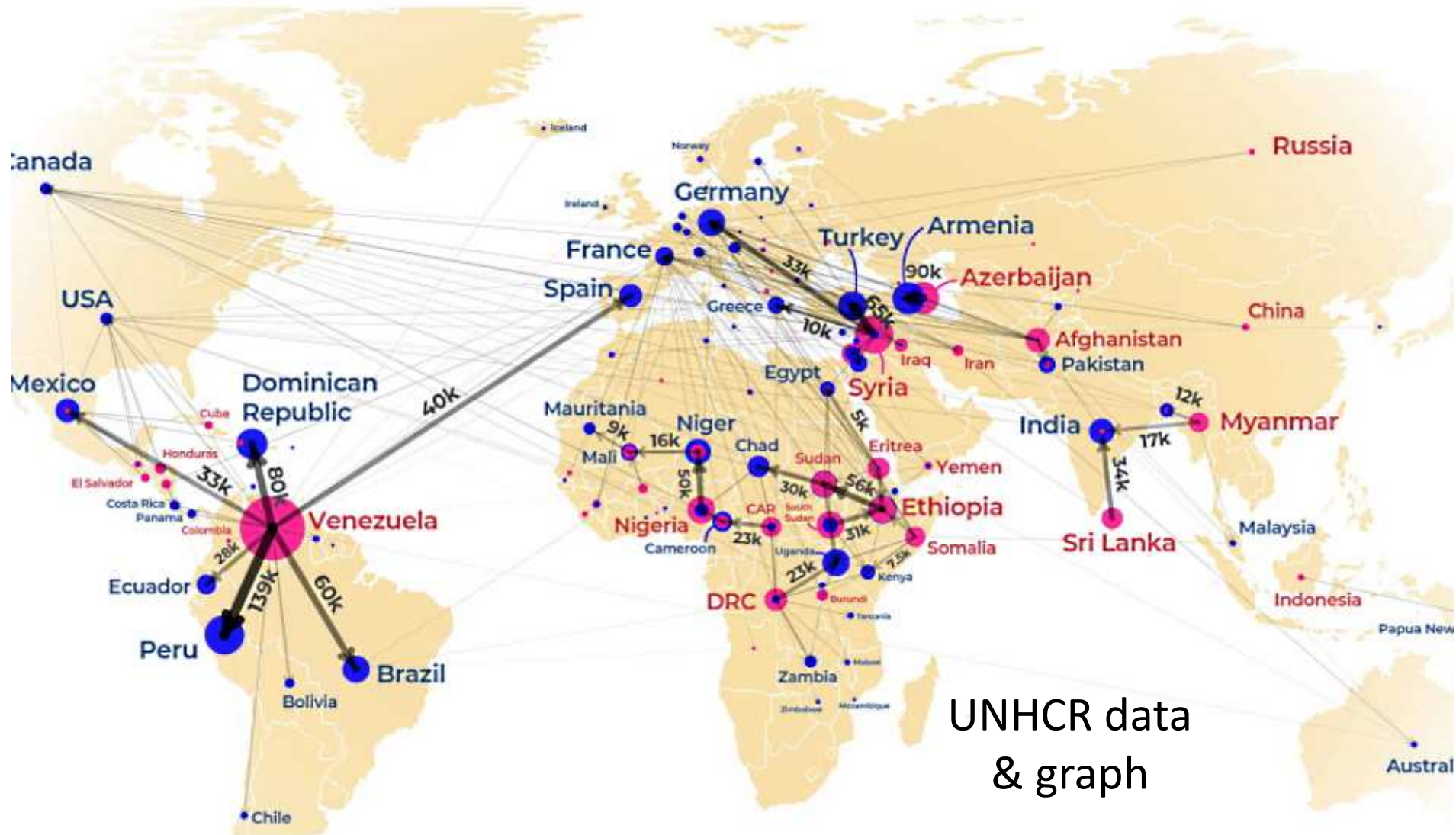
## 70 years of refugee journeys

The number of refugees worldwide has continued to grow reaching 30 million in 2020.

UNHCR data  
Aljazeera graph



- The 1950-2020 World Refugee Wave

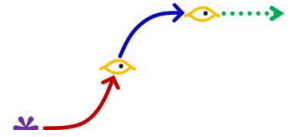


# UNHCR data & graph

<https://www.unhcr.org/flagship-reports/globaltrends/>



*Germ* — Turn Forward — *Release*  
*Individuation* — *Maturation* — *Engagement*



Speak a new  
language so that  
the world will be  
a new world.

Rumi

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