Ecological Modernisation

environment, culture and systemic invention

Seminar talk

for

School of Development Studies, UEA

from

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14 February 2007

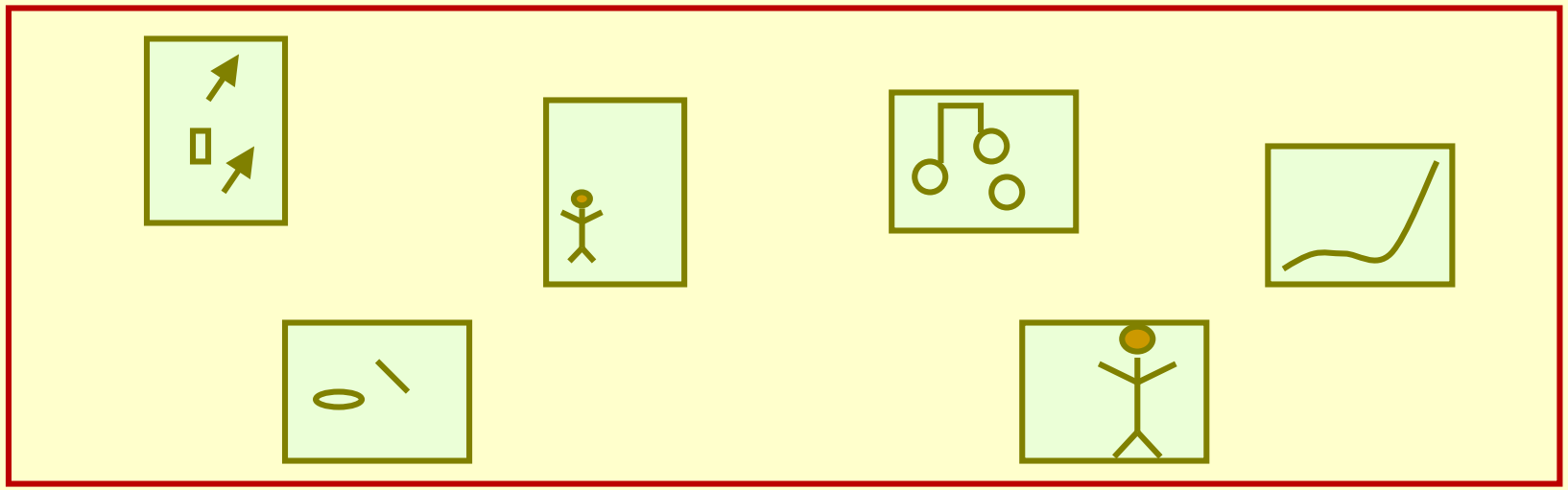
Exercise

1. Using ≤ 5 lines PLUS ≤ 5 figures,

draw an image of:

Development

2. Post your drawing on the wall



NO WORDS ALLOWED!

Questions

- What do we notice?
- Can these images be grouped?
- Artists stand next to their images.
  - *Who was born & raised in global South?*
  - *Who was born & raised in global North?*

THREE SUBJECTS & AN IDEA

1. Development & its assumptions

2. Challenge of systemic invention

3. Necessity & right relations

BARBETS' DUET

1. Development & its assumptions

Measuring development: 1960s-1990s

SOCIAL INDICATORS

Health
Life expectation
infant mortality
Access to clean water

Education
Adult Literacy
School enrolment of boys & girls

Nature of Employment

Men in agriculture
as % of working men

Salaried & wage earners
% of work'g men & women

19 reliable indicators, UNRISD

ECONOMIC INDICATORS

Consumption by Economy at Large
per capita
Investment
Foreign trade
Steel consumption
Energy consumption

Production & Productivity
GDP – gross domestic product per capita
Agriculture production per man in agriculture
Manufacturing production
per person in mf.
Professional & technical workers
as % of working population

Direct Personal Consumption
Daily newspapers in circulation
Telephones per 100,000 population
Televisions per 1,000 population
Animal protein consumption per head

Development = industrialised society

Preparing people …

Health
Life expectation
infant mortality
Access to clean water

Education
Adult Literacy
School enrolment of boys & girls

Nature of Employment

Men in agriculture
as % of working men

Salaried & wage earners
% of work'g men & women

… for industrial production & consumption

Consumption by Economy at Large
per capita
Investment
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Energy consumption

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Direct Personal Consumption
Daily newspapers in circulation
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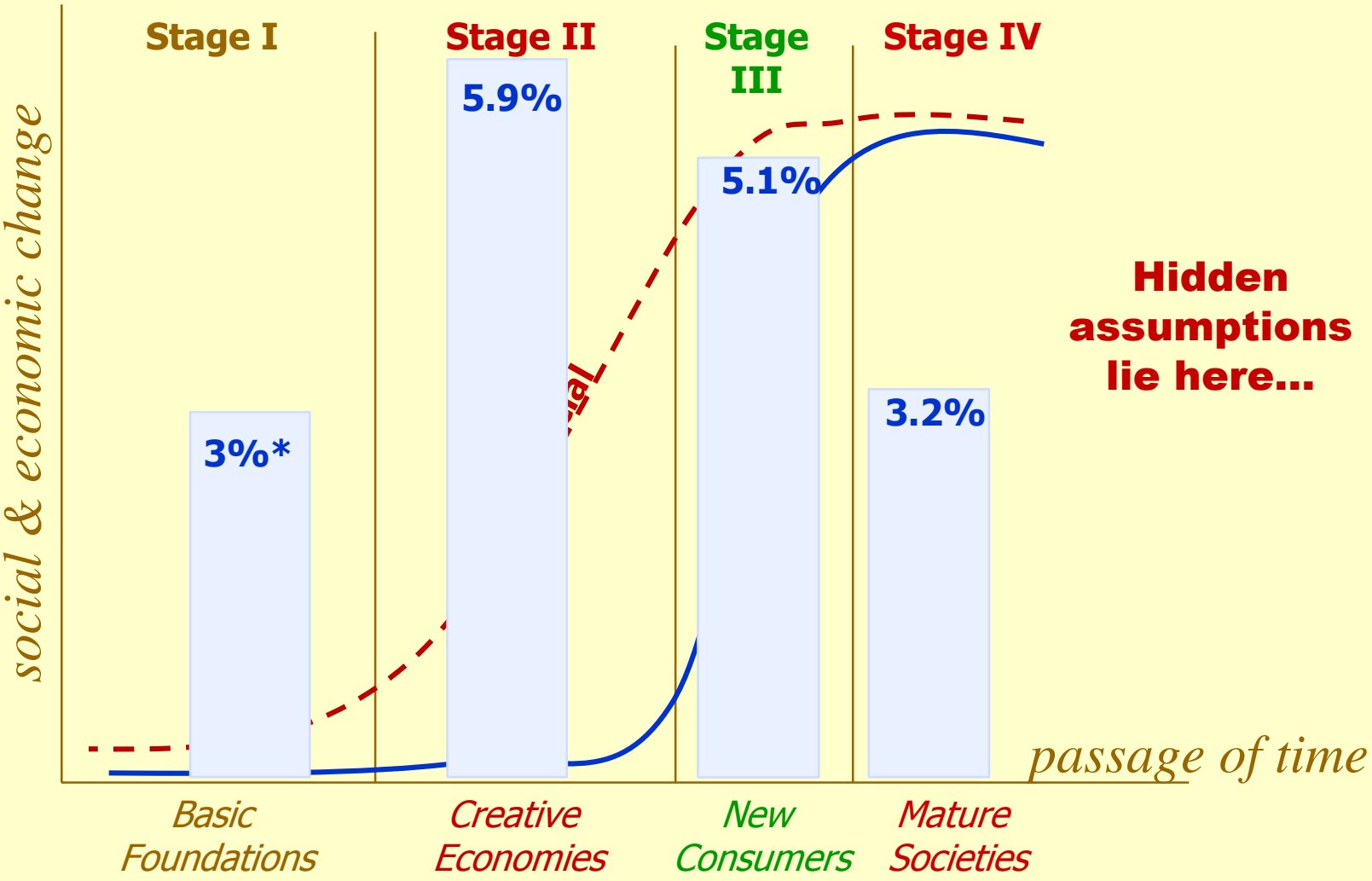
Televisions per 1,000 population
Animal protein consumption per head

Social Foundations of Economic Development", November 1984 by B.J. Heinzen, available at www. barbaraheinzen.com

Two curves & four stages



** 1970-80 growth rates of countries according to 1970 dev't level*

Assump'n 1: We can all live like rich Americans

Development is God's gift …

to anyone who

learns to read,

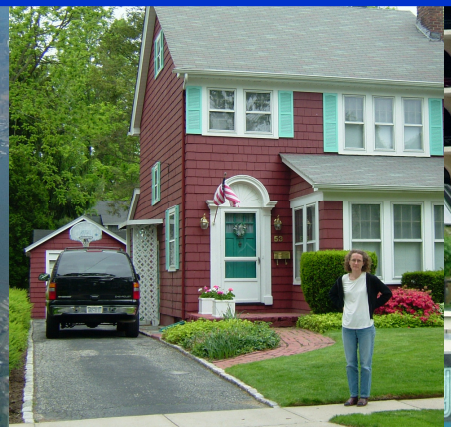
works hard,

& invests the right amounts of money

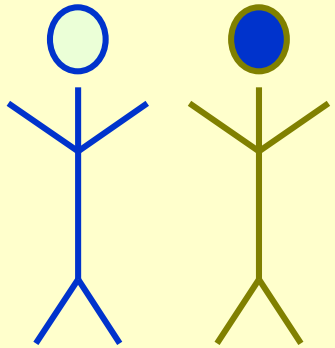
in the right technologies & businesses.

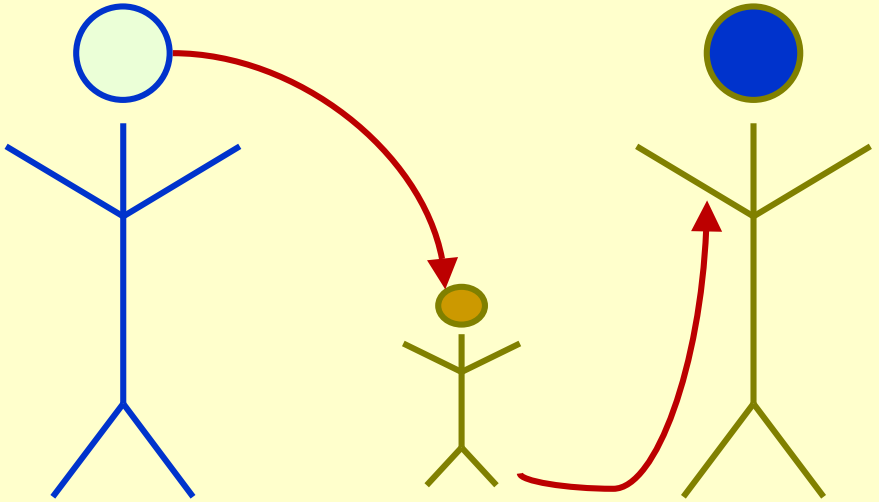
Photos from New York suburbs & New York Times, 2002-2006

Assump'n 2: Societies can change quickly …

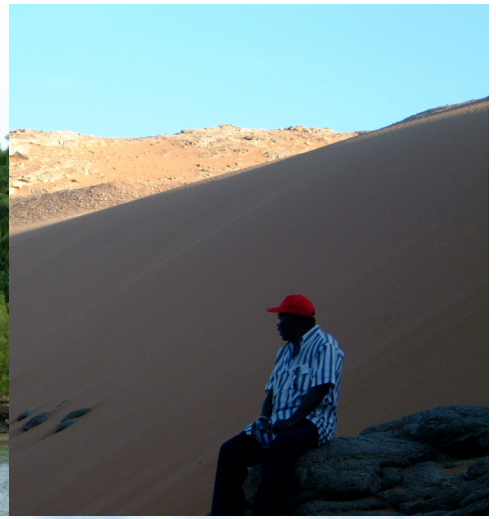


Assump'n 3: What worked in one place, can work in another





Assump'n 4: Culture & geography are irrelevant …

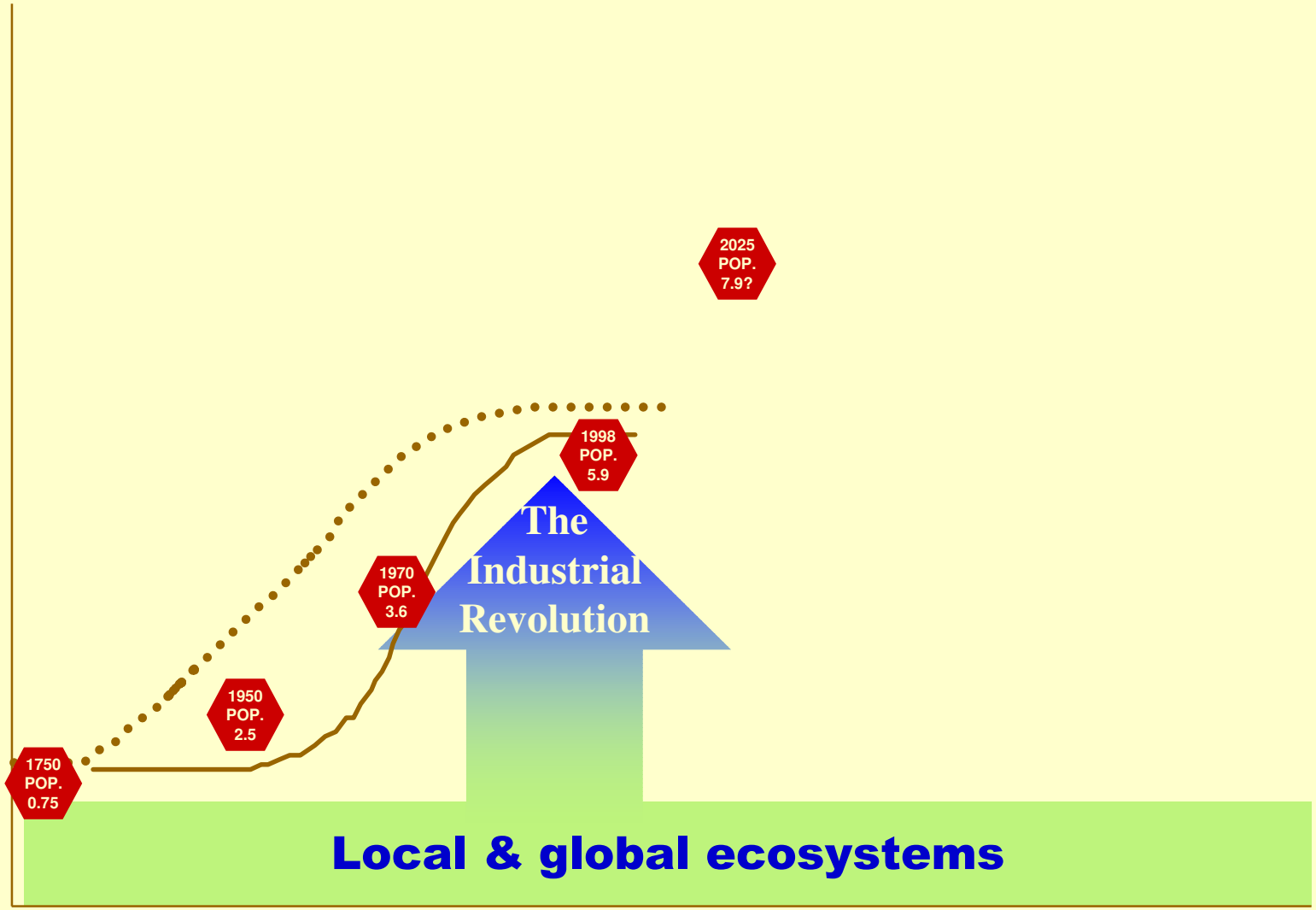


Scenes from Namibia & Tanzania, 1990s.2000s

Assump'n 5. The natural world will always support us …

Scenes from USA & Uganda, 2000s

Assumptions can be wrong



1750 0.75bn POP. *global population, in billions*

Hidden subsidies must be repaid

New Orleans, after the Katrina

1750 POP. 0.75

1950 POP. 2.5

1970 POP. 3.6

1998 POP. 5.9

2025 POP. 7.9?

The Industrial Revolution

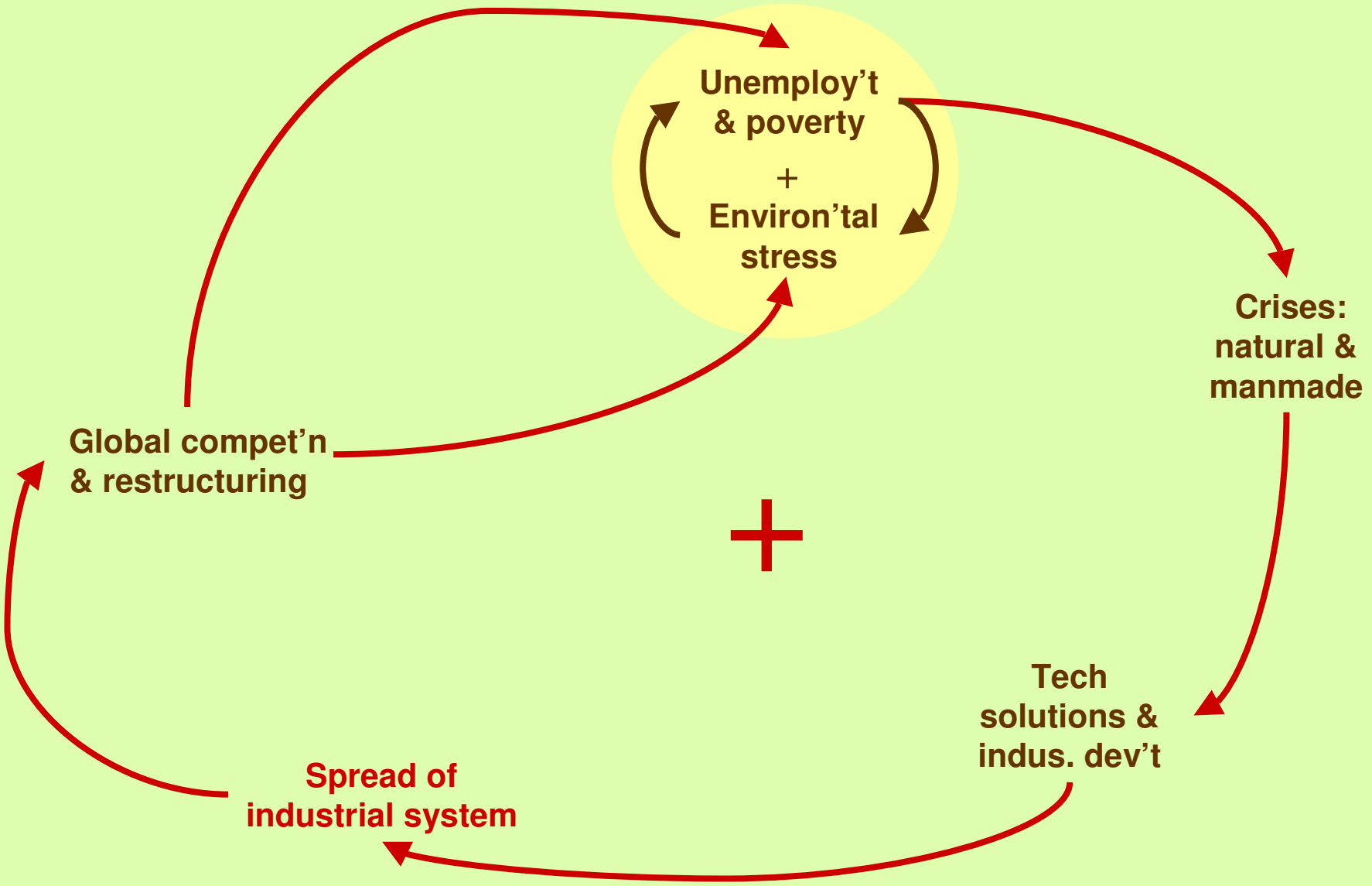
The Ecological Revolution

Local & global ecosystems are finite & dynamic

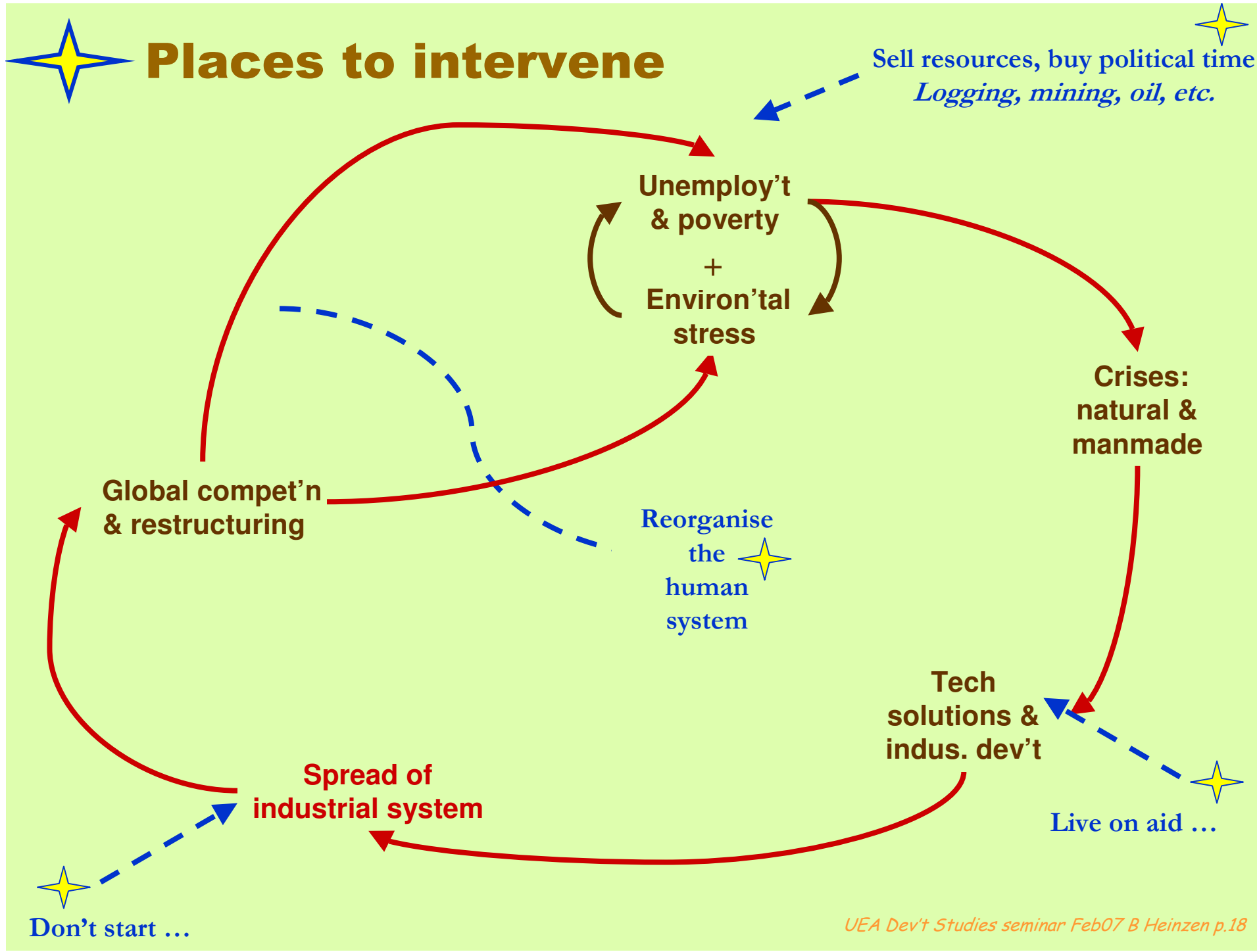
1750 0.75bn POP. *global population, in billions*

The challenge of systemic invention

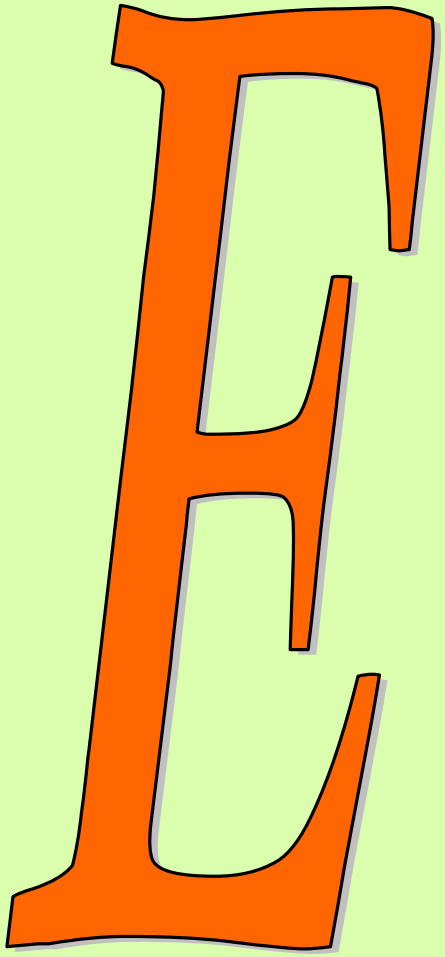
Development today



Places to intervene



Drivers of invention in pre-industrial England

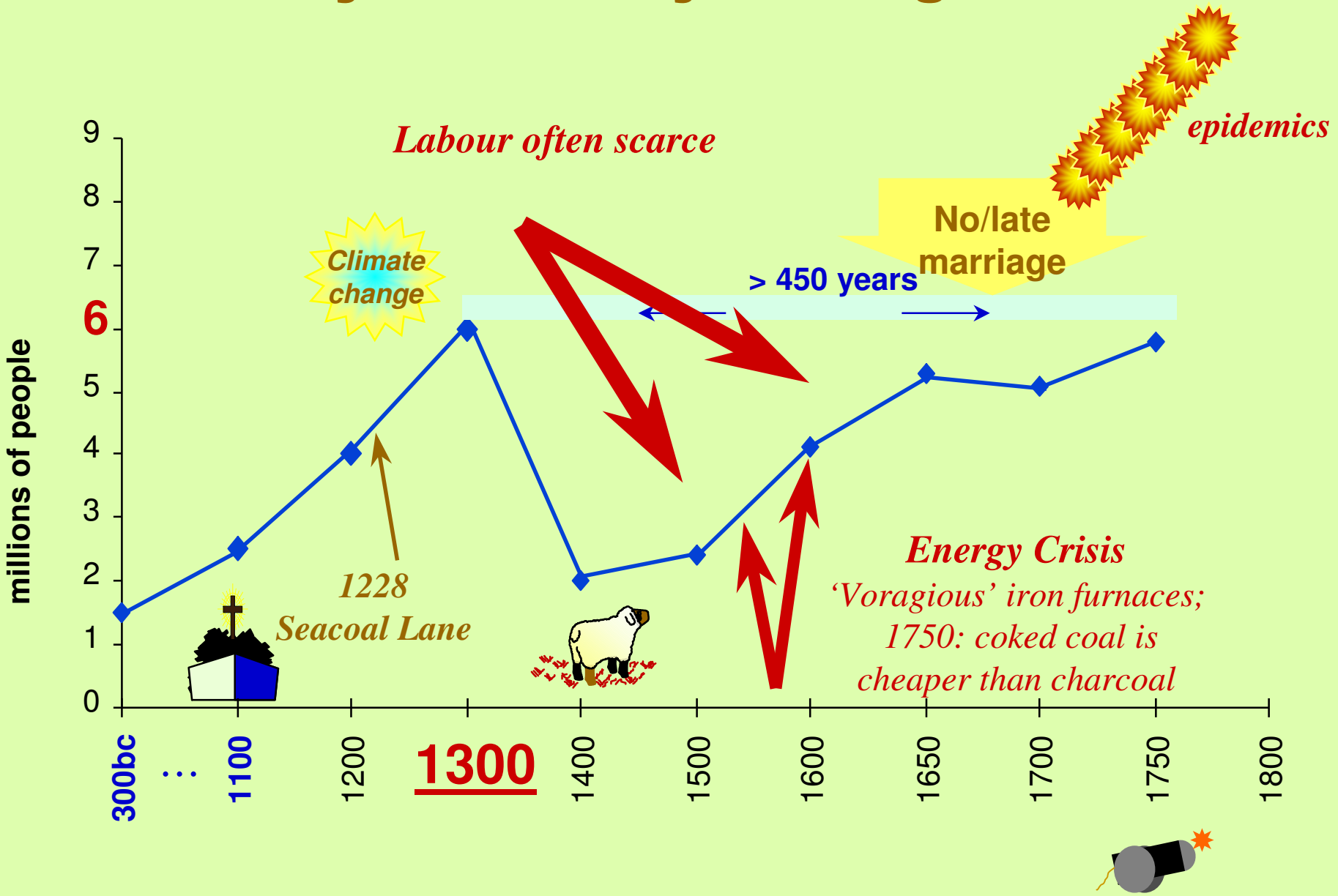


Engagement

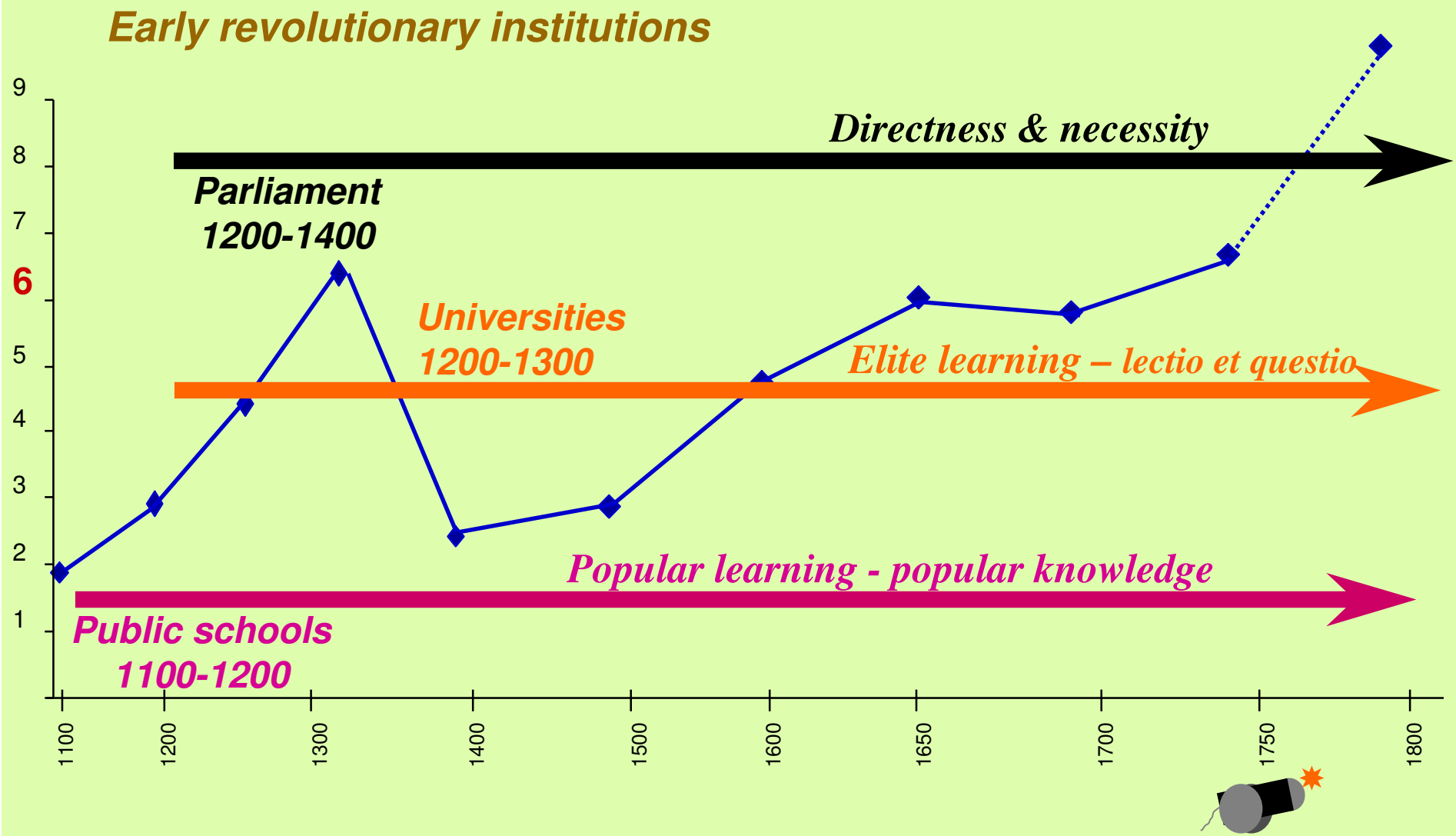
Education

Extremity

Extremity →recovery & reorganisation

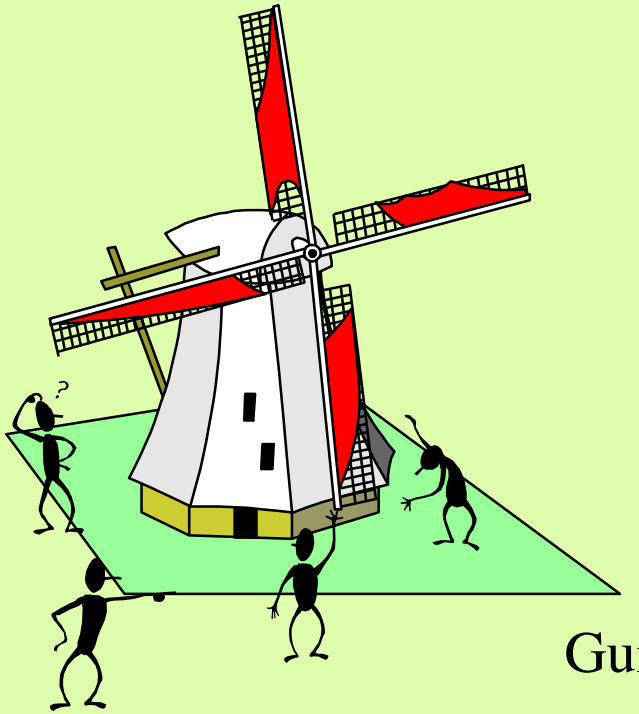


Education & dialogue



Sources: Schools: Nicholas Orme, 1976; Parliament: Ronald Butt, 1989; Universities: Jacques Verger, 1999

Engagement in self-governing localities



"Neighbourliness" a central virtue

Across & within social divides

London

Gentlemen

Merchants

Intimacy
&
Diversity
over the
Long Term
working
Project by Project

Guildsmen

Farmers

Playwrights

Yeomen

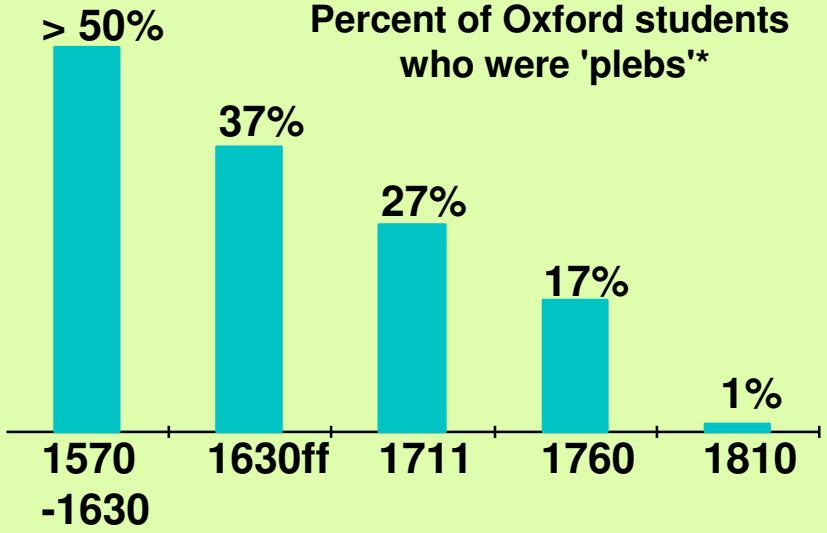
Counties

Creation of the "Dispersed University"

1660 onwards
Decline of Oxbridge & Inns

- *higher fees*
- *no dissenters allowed*
- *loss of reputation at Inns of Court*

"Intellectual life was concentrated outside the universities and merged with practical affairs."



*husbandmen, cloth workers, trades, glovers

Oxford plebs from: Nigel Whealey, Writing & Society, Routledge, 1999, p.37, quotation from: M.D. Shipman, Education & Modernisation. Faber & Faber, 1971, p. 100.

To be a 'gentleman':

Leisure, wealth & learning

*"The most remarkable was the **Lunar Society of Birmingham** in which men such as Watt, Boulton, Wedgewood, Joseph Priestley and Erasmus Darwin met and exchanged scientific, philosophical and technical information. Many of these societies started in coffee houses which served not only as centres of business an the spreading of news, but as potential learned societies."*

Systemic invention in 2007: Necessity & right relations

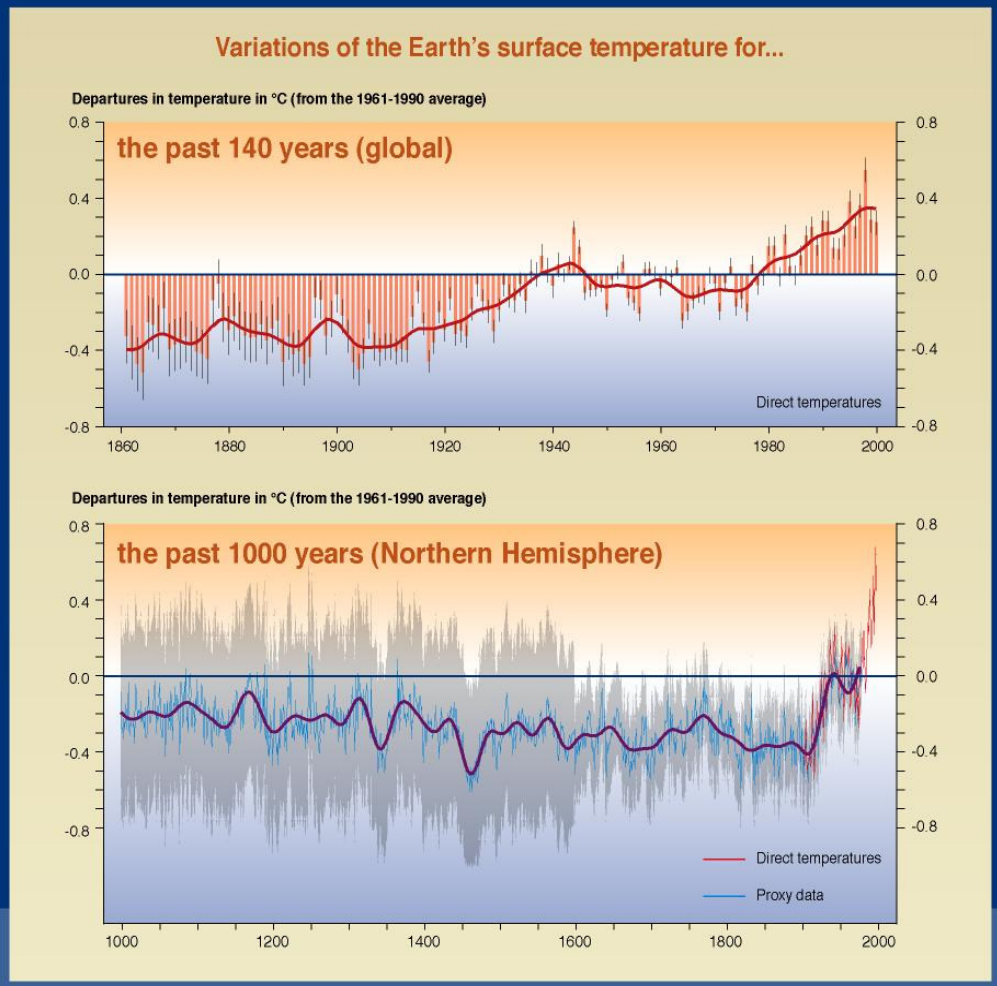
Drivers of invention today

Engagement

Education

Extremity

Extremity: rising CO2

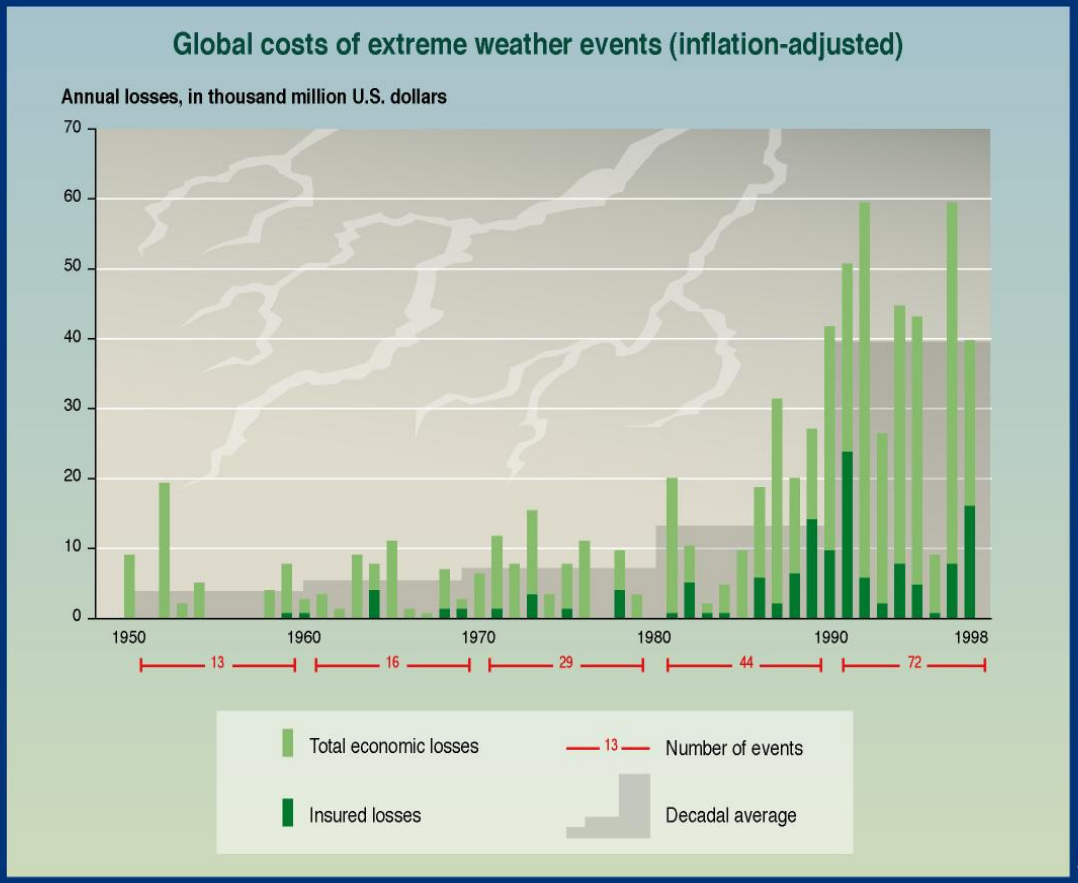


SYR - FIGURE 2-3

IPCC | INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE

WMO UNEP

Rising risks, rising costs

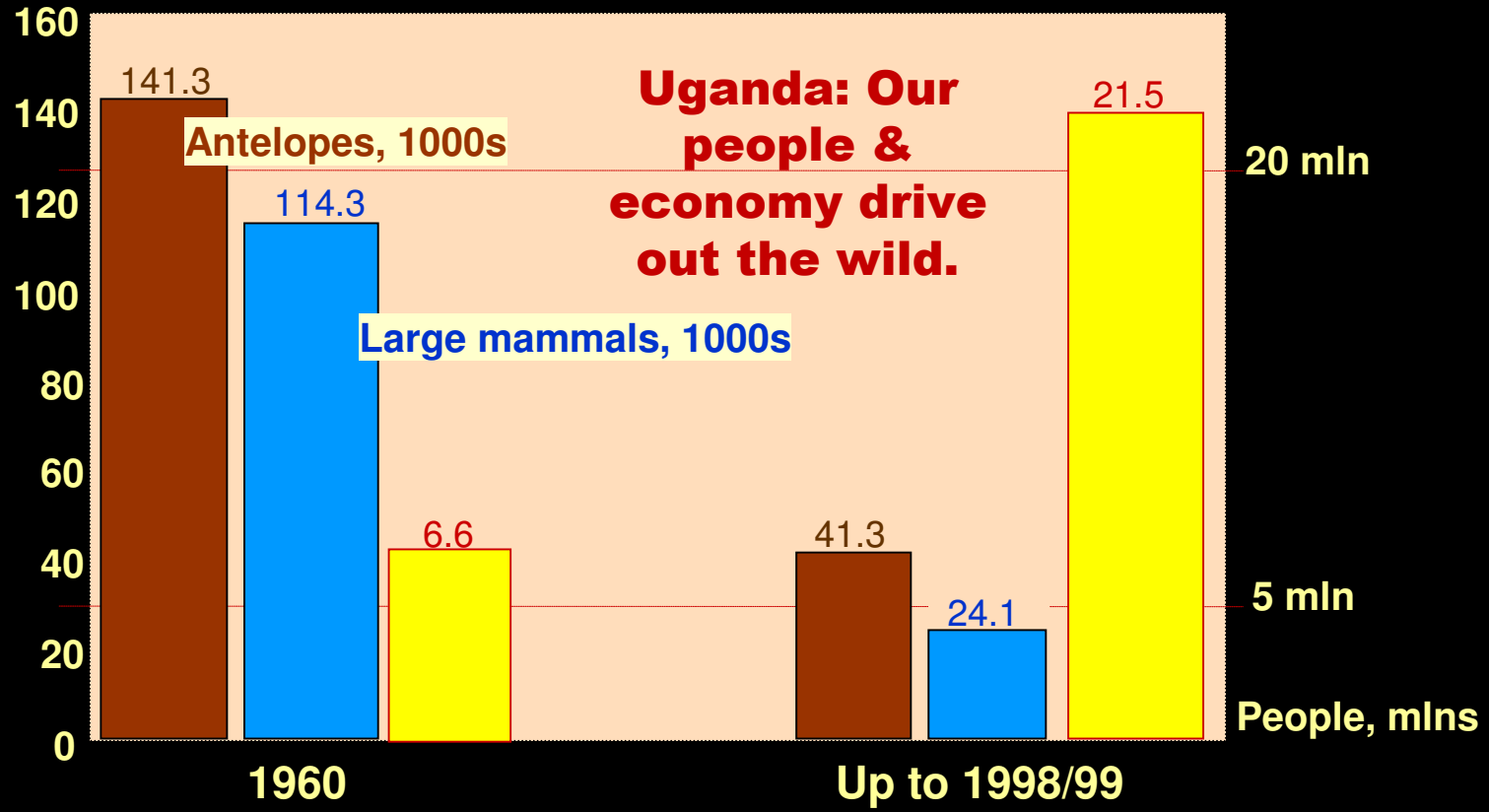


SYR - FIGURE 2-7

IPCC | INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE

WMO UNEP

Rising damage to rest of life



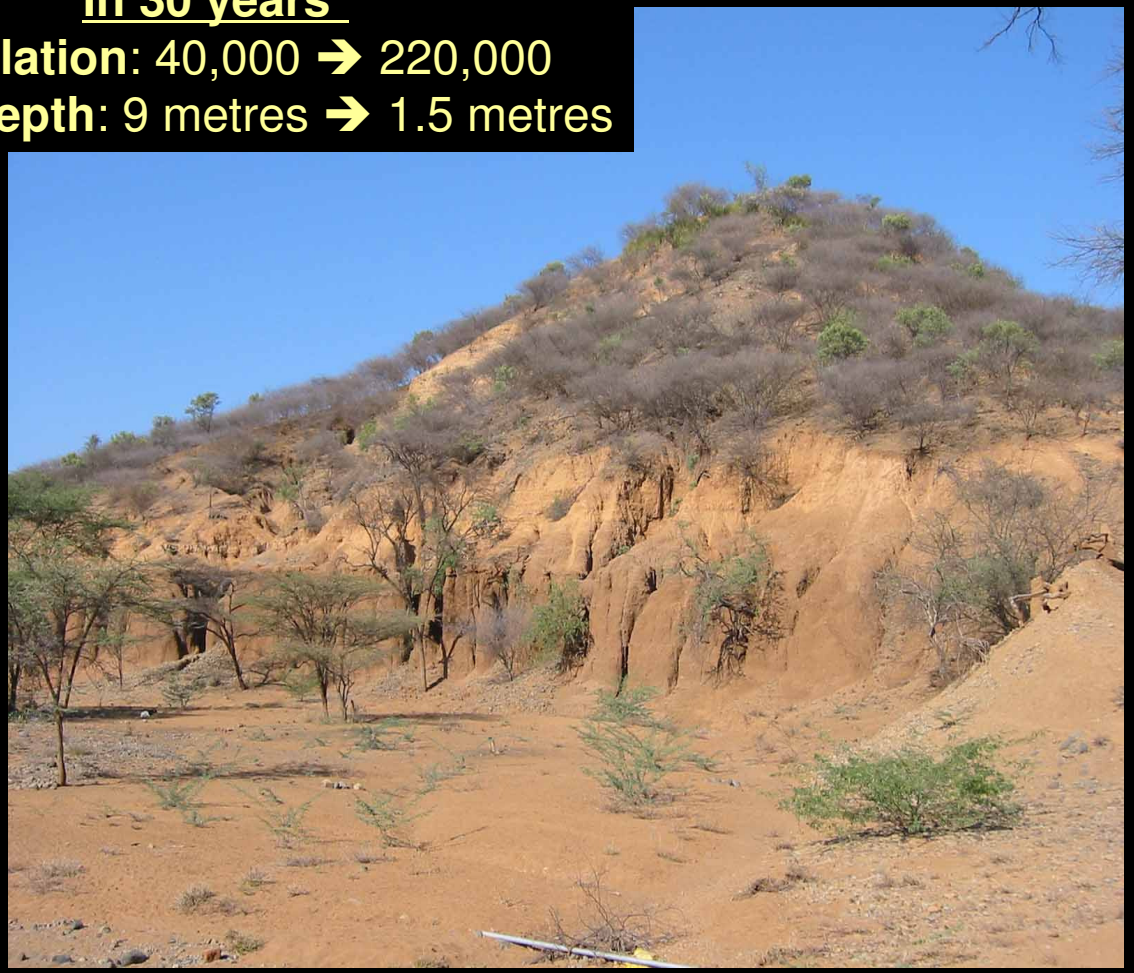
Stable
Waterbuck
Uganda kob
Hippopotamus
Buffalo
Elephant (but low)
Rothschild's giraffe, (but low)

Decreasing or precarious*
Hartebeest
Topi
Impala
Eland
Bights gazelle*

Very rare or extinct**
Roan
Oryx**
Berby's Eland**
Black rhino**
White rhino**

Erosion at Lake Baringo

<u>In 30 years*</u>
Population: 40,000 ➔ 220,000
Water depth: 9 metres ➔ 1.5 metres

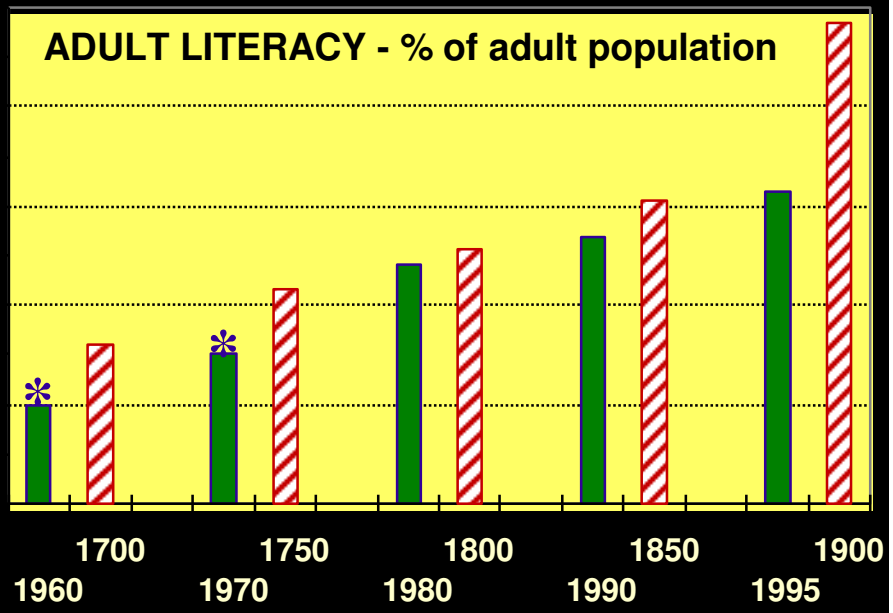


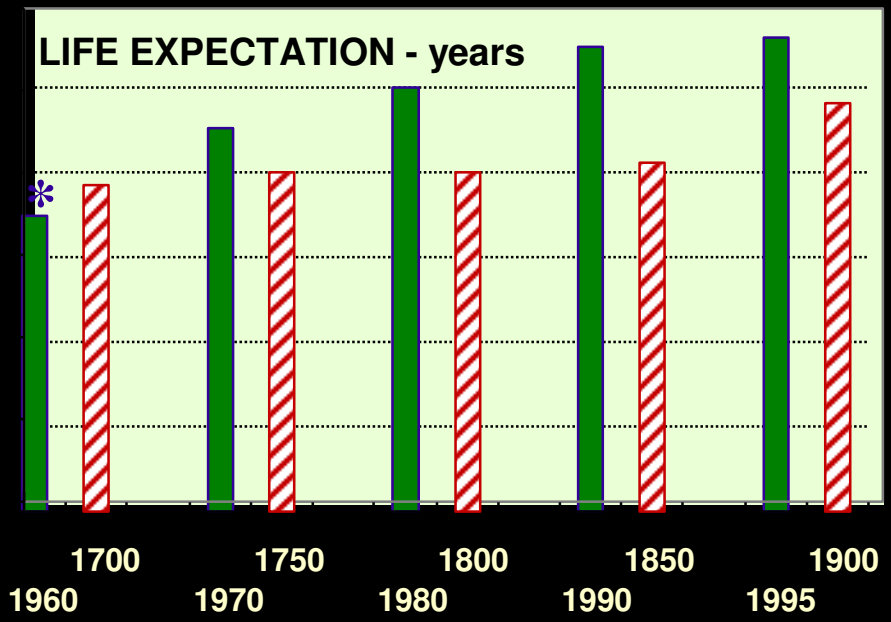
photographs courtesy of RAE, Baringo, 2003

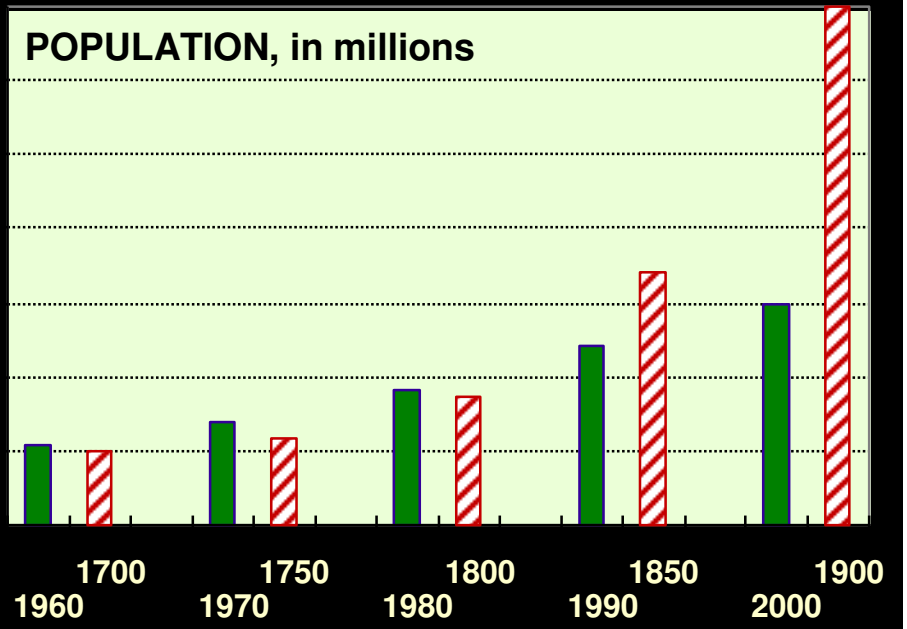
Education & new ideas

Cameroon 1960-1995/2000

England 1700-1900







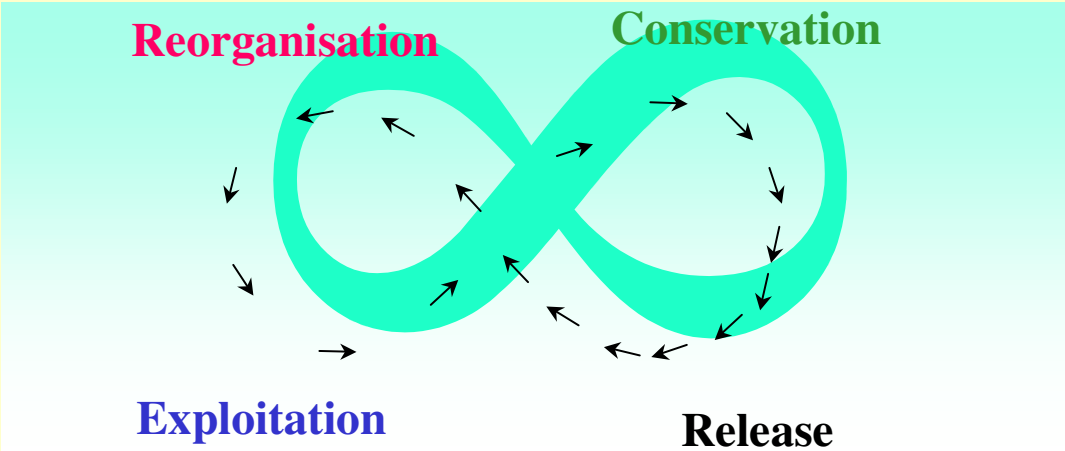
**Cameroon's literacy for 1960 & 1970, plus life expectation for 1960 are my own 'best guesses'; no data are available.*

New concepts: ecologist's view of change

Ecosystem Cycle

- *Accessible carbon*
- *Nutrients & energy*

- *Consolidation*
- *Climax*



- *Pioneer*
- *Opportunist*

- *Fire*
- *Storm*
- *Pest*

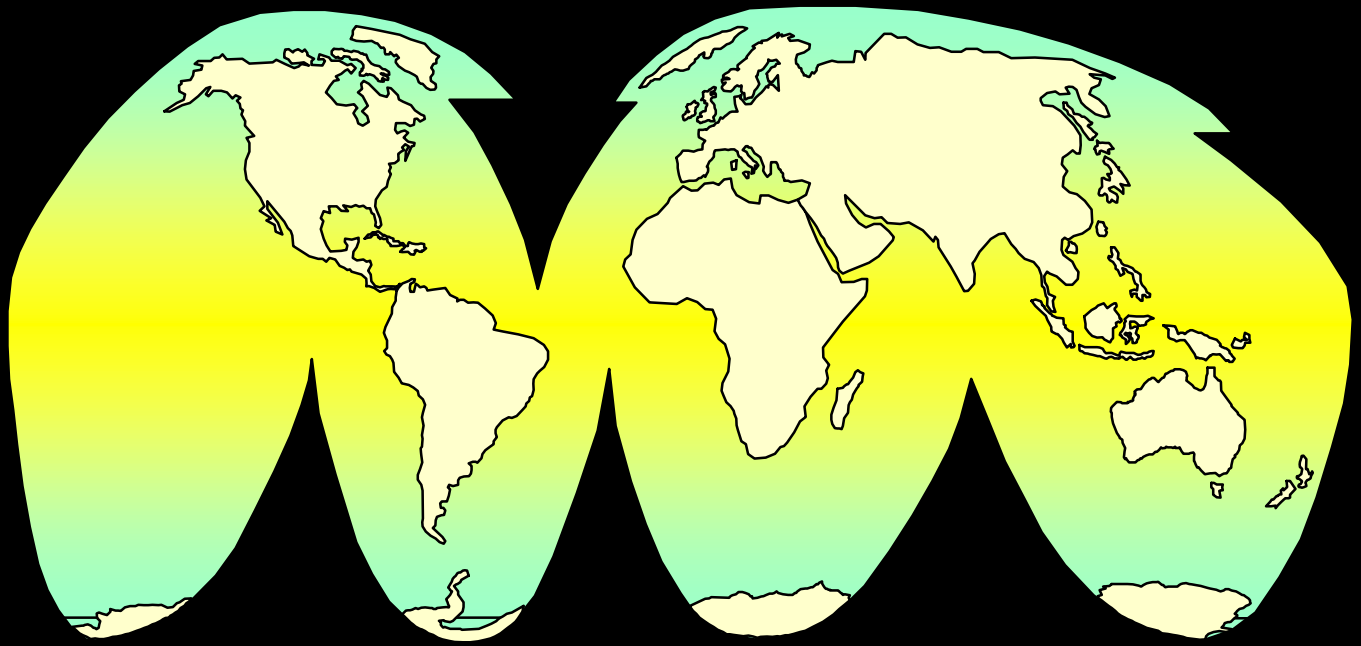
Adapted from "What Barriers? What Bridges? by C.S. Hollings in Barriers and Bridges, editors Lance H. Gunderson, et al. 1995, p.22

Cribsheet598, B.J. Heinzen 1998, p. 3

Adapted from "What Barriers? What Bridges? by C.S. Hollings in Barriers and Bridges, editors Lance H. Gunderson, et al. 1995, p.22

Engagement: potential for new relations

Most carbon emissions are in the OECD North.



The greatest biodiversity is in the tropics of the South.

For 19th century Europeans, Africa was

An 'invisible' society

An oral society

Multiple languages

Multiple ecologies

Multiple political forms

Not using the abundance of their natural world

BACKWARD & PRIMITIVE

Perhaps this abundance was created by Africans

An ‘invisible’ society – living lightly on the land

An oral society - living in 3 dimensions

multiple languages reflecting

multiple ecologies which created

multiple political forms

LIVING ECOLOGICALLY

Increasing the abundance of all life

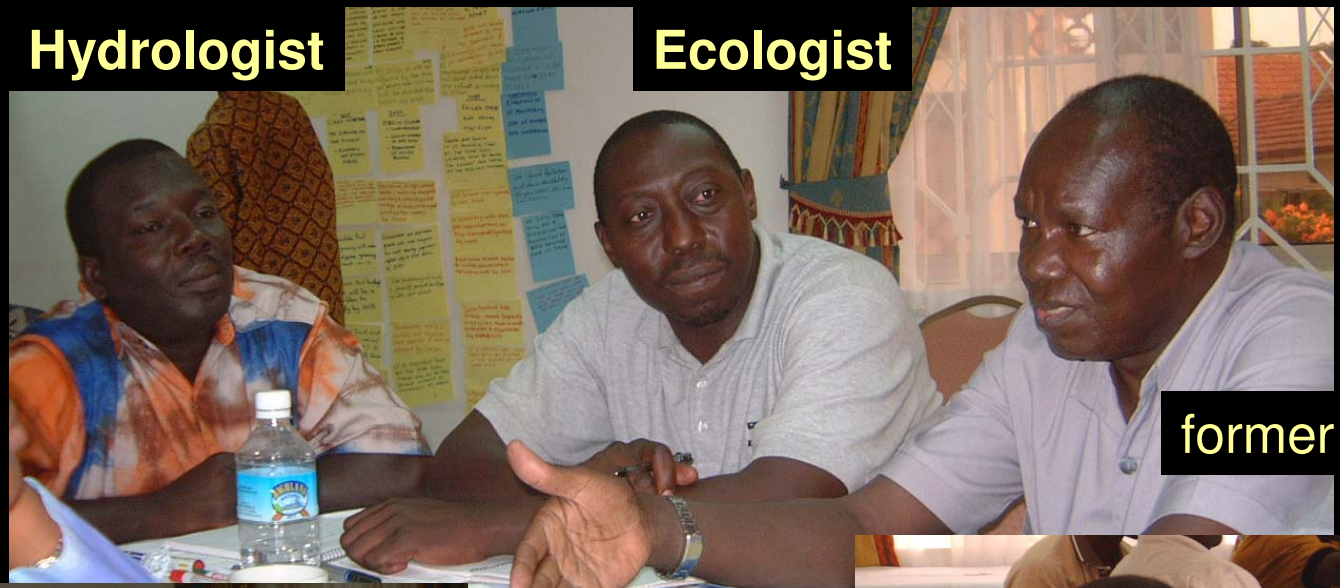
Across social & knowledge divides

'Why is there no university of Tanzanian knowledge?'

Using the 3 dimensional knowledge of hands

Boat building fundi – Dar es Salaam, 2001

Africa's dispersed university



Drawing on older knowledge & traditions

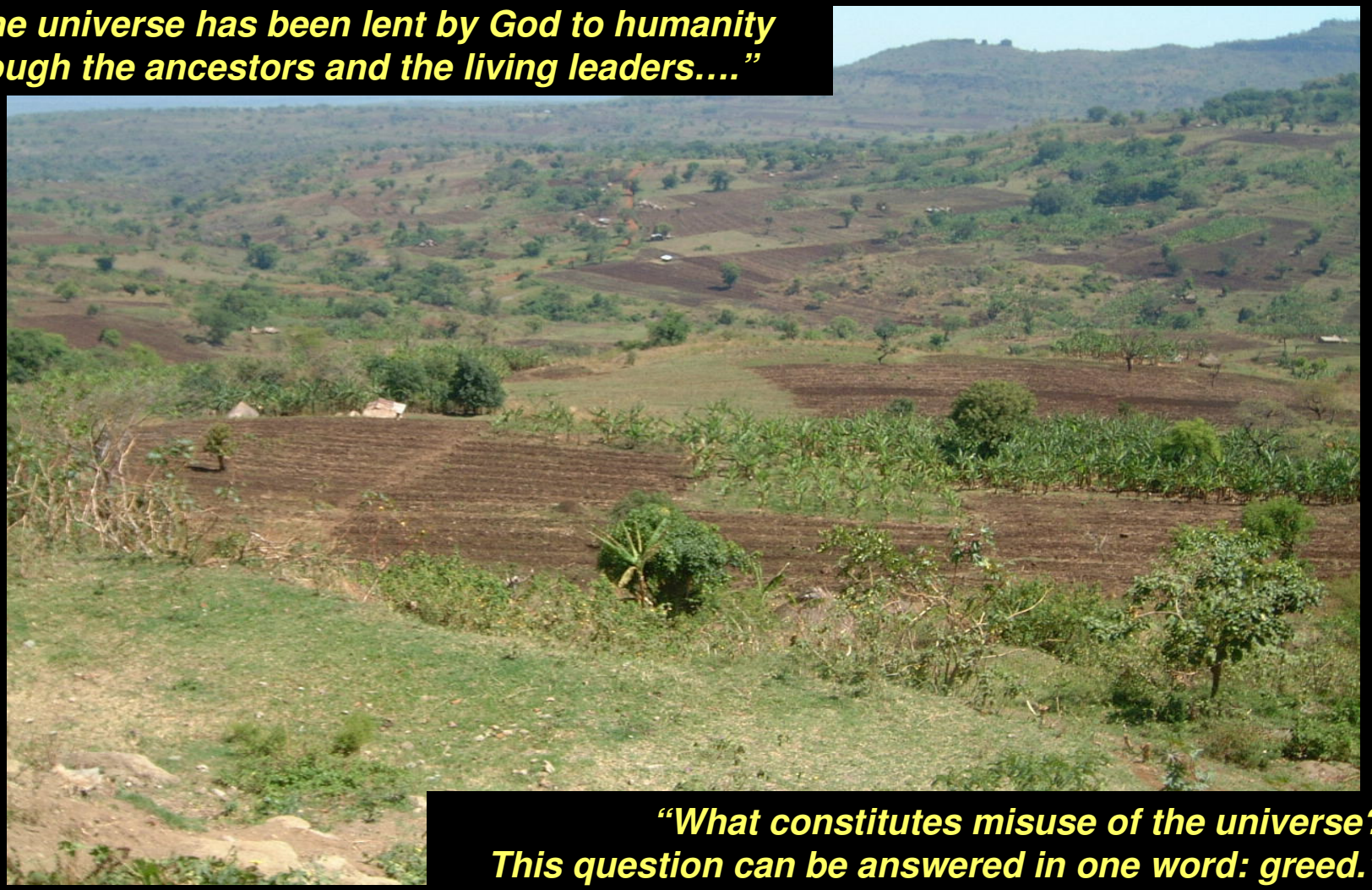
Franco Mpangala

Mwenye Nkope

Dada Fatma, Apwia Mwenye to Mwene Hatia VIII, Mtwara, Taznania, 2002

Creating appropriate rights & institutions

"…the universe has been lent by God to humanity through the ancestors and the living leaders…."



"What constitutes misuse of the universe? This question can be answered in one word: greed."

Mosaic rights: Women & food crops; Men & tree crops; Herders & grazing after harvest
Gov't & mineral rights; Those who dug the well, decide who uses the water

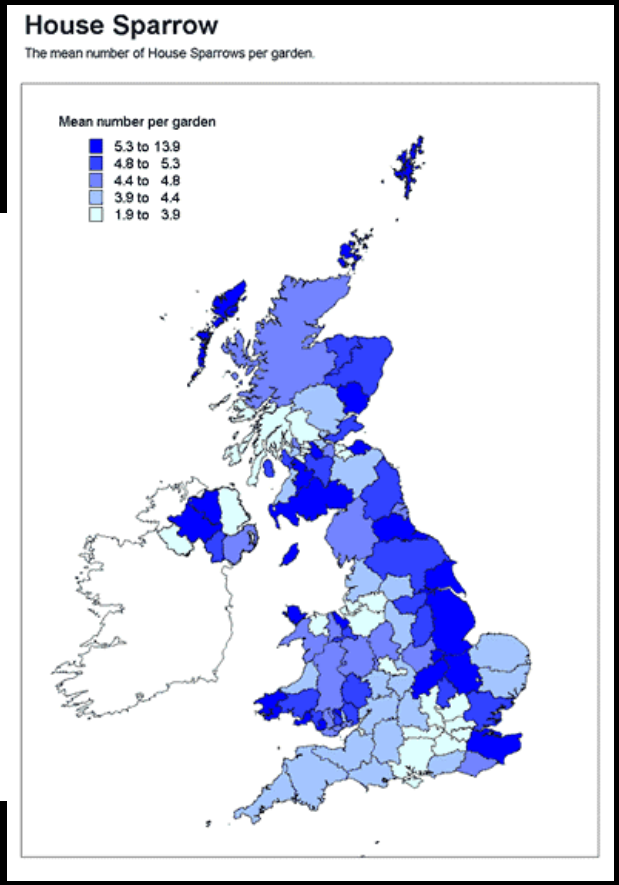
Photo: Fields near Sipi Falls, Mt. Elgon, Uganda, 2001; mosaic rights from various places;
**Laurenti Magesa, African Religion:The Moral Traditions of Abundant Life, 1998, p. 62*

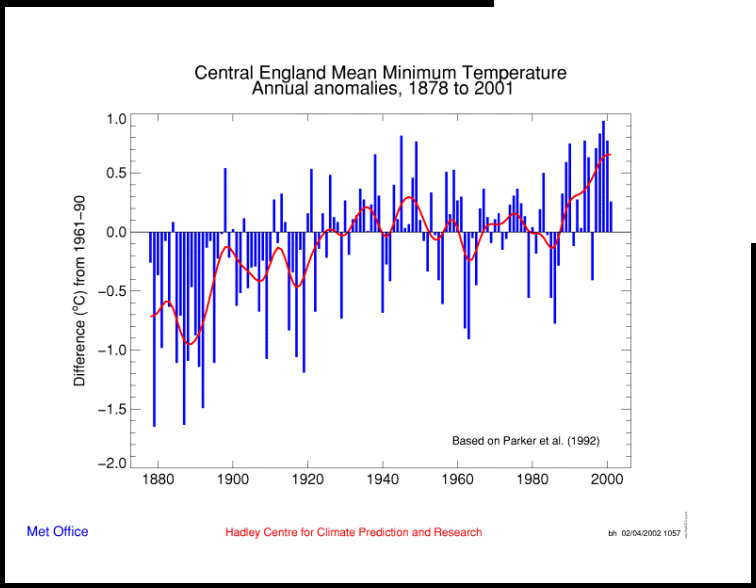
BARBETS' DUET

An experimental space
in systemic invention

Something at stake & something to trade

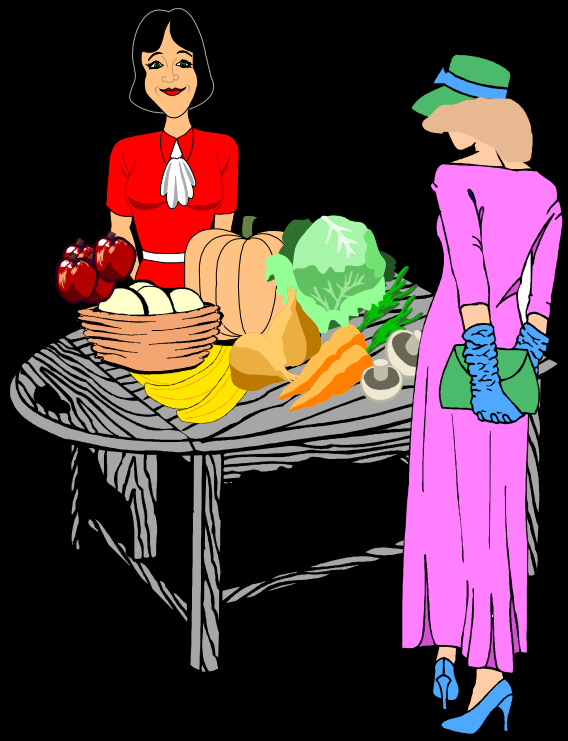
biodiversity & climate change





New price signals & institutions are needed

There is a clear market for eggs, fruits & vegetables



What is the market for ….

Sinks?

Non-use of resources?

Biodiversity?

New incomes & new rights are being negotiated now.

Barbets' Duet

experimental sites for ecological societies

Barbets are tropical birds from the woodpecker family. Some Afro-tropical barbets sing in duet, creating the sound of one voice.

where two cultures

-- "Modern" & "Traditional" –

meet on equal terms

to invent a new social & economic system

which supports the natural world

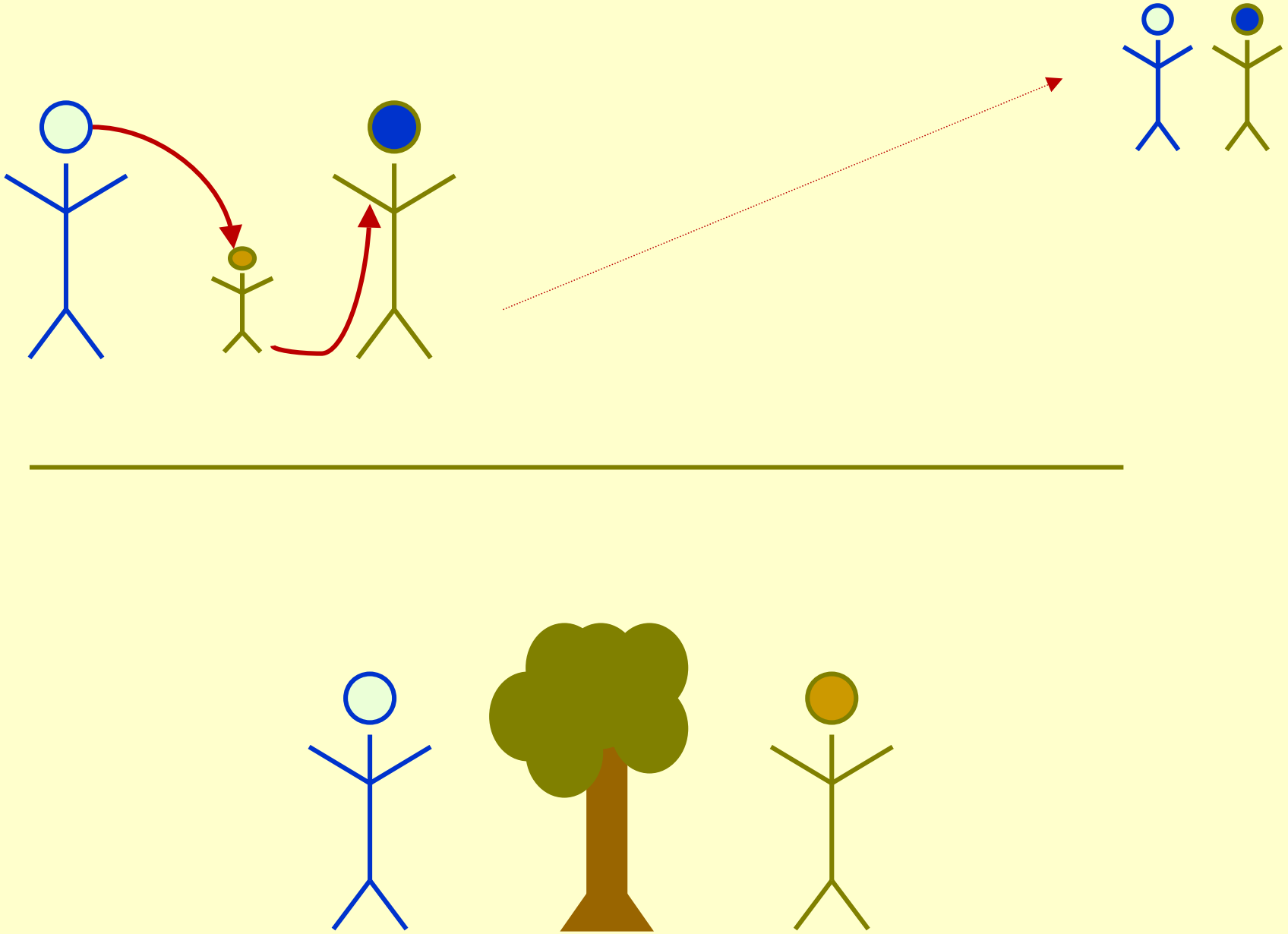
so

it will continue to support mankind

Red & yellow barbet, Tarangire, Tanzania
Photos from: http://www.birdingafrica.net/page69.html

Barbet sites exist everywhere

Wilmington Square
London WC1



Life, by Joseph Nyunga, 2001

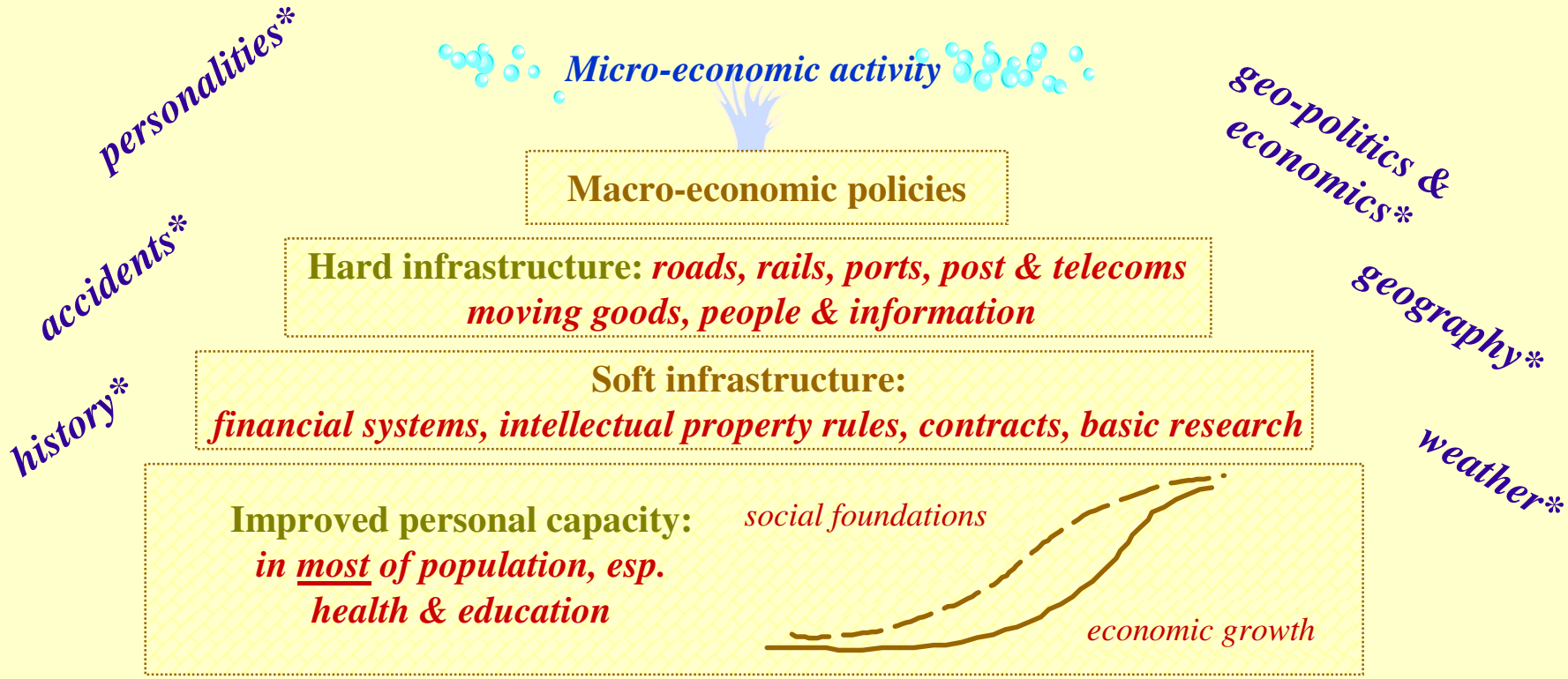
“Because life is dangerous.”

The challenge of systemic invention

additional slides

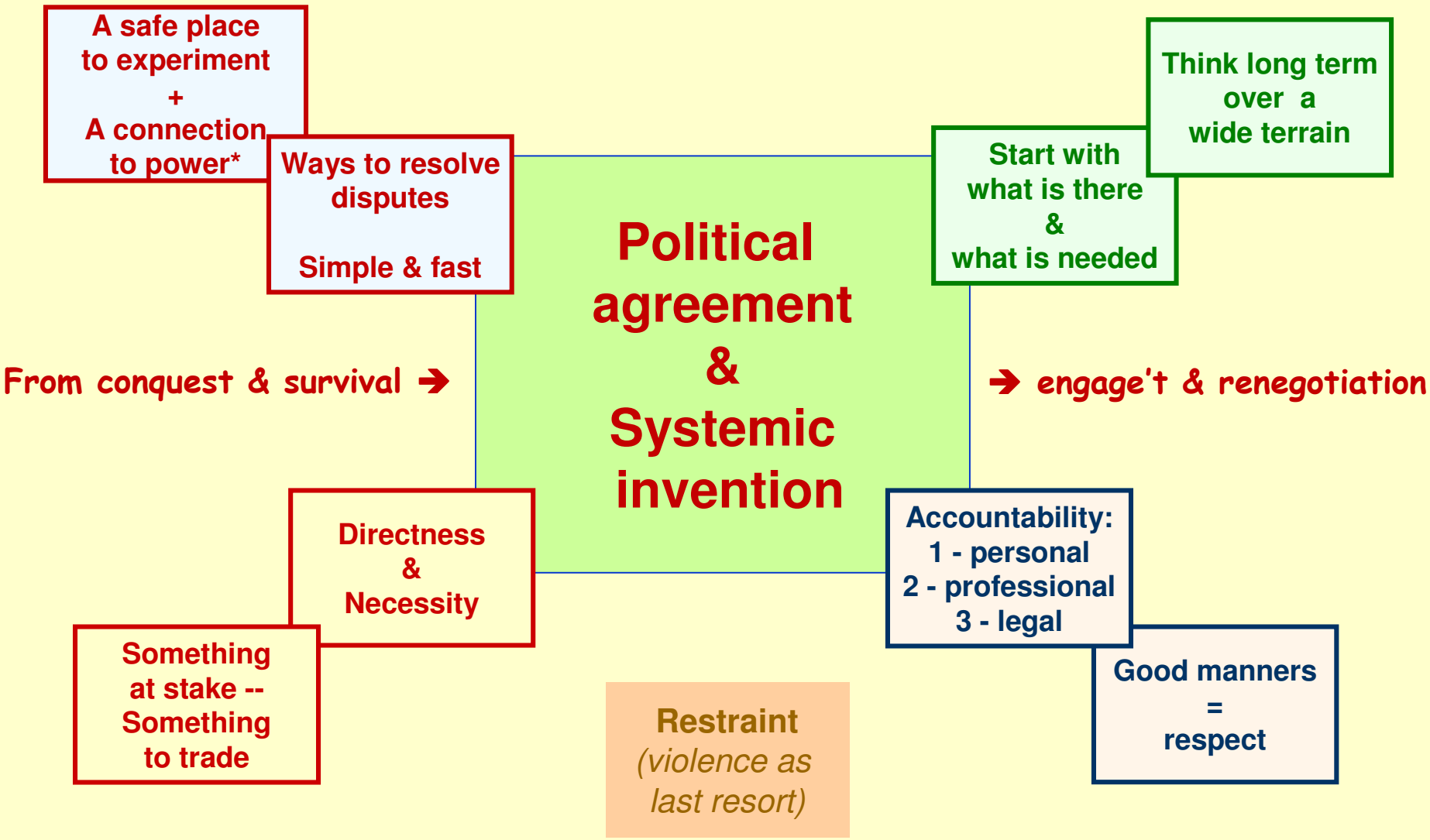
Systemic building blocks

based on experience of late 20th century development



("If you can't be wise, be lucky…")*

English politics of systemic invention



*+ deniability, if needed