



The Dynamic Planetary Context for Intentional Communities

By Dr. Robert Gilman

A Presentation for *Communal Pathways to Sustainable Living*
Findhorn Foundation 26 June 2013



I've never been more
encouraged about the
future than I am today

System
domains

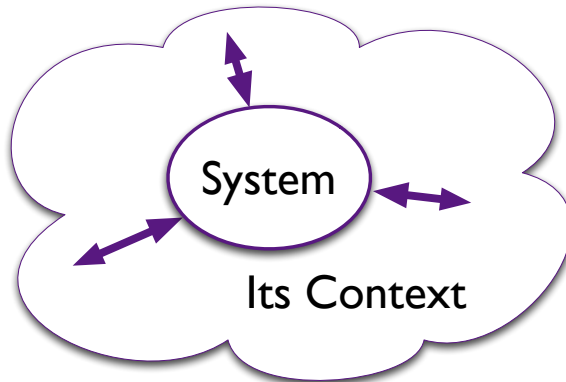


Where are we
in history?



Implications for
intentional communities

System Domains



- A *system domain* is a region in the system-context “map” where the system has a *characteristic set of behaviors*
- The *behavior of a system* changes, sometimes dramatically, when it moves from one domain to another

H₂O example

0°C



Solid

100°C



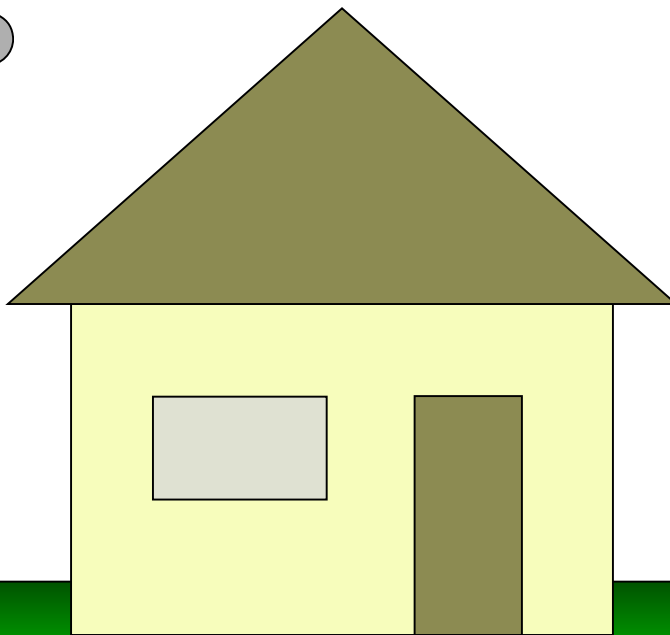
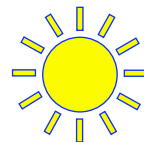
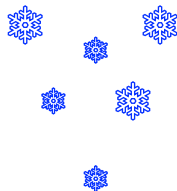
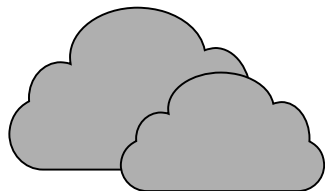
Liquid



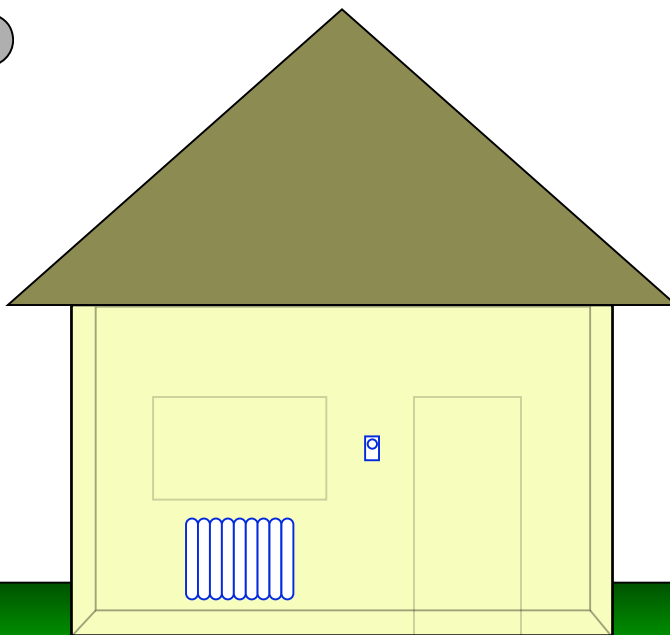
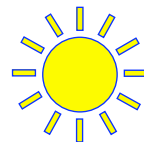
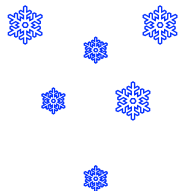
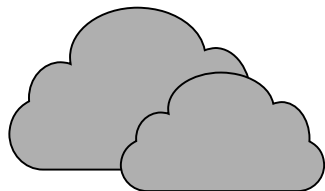
Gas

Three very different domains of behavior
with sharp transitions between domains

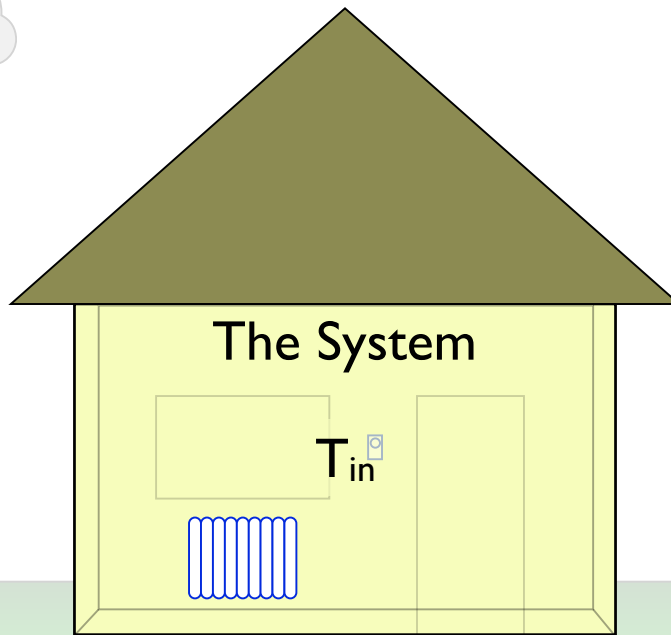
Home-heating example



Home-heating example



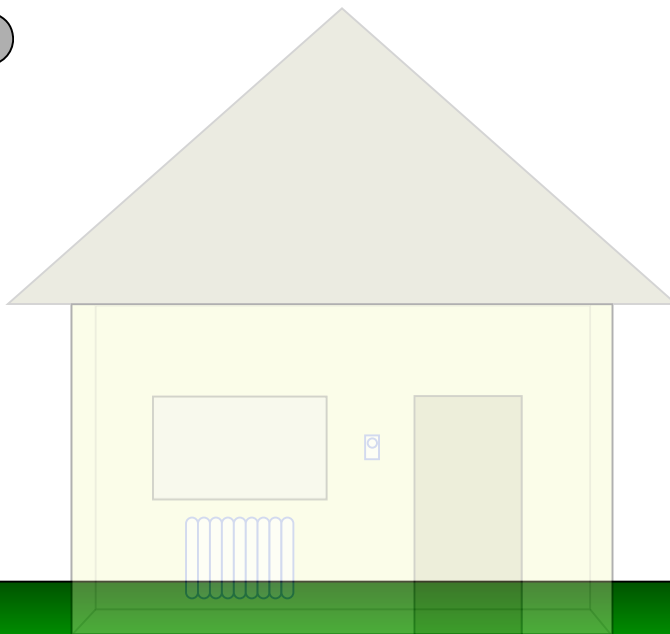
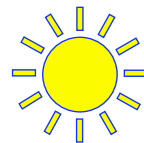
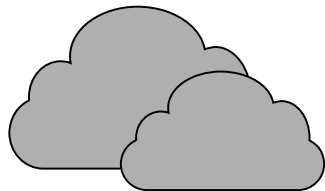
Home-heating example



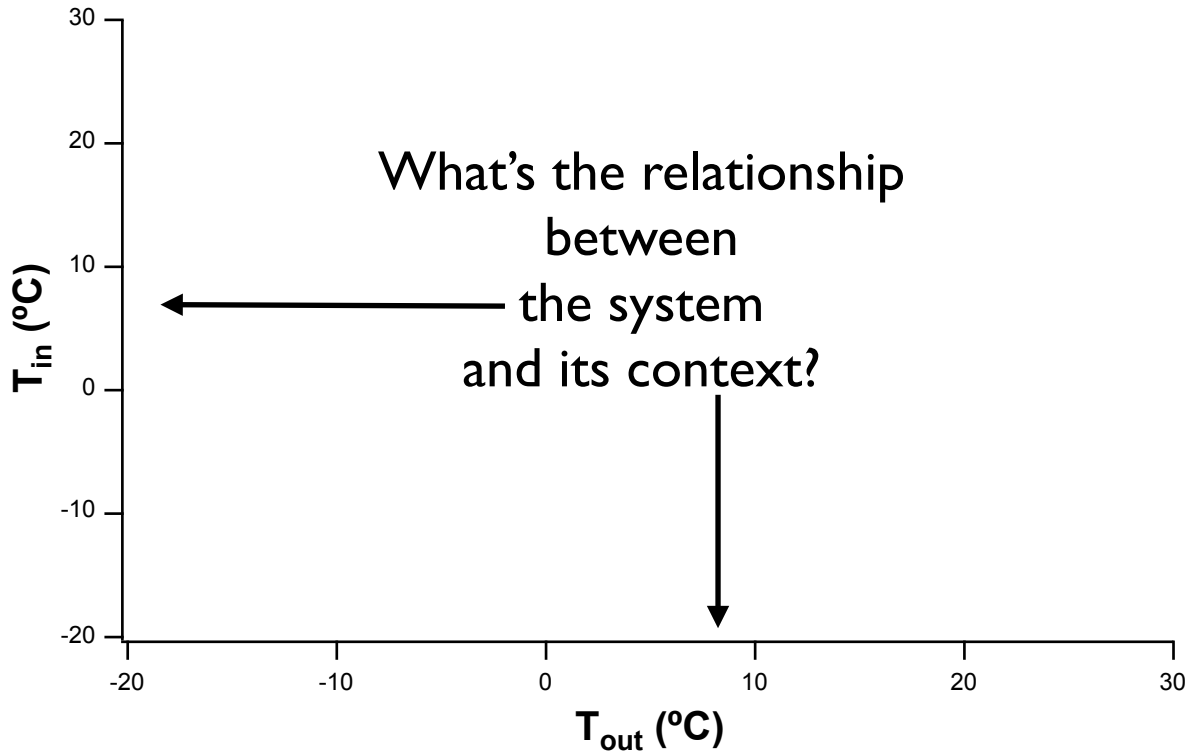
Home-heating example

The Context

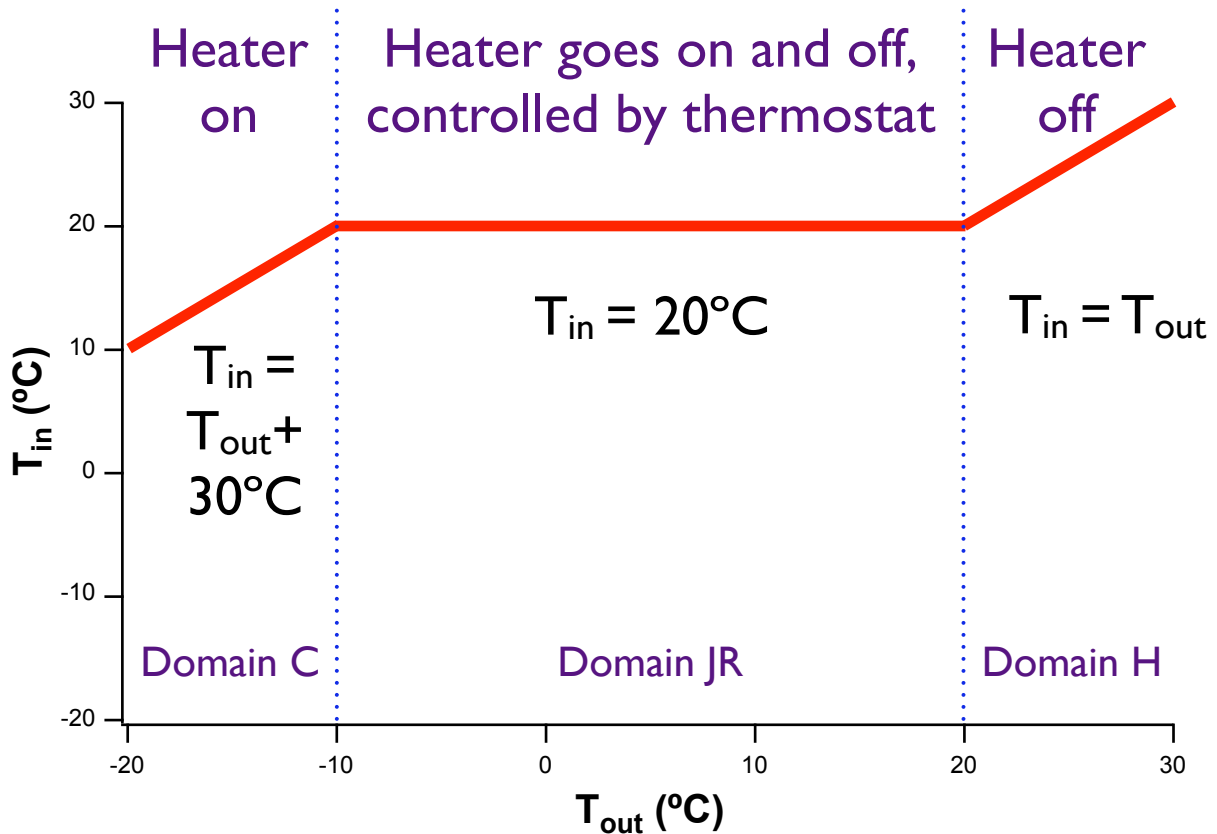
T_{out}



Home-heating example



Home-heating example

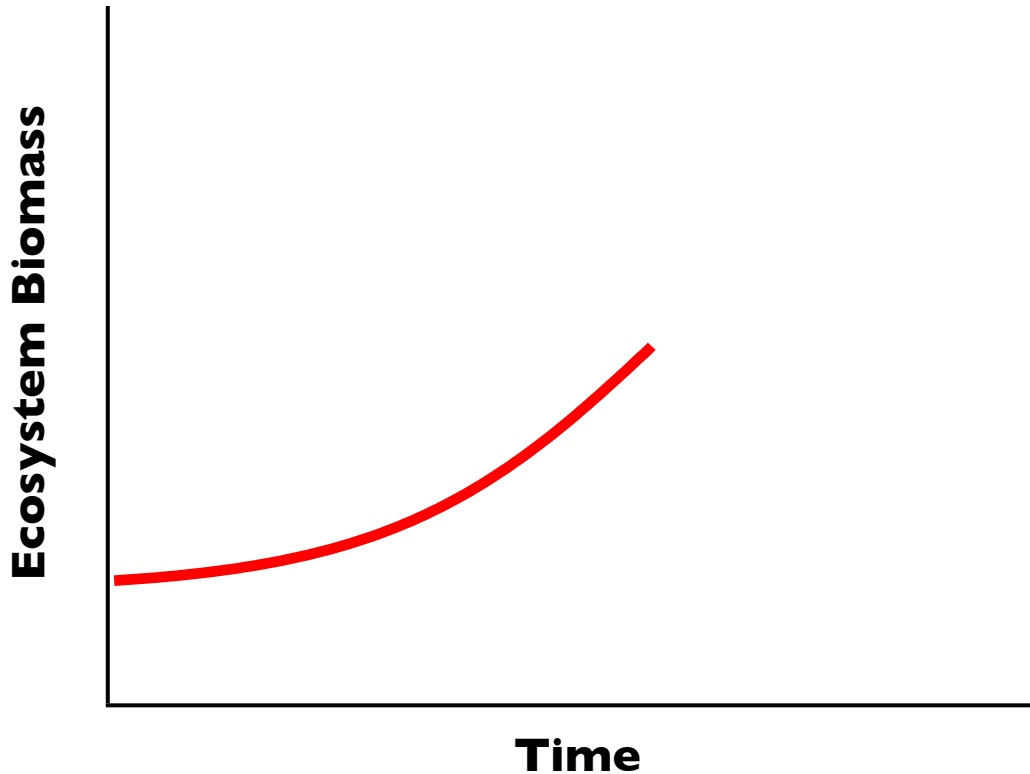


Ecosystem example

- The system will be a forest
- The context includes sun, rain and soil
- We'll start with bare ground and then watch the forest develop over time

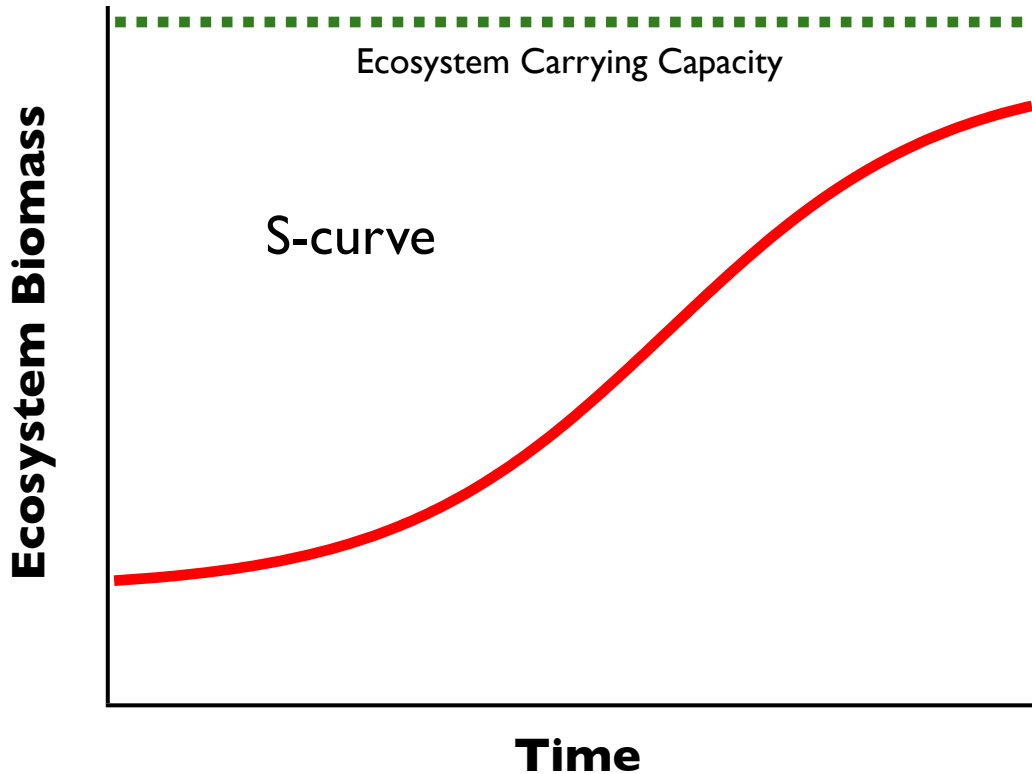


Ecosystem example

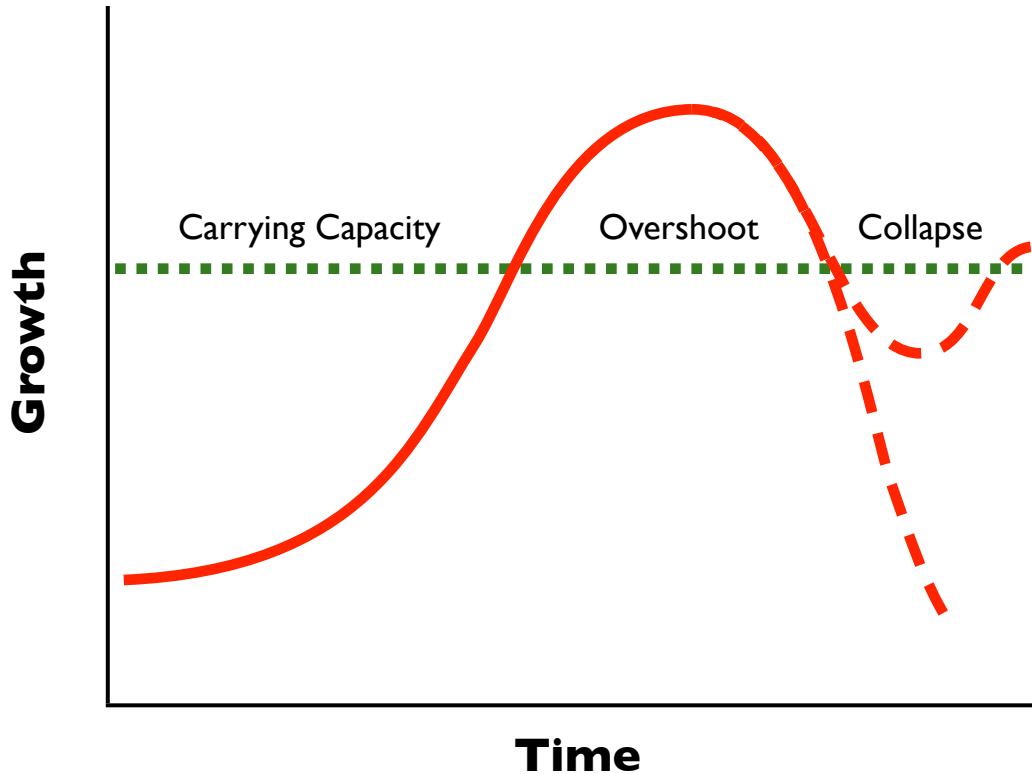




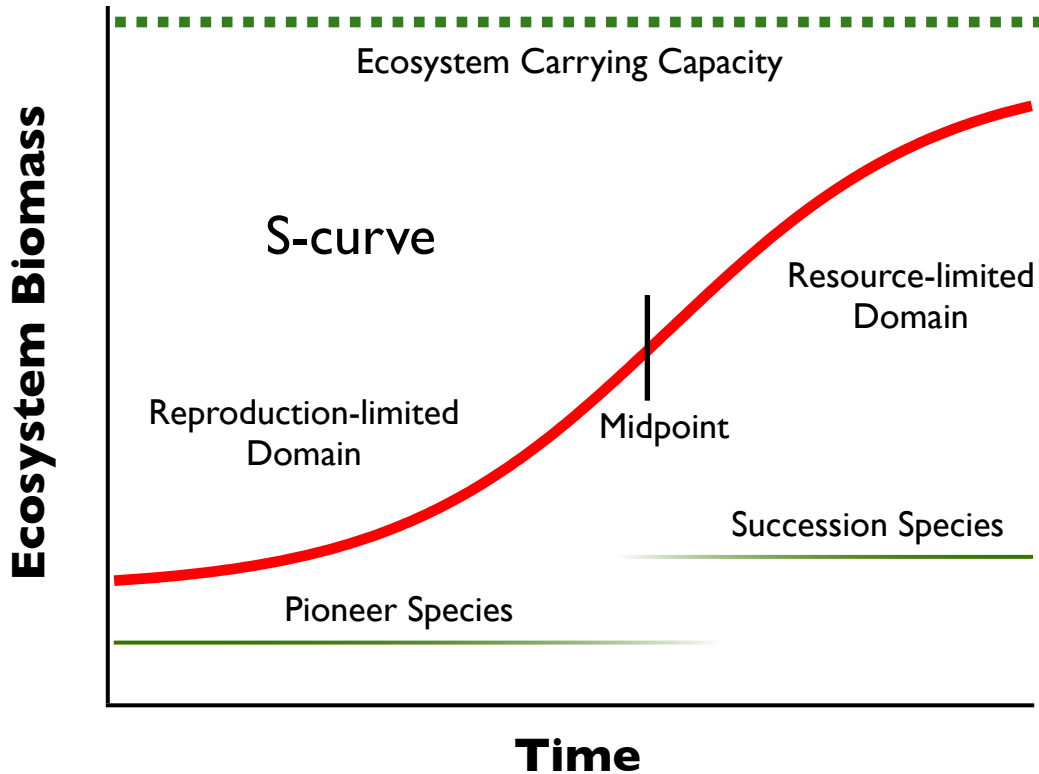
Ecosystem example



Time-lags Allow Overshoot



Ecosystem example



Success Strategies

<i>Attribute</i>	Pioneer	Succession
<i>Resource Consumption</i>	high	low
<i>Resource Efficiency</i>	low	high
<i>Growth Rate</i>	high	low
<i>Longevity</i>	short	long
<i>Diversity</i>	low	high
<i>Complexity</i>	low	high
<i>Relationship With Others</i>	isolated	cooperative

System Domains - Summary

- Created by *system-to-context* relationship
- Transitions can be *sharp* or *gradual*
- *System behavior changes across transition*, sometime dramatically
- If we know only one domain, we *can be misled* into thinking we understand the system (e.g. Newtonian physics)
- *Identifying* a system's domains and transitions *is crucial* to fully understanding that system

System
domains

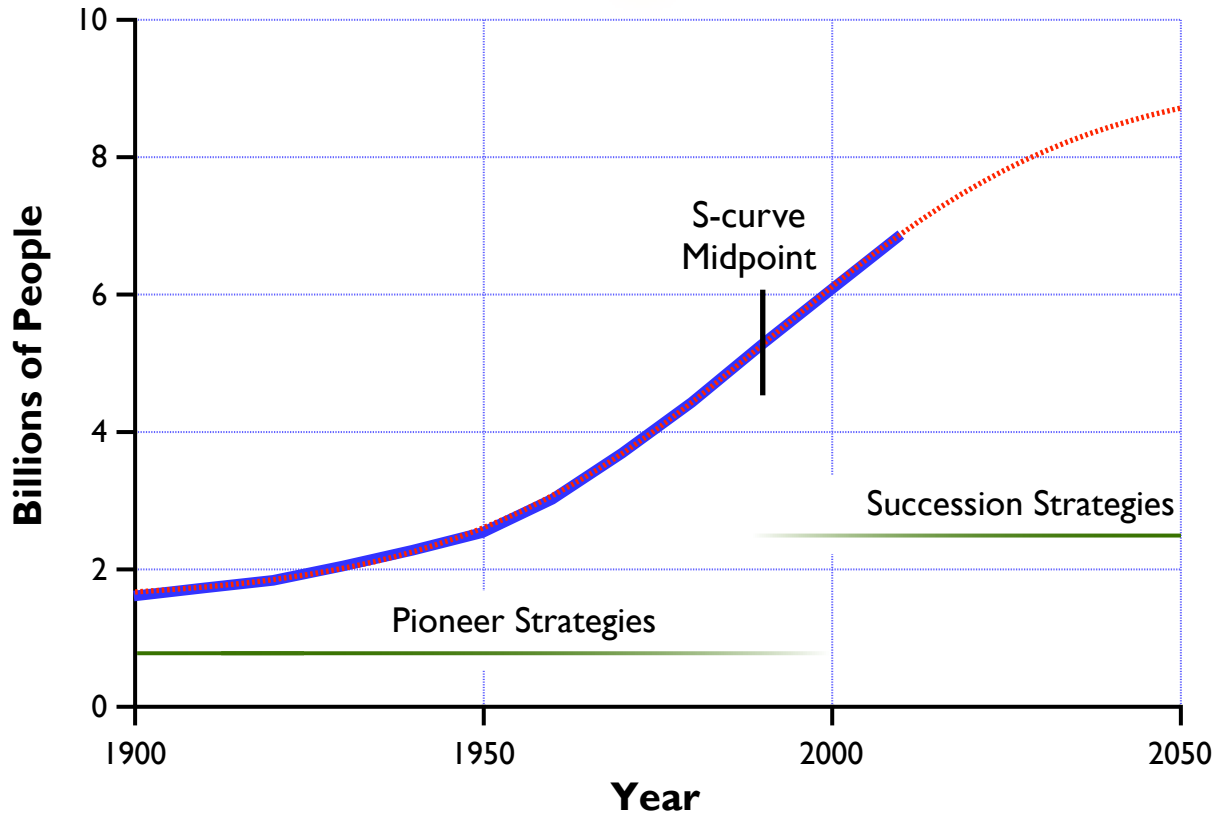


Where are we
in history?

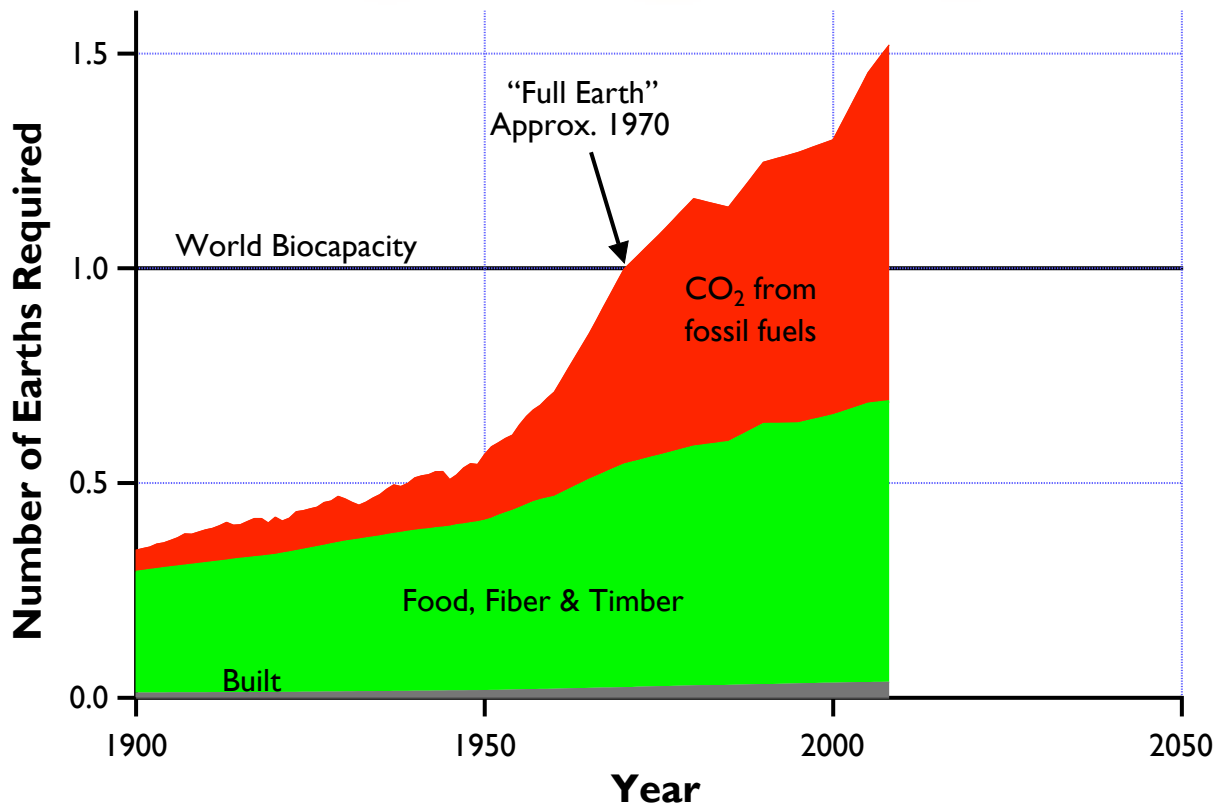
Where are we in history?



World Population



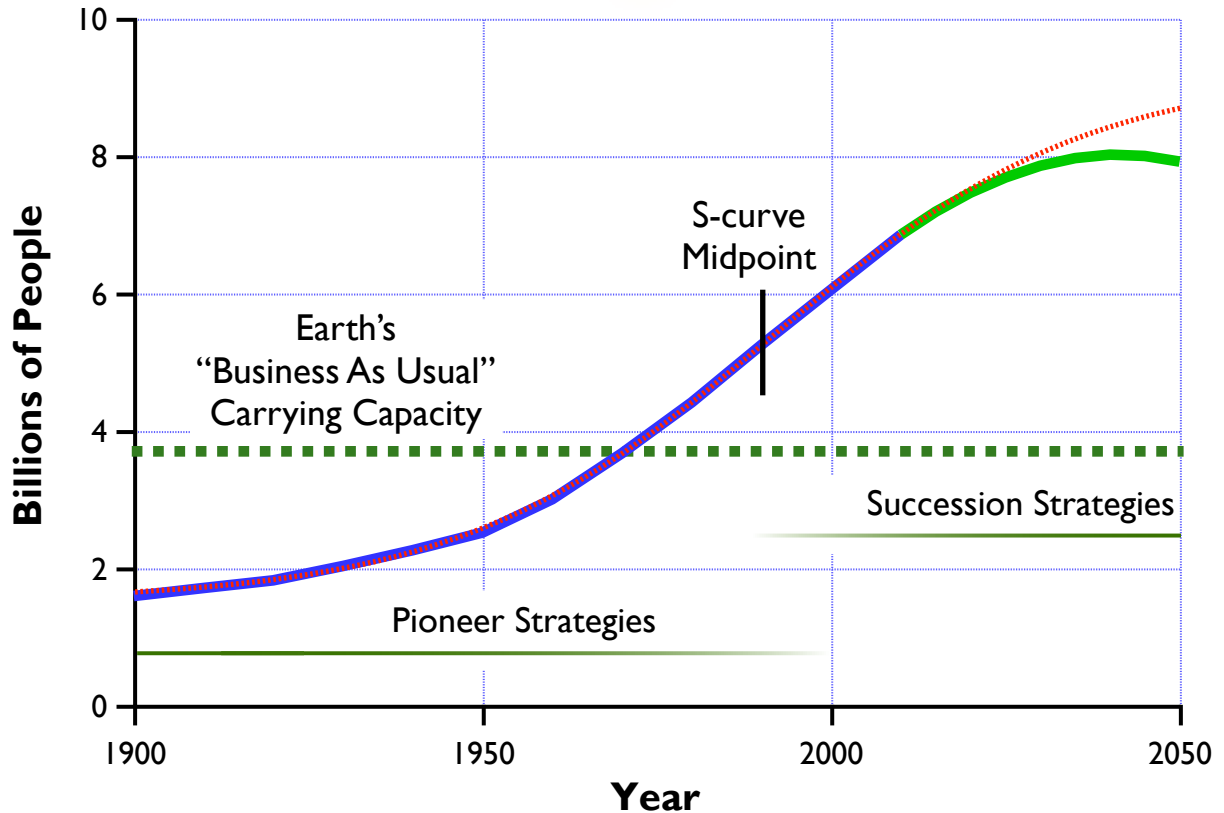
Humanity's Ecological Footprint



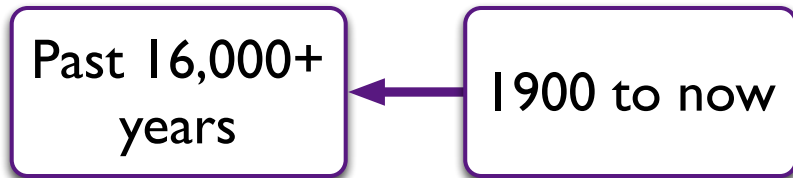
Limits-To-Growth Crisis

- *Non-renewable resources* (e.g. fossil fuels) are finite and get more costly to produce over time
- *Renewable resources* (e.g. fisheries, forests, topsoil, groundwater) have maximum sustainable yields
- *Natural waste processing services* (e.g. CO₂ absorption, water purification) have maximum sustainable loads
- We have overshoot in all these areas but time-lags are delaying the full impact

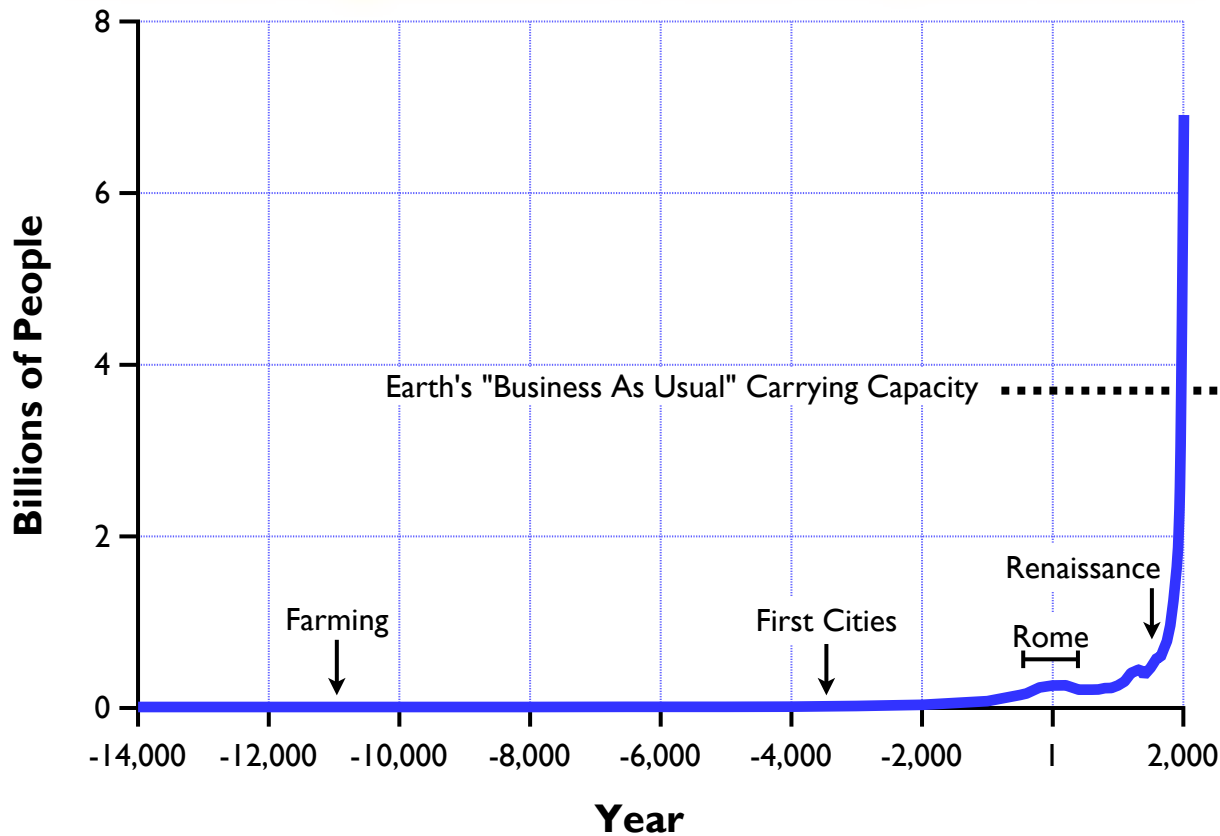
World Population



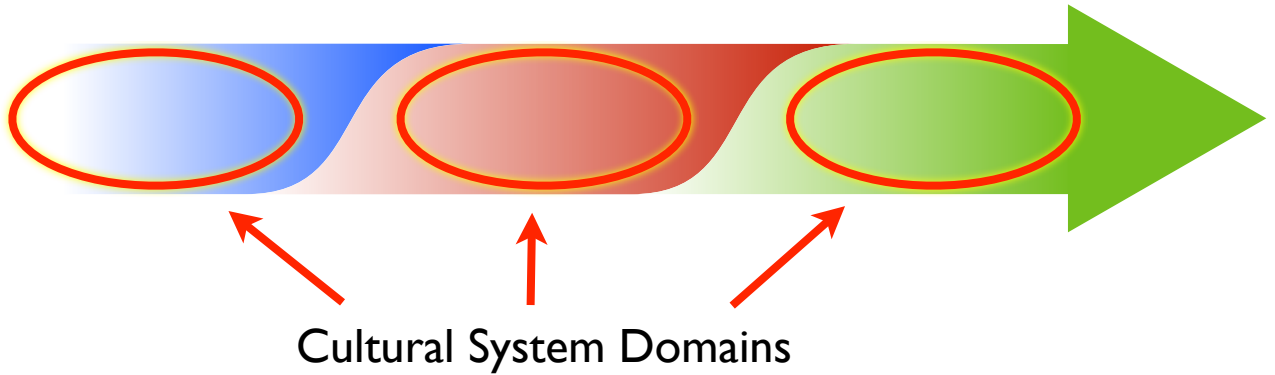
Where are we in history?



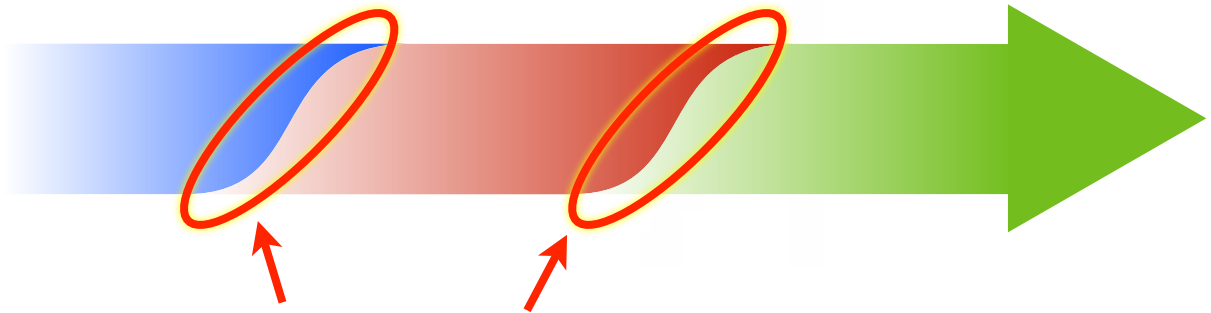
World Population From 14,000 BCE



Outline of History

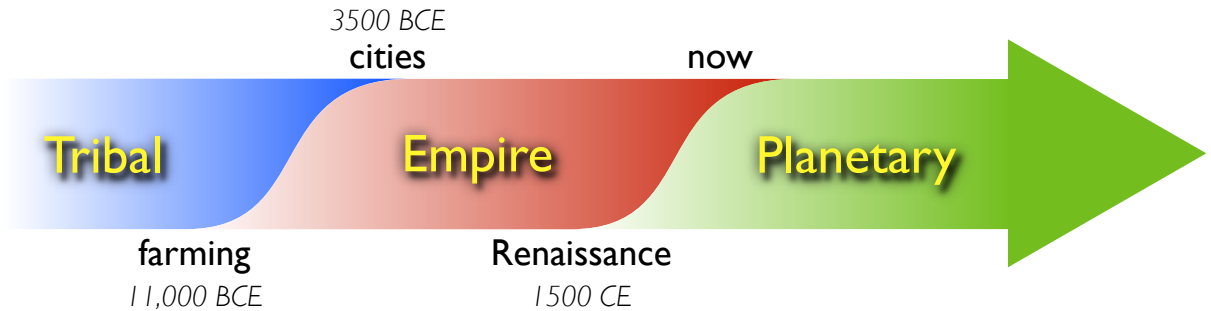


Outline of History

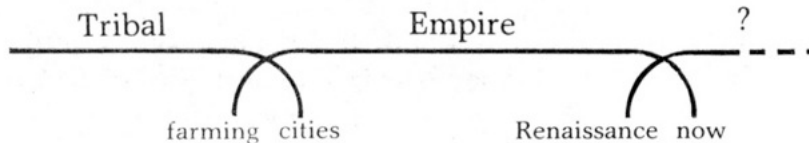


Cultural System Transitions

Outline of History

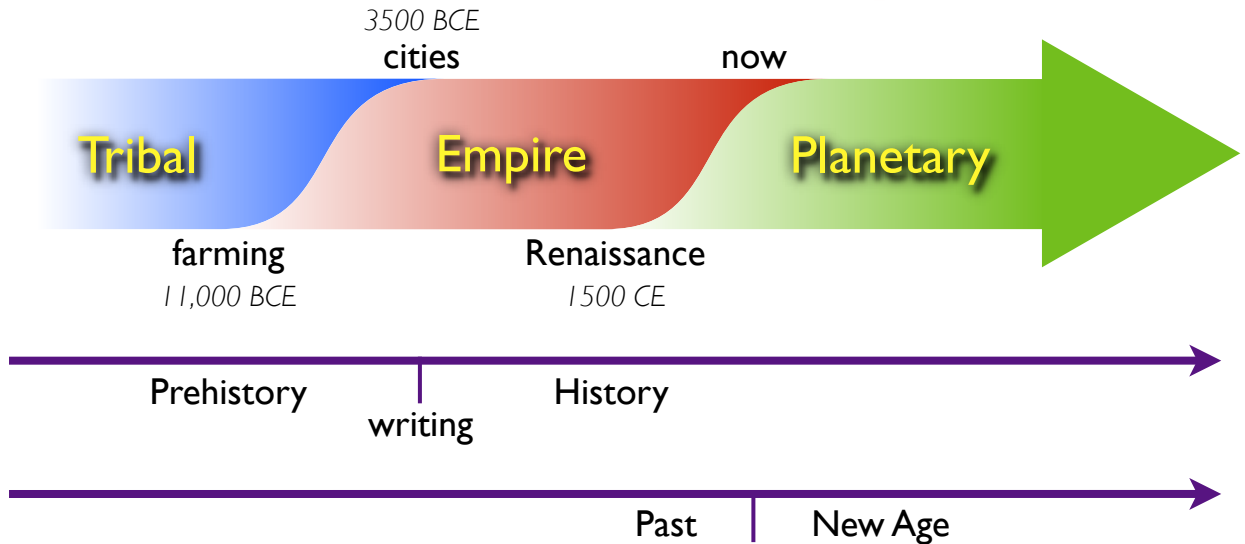


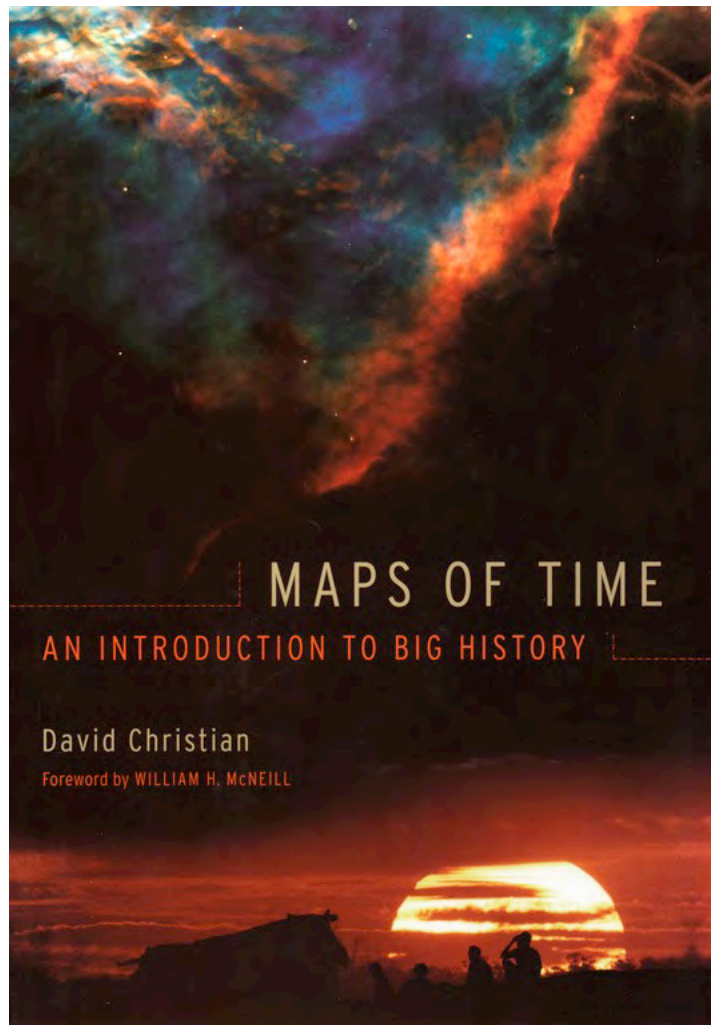
OUTLINE OF HISTORY



SPRING 1985 / IN CONTEXT 21

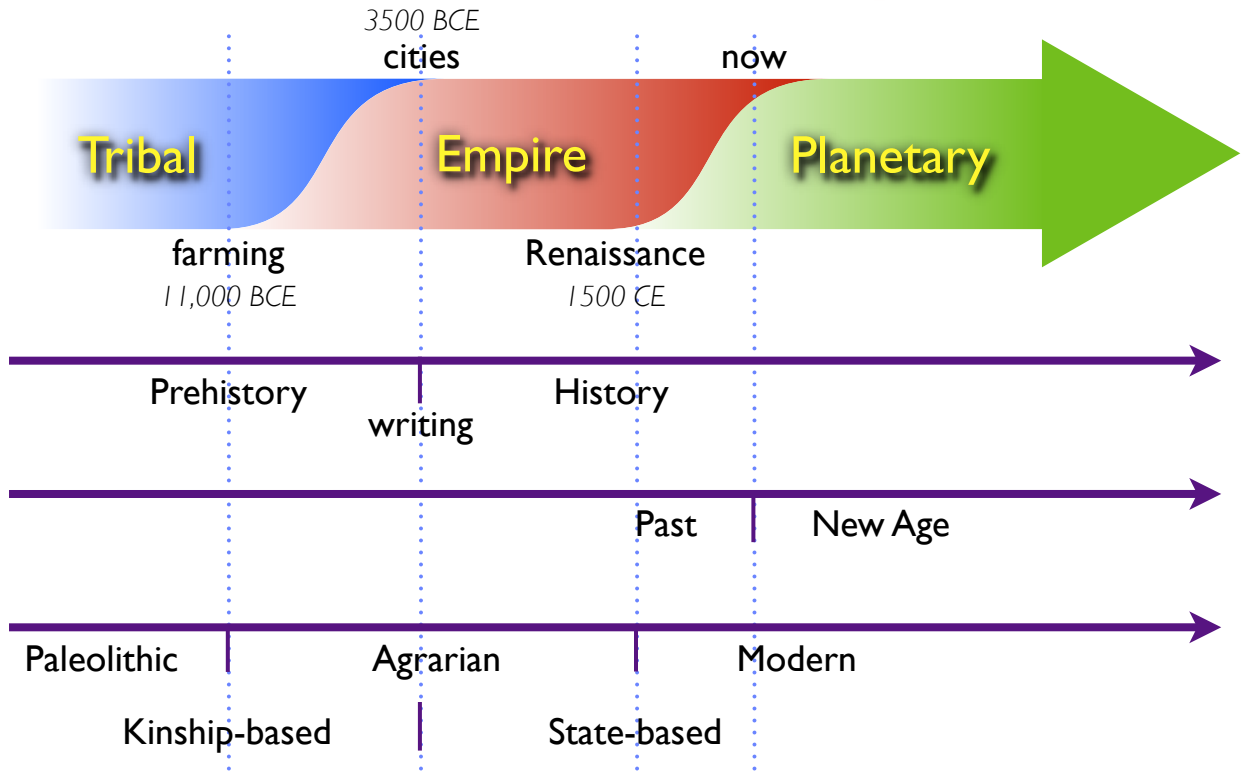
Outline of History





© 2004

Outline of History



Cultural System-Domain Qualities

<i>Quality</i>	Tribal	Empire	Planetary
<i>Main Livelihood</i>	Hunting & Gathering	Agriculture	?
<i>Basis For Social Organization</i>	Kinship	Violence-enforced, Religiously-sanctioned Hierarchy	?
<i>Communications Level of Development</i>	Oral Stories, Songs and Verse	Elite Literacy	?

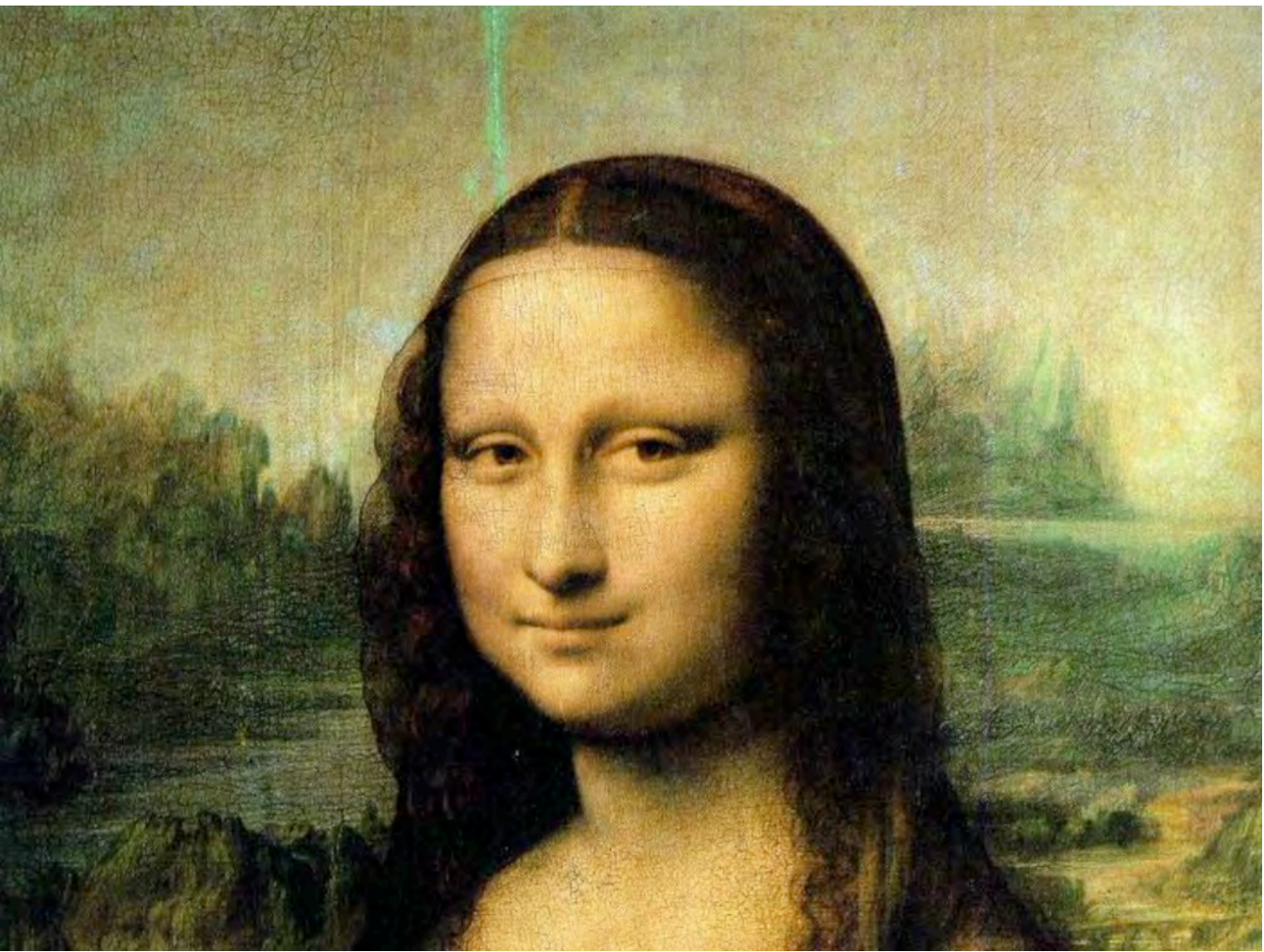
How Shall We Discern The Future?

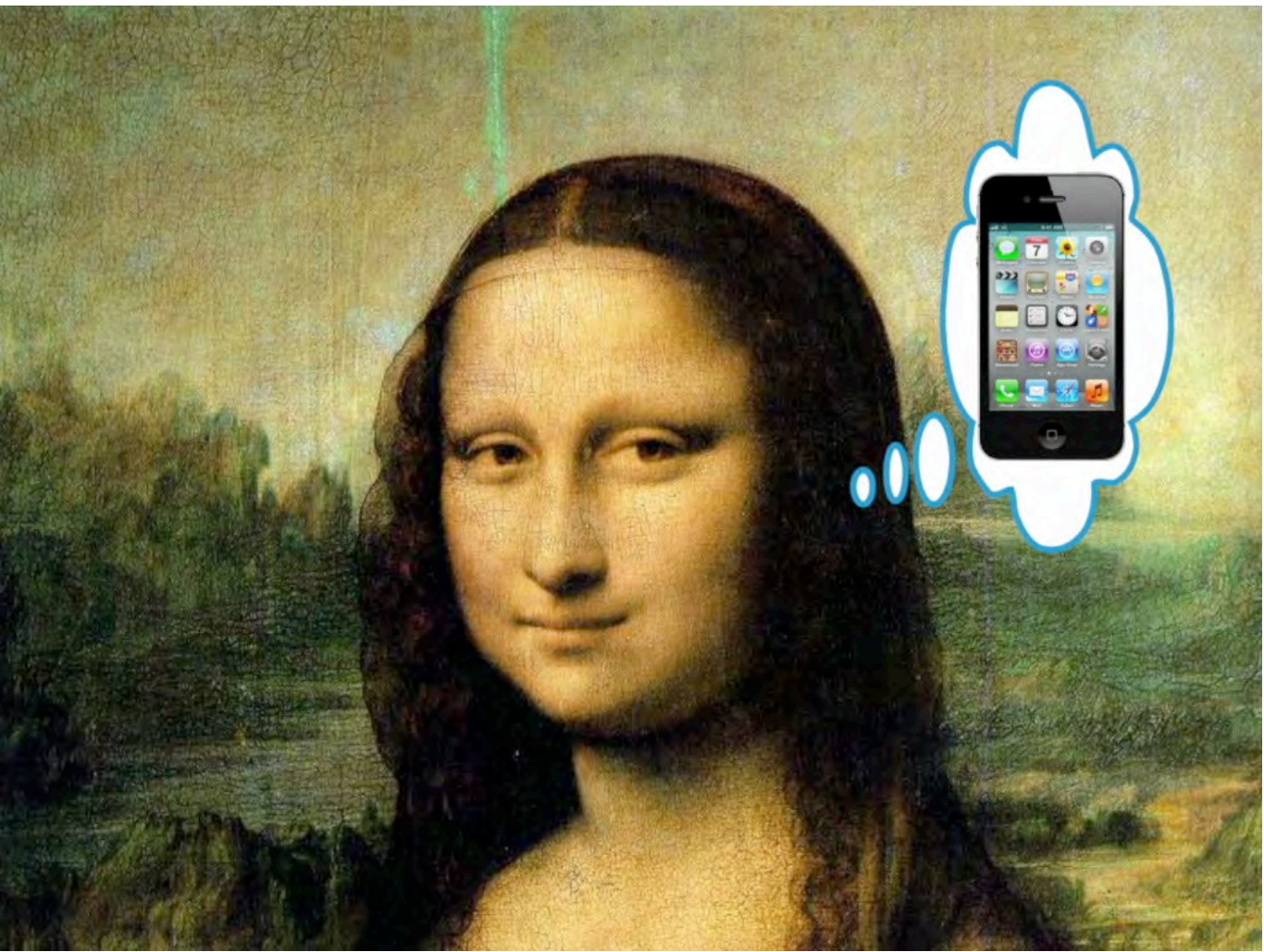
- Humanity's track record isn't good
- Hard to imagine beyond our domain

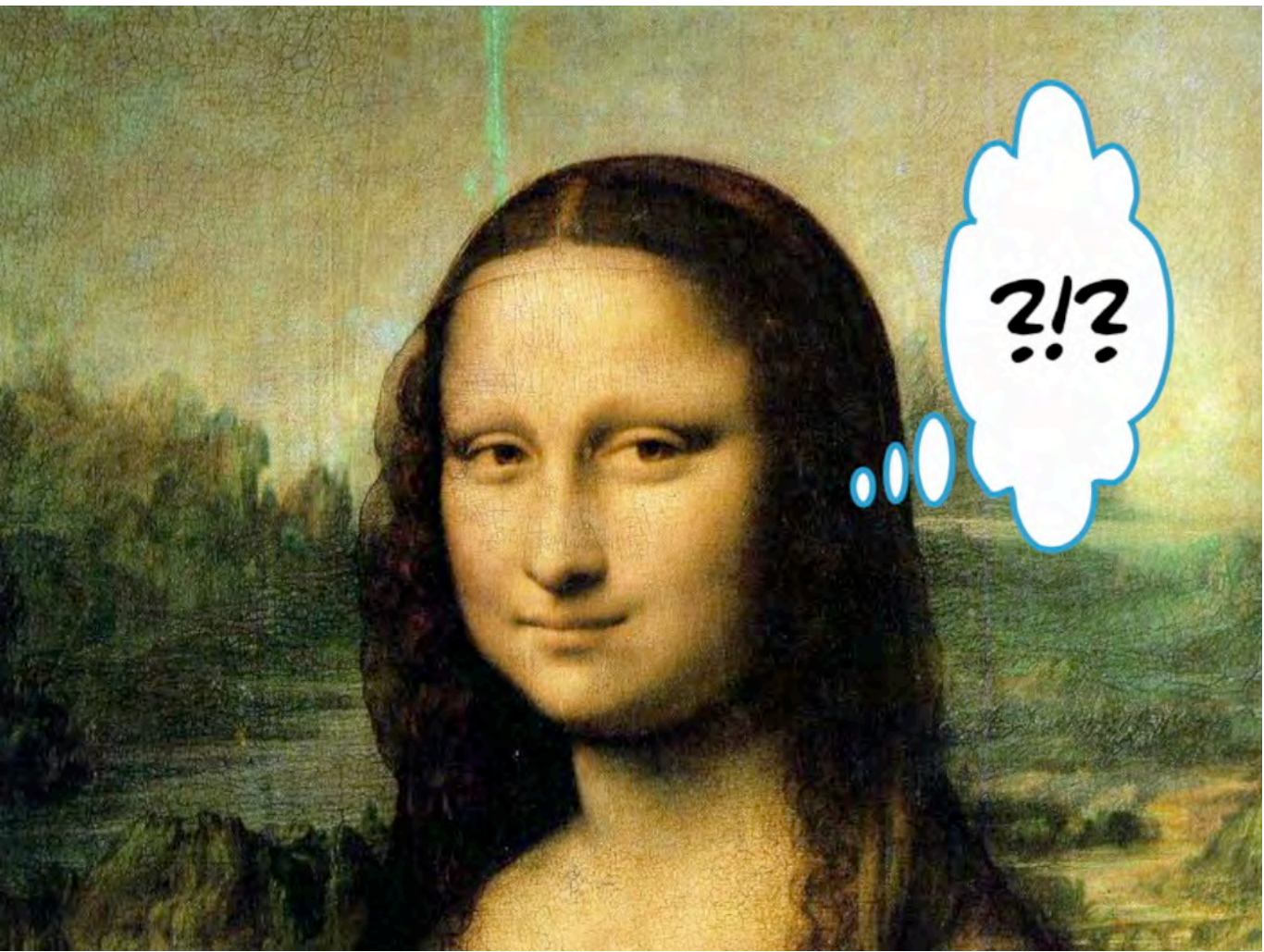








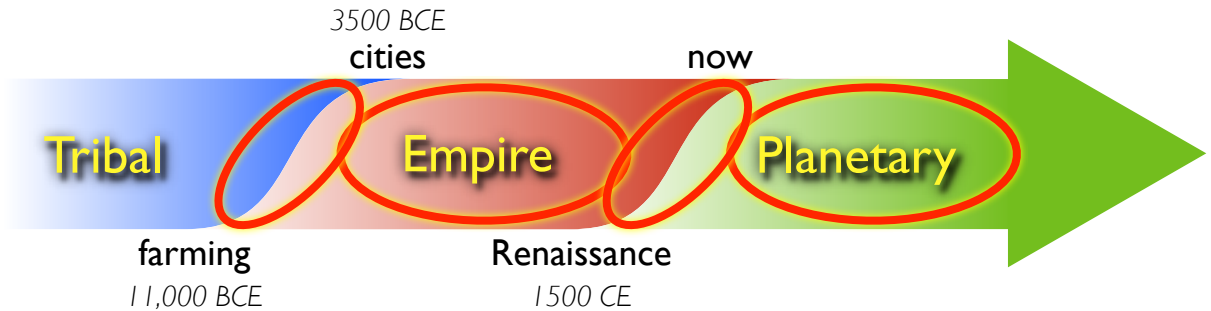




How Shall We Discern The Future?

- Humanity's track record isn't good
- Hard to imagine beyond our domain
- We need a strategy to look *across* the Empire-to-Planetary transition
- The strategy I'm using is to
 - * look for *analogous transitions in nature* (e.g. pioneer to succession)
 - * explore deep history *from the perspective of cultural system domains* in search of *essential patterns that transcend any one domain*

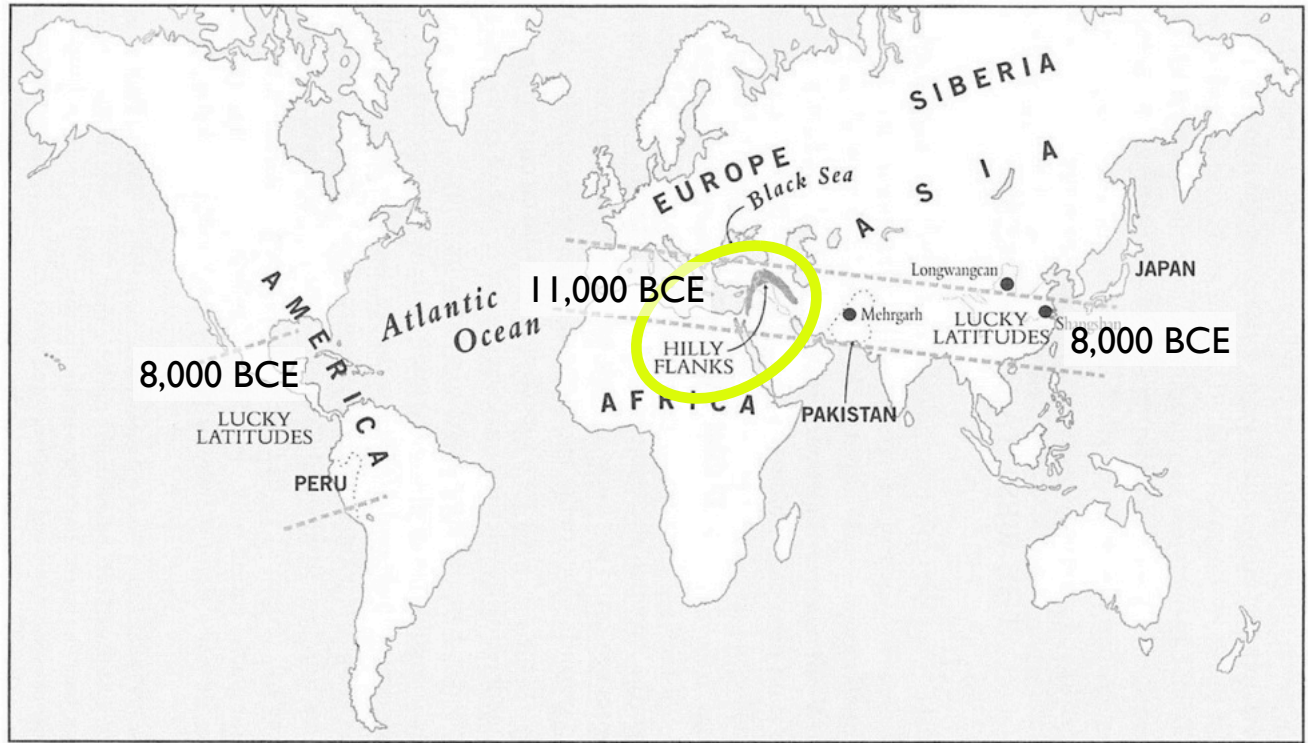
How We'll Proceed



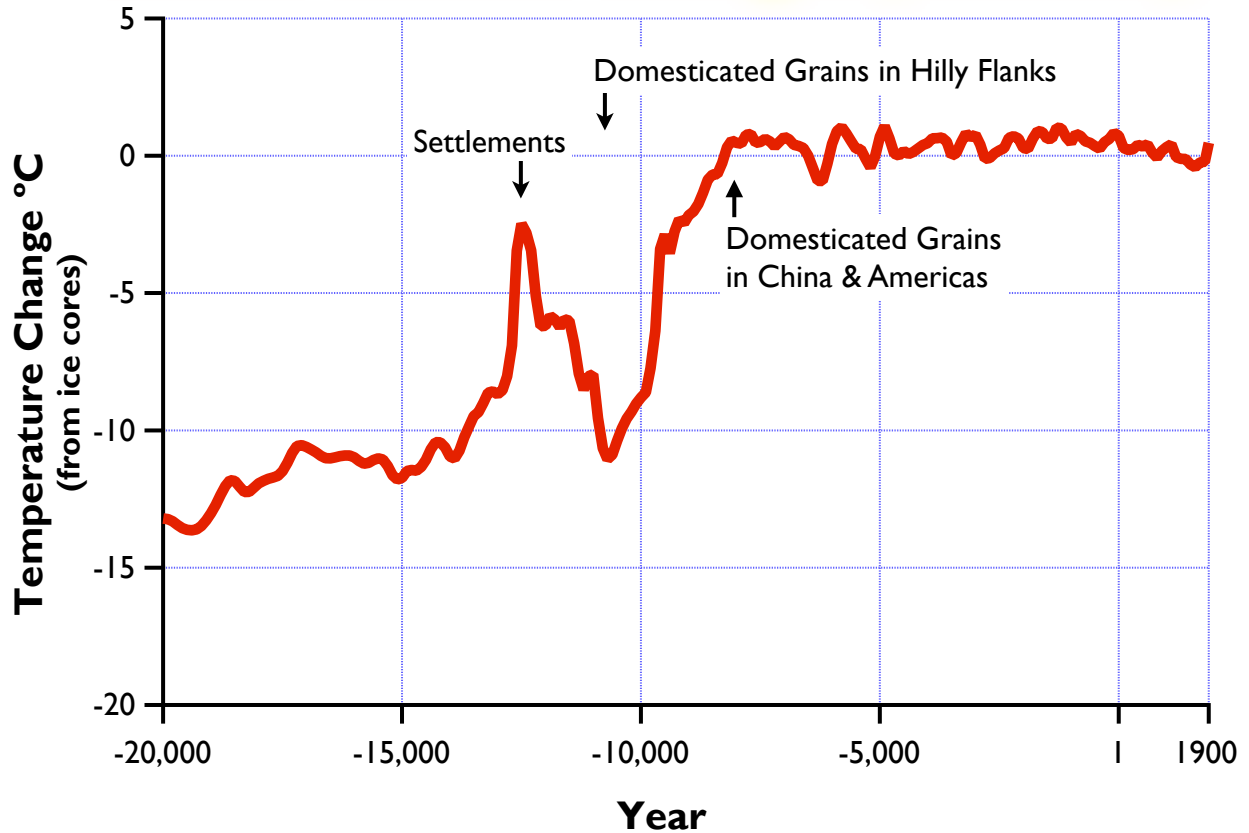
The Tribal-To-Empire Transition

<i>Quality</i>	Tribal	Transition	Empire
<i>Main Livelihood</i>	Hunting & Gathering	?	Agriculture
<i>Basis For Social Organization</i>	Kinship	?	Violence-Enforced Hierarchy
<i>Communications Level of Development</i>	Oral Stories, Songs and Verse	?	Elite Literacy

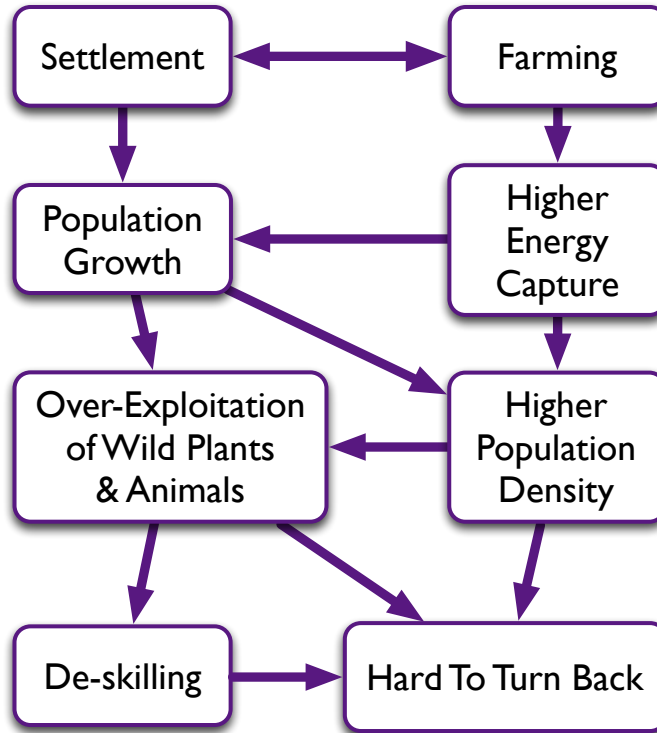
Lucky Latitudes For Agriculture



Global Climate Changes (Context)



Irreversible Transition to Agriculture

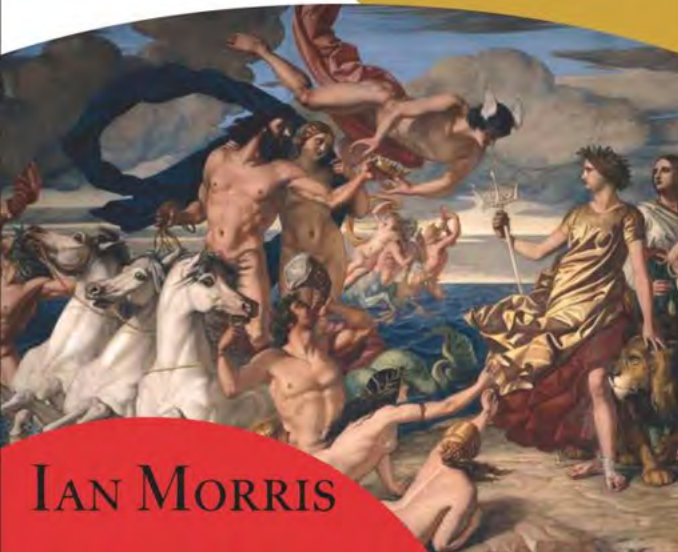


Kinship To Hierarchy

<i>Quality</i>	Tribal	Transition	Empire
<i>Main Livelihood</i>	Hunting & Gathering	Initiated by climate change; maintained by more energy /capita & /area	Agriculture
<i>Basis for Social Organization</i>	Kinship	?	Violence-enforced, Religiously-sanctioned Hierarchy
<i>Communications Level of Development</i>	Oral Stories, Songs and Verse	?	Elite Literacy

WHY THE WEST RULES—FOR NOW

The Patterns
of History, and
What They
Reveal About
the Future



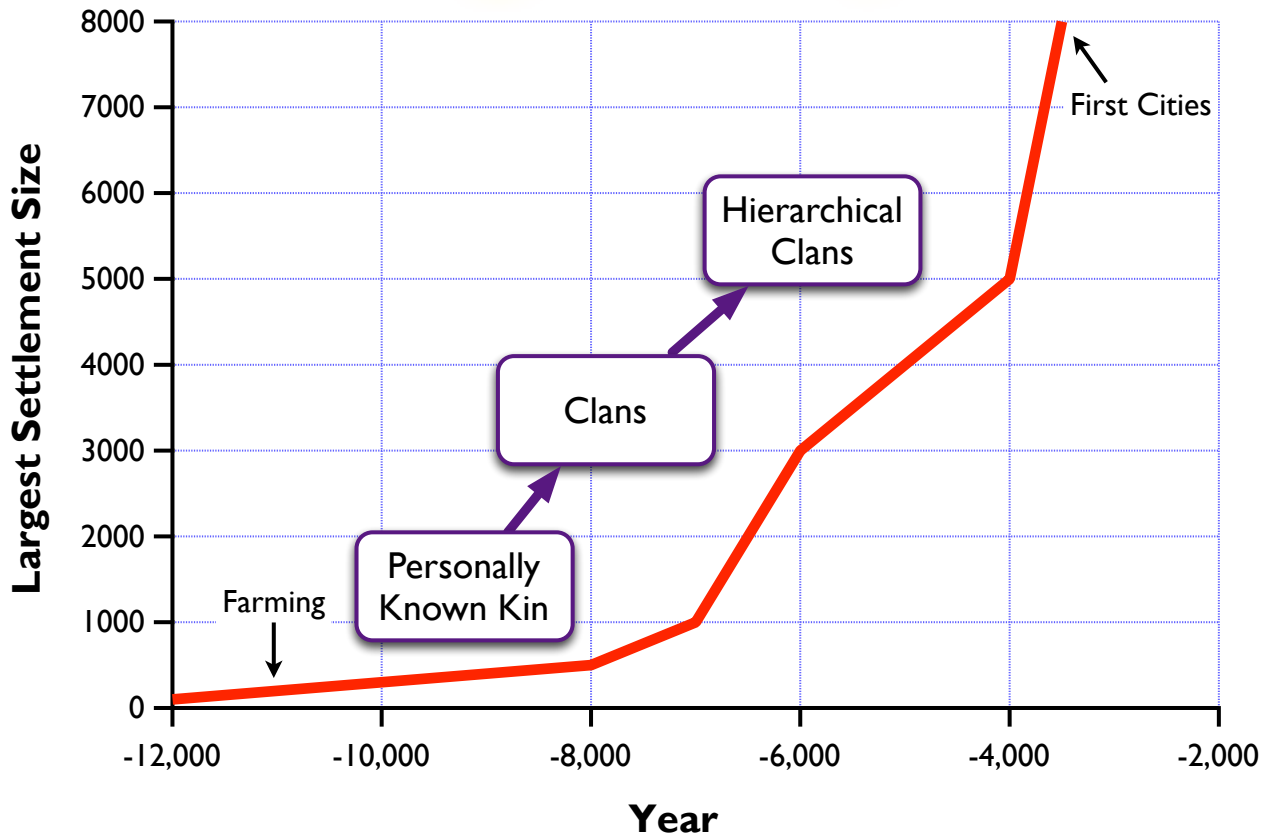
SOCIAL DEVELOPMENT

Ian Morris

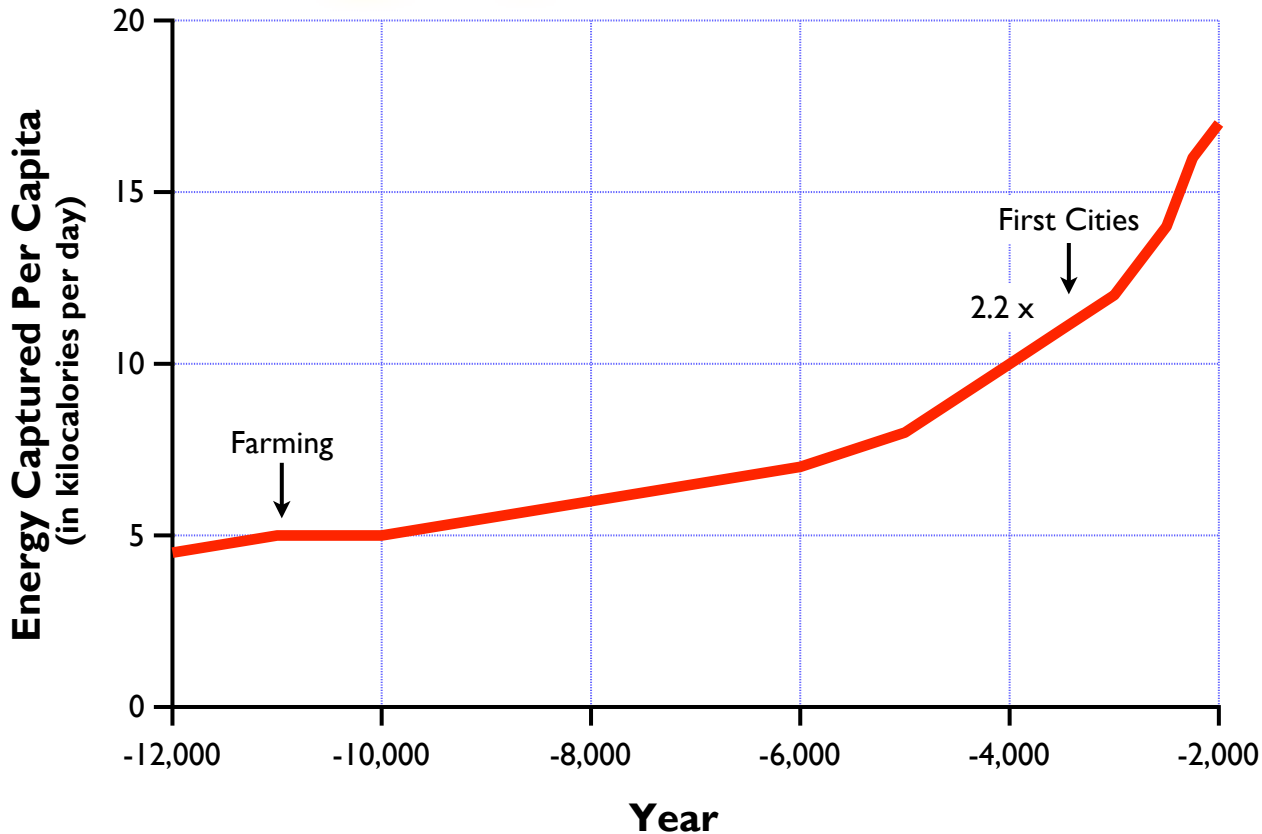
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Stanford University
October 2010
<http://www.ianmorris.org>

Free pdf downloadable from
<http://ianmorris.org/docs/social-development.pdf>

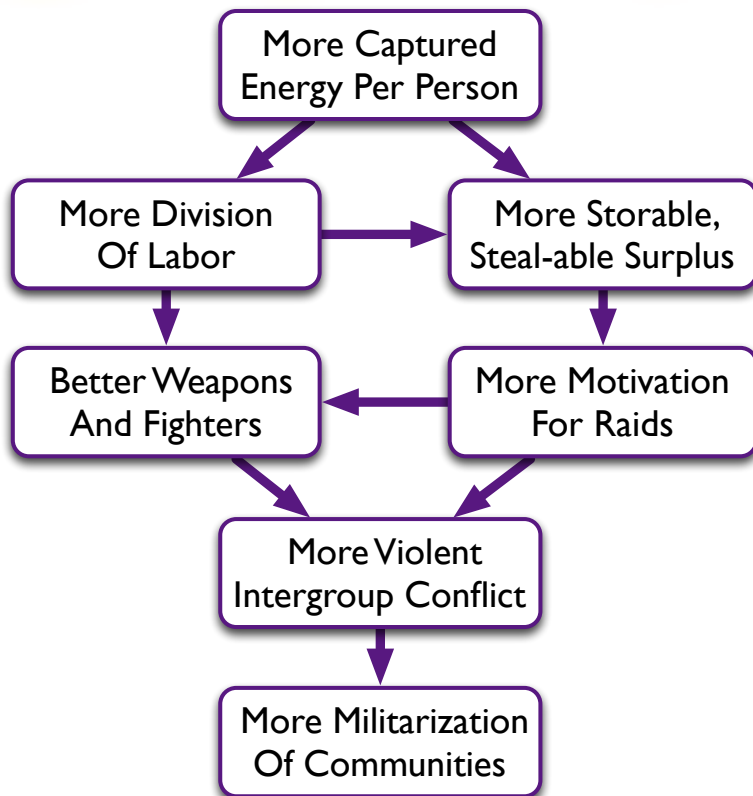
Scale Changes Social Dynamics



Energy Capture Per Person



Energy Changes Social Dynamics



Empire Era Hierarchy

- Penetrates into all aspects of culture, e.g.
 - * adults over children
 - * men over women
 - * powerful men and women over others
 - * humans over nature
 - * mind or spirit over the body
 - * sky gods over everything
- This legacy is still powerfully with us

Orality To Literacy

<i>Quality</i>	Tribal	Transition	Empire
<i>Main Livelihood</i>	Hunting & Gathering	Initiated by climate change; maintained by more energy	Agriculture
<i>Basis for Social Organization</i>	Kinship	Driven by increase of community scale and wealth	Violence-Enforced, Religiously-Sanctioned Hierarchy
<i>Communications Level of Development</i>	Oral Stories, Songs and Verse	?	Elite Literacy

Transition To Literacy

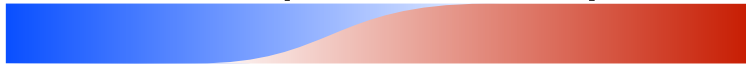
- Full literacy preceded by written numbers
- Much early writing focused on accounting and related record-keeping
- Literacy required enough division of labor and a large enough community to have multiple scribes; not surprisingly, it emerges along with the first cities (about 3200 BCE)
- Record-keeping enabled orderly control of large areas and populations; it was an essential complement to military force

Transition Timing

Foraging to Agriculture



Kinship to Hierarchy



Orality to Literacy



Tribal
Domain

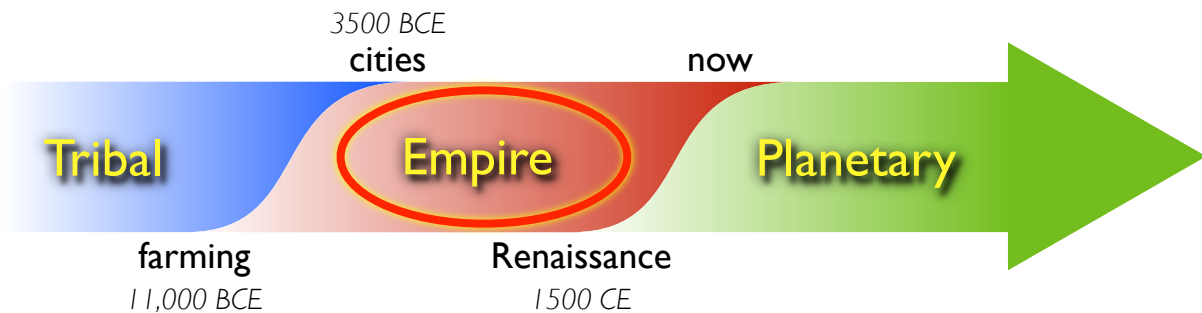
Transition

Empire
Domain

Lessons From The Transition

- The driving forces (e.g. improved agricultural yields, population growth) are gradual and unobtrusive
- Small changes can grow to irreversibility
- Changes in one part of the system can destabilize other parts, driving change throughout the system
- Powered by positive feedback loops, the changes progress until a new stable constellation of qualities is found
- Foraging, kinship and orality never go away; they just become secondary

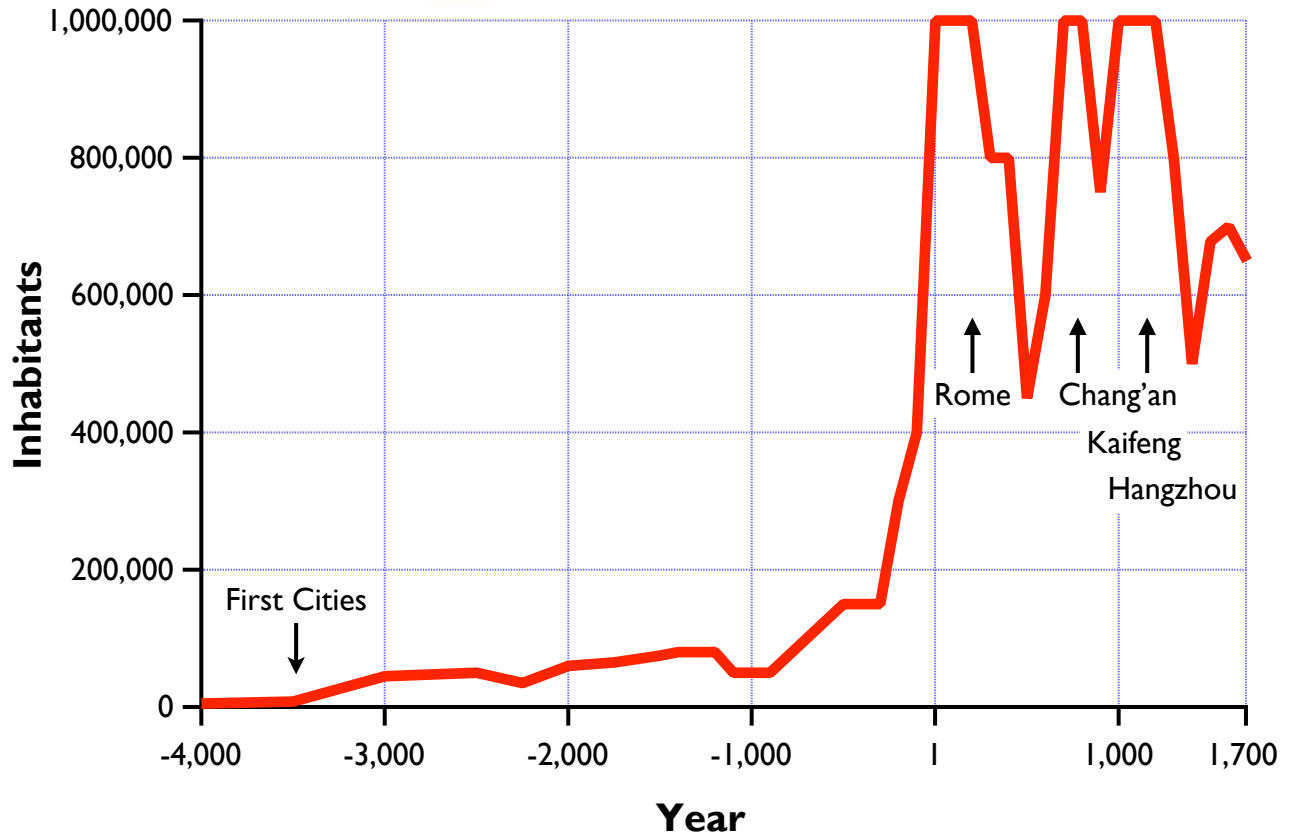
The Empire Era



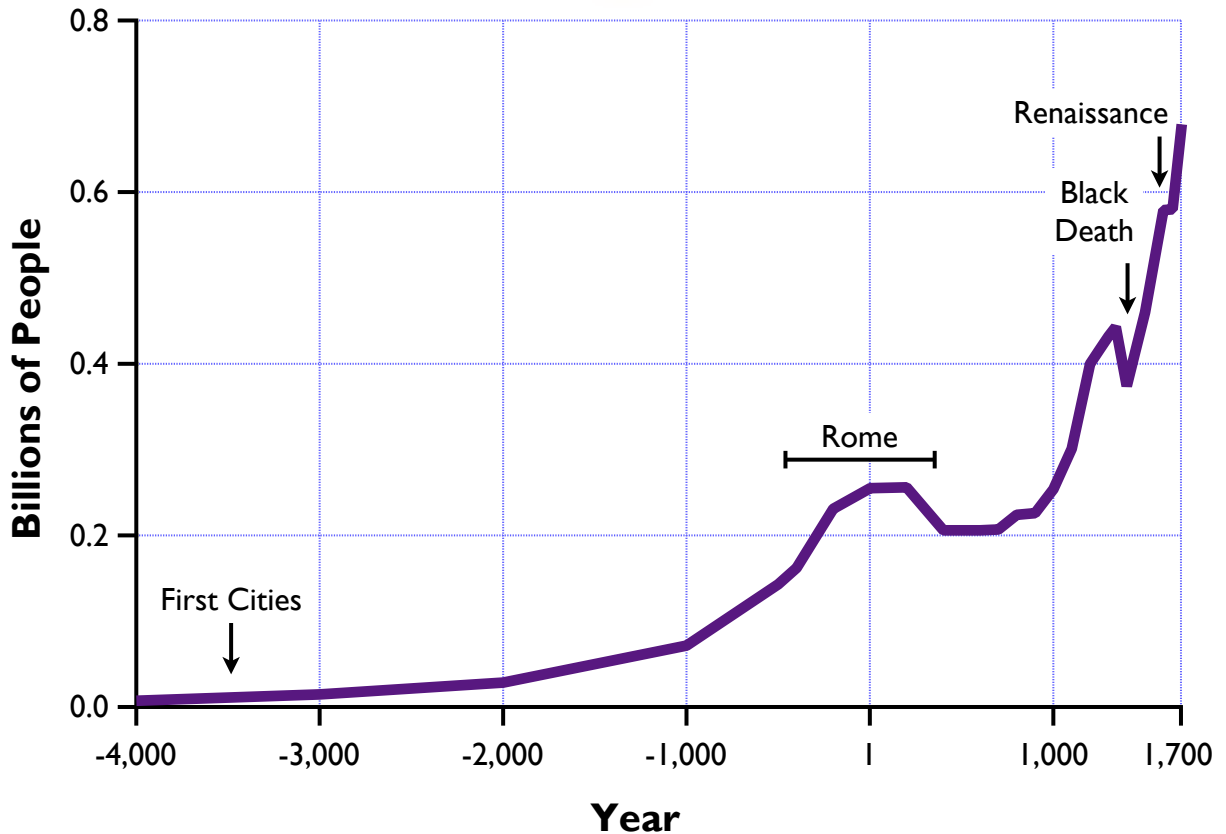
Empire Era Characteristics

- Cultural *system domain* characterized by:
 - * Agriculture (>90% of population)
 - * Hierarchy (violence-enforced, religiously-sanctioned)
 - * Literacy (<10% of population)
- Its basic pattern remained stable for 4500 years (from 3000 BCE to 1500 CE)
- Nevertheless, there were some changes during the era ...

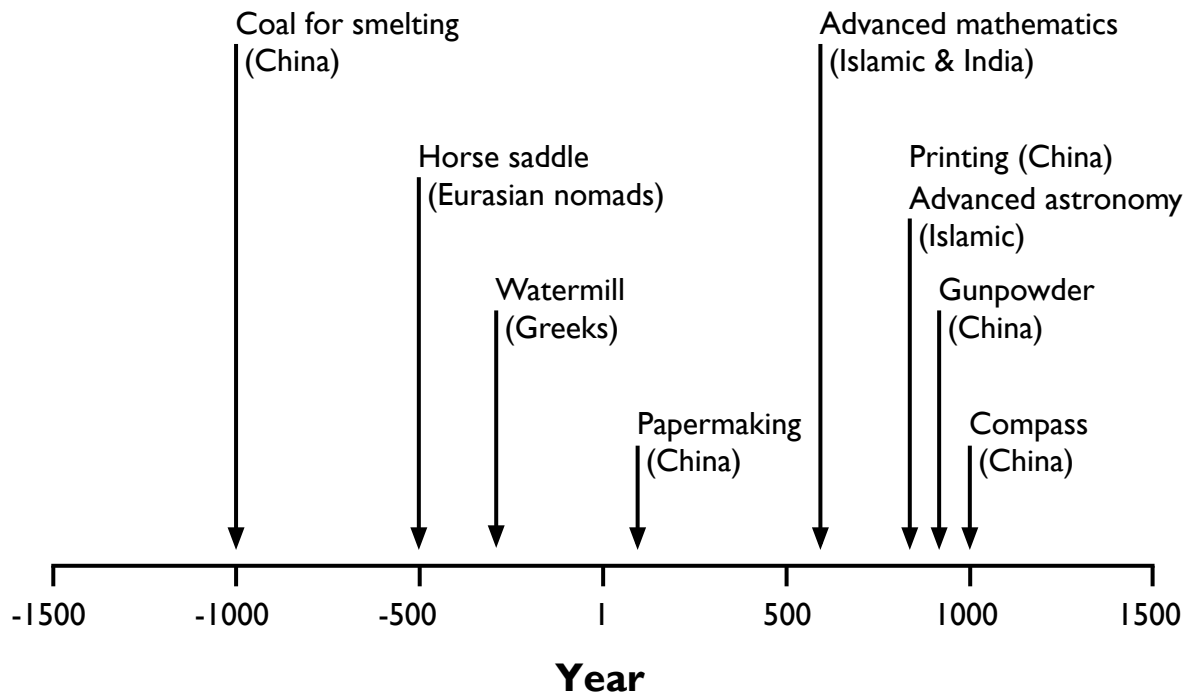
Largest Settlements



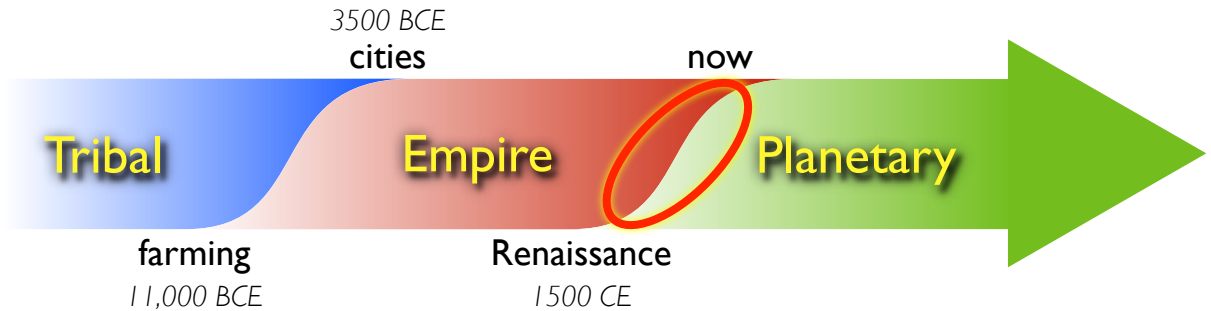
World Population



Later Empire Era Inventions

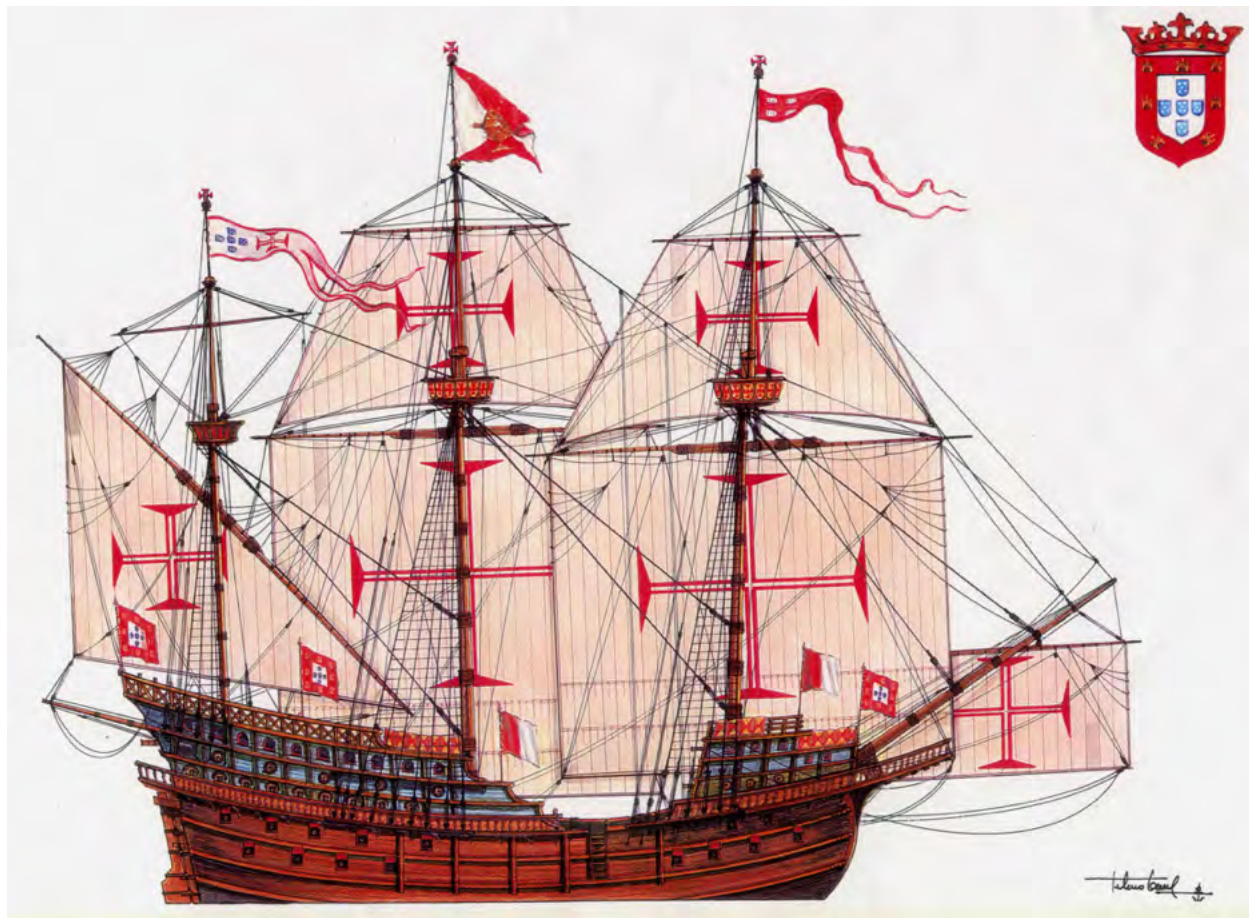


The Empire-To-Planetary Transition

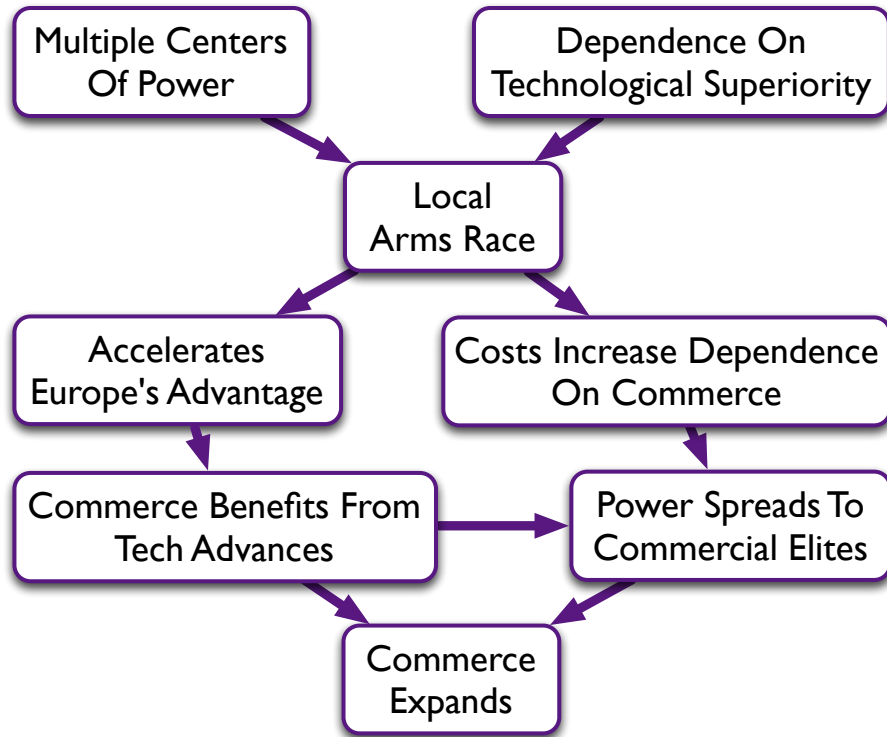


Innovation Seen As An Asset

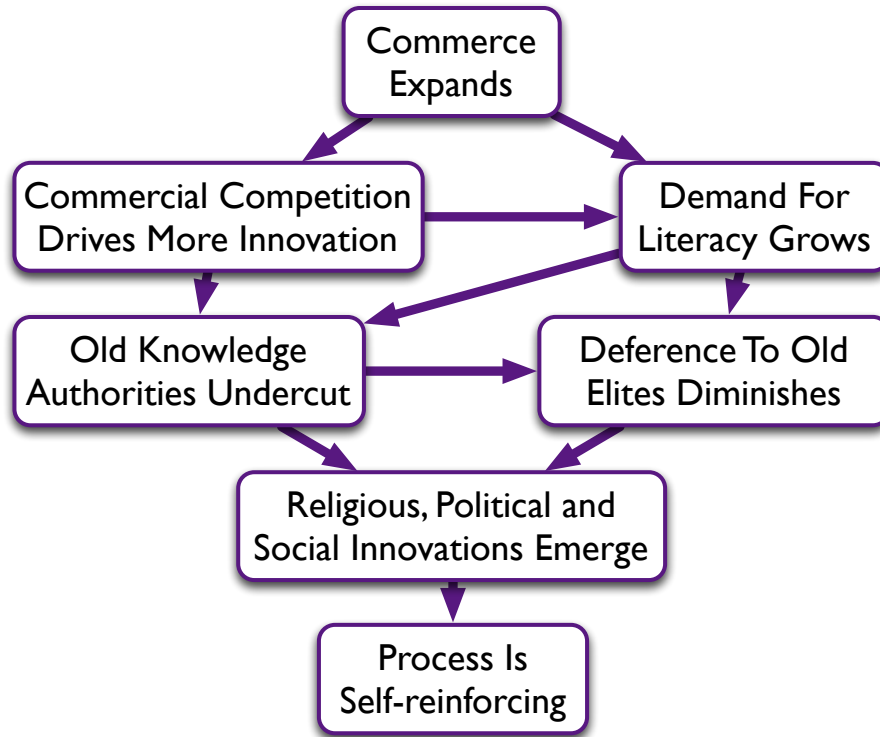
- “Innovation” includes technological, social, economic, philosophical change
- Innovation has always been a factor
 - * Before Empire Era, too slow to be noticed
 - * During Empire Era, elites wary of innovation
- Europe best positioned to lead on using innovation (like Hilly Flanks was with agriculture)
 - * Multiple competing centers of power
 - * Knew that others (Greece, China, etc.) were more advanced; could learn from them
 - * Major initial success with warships



Innovation's European Dynamics



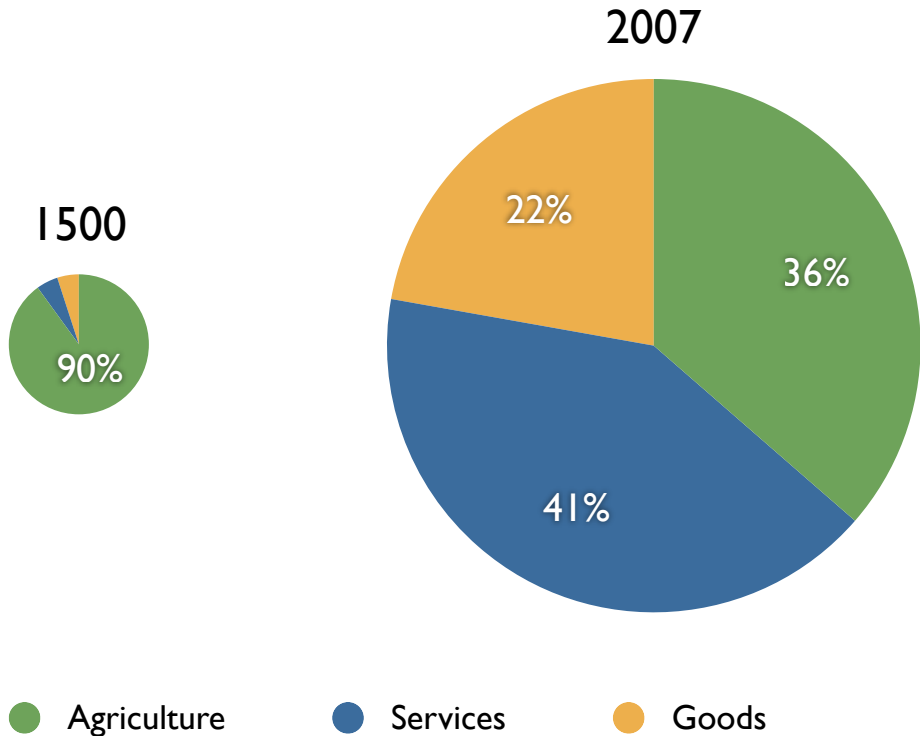
Innovation's European Dynamics



The Empire-To-Planetary Transition

<i>Quality</i>	Empire	Transition	P.E. so far
<i>Main Livelihood</i>	Agriculture	?	?
<i>Basis for Social Organization</i>	Violence-enforced, Religiously-sanctioned Hierarchy	?	?
<i>Communications Level of Development</i>	Elite Literacy	?	?

Worldwide Workforce



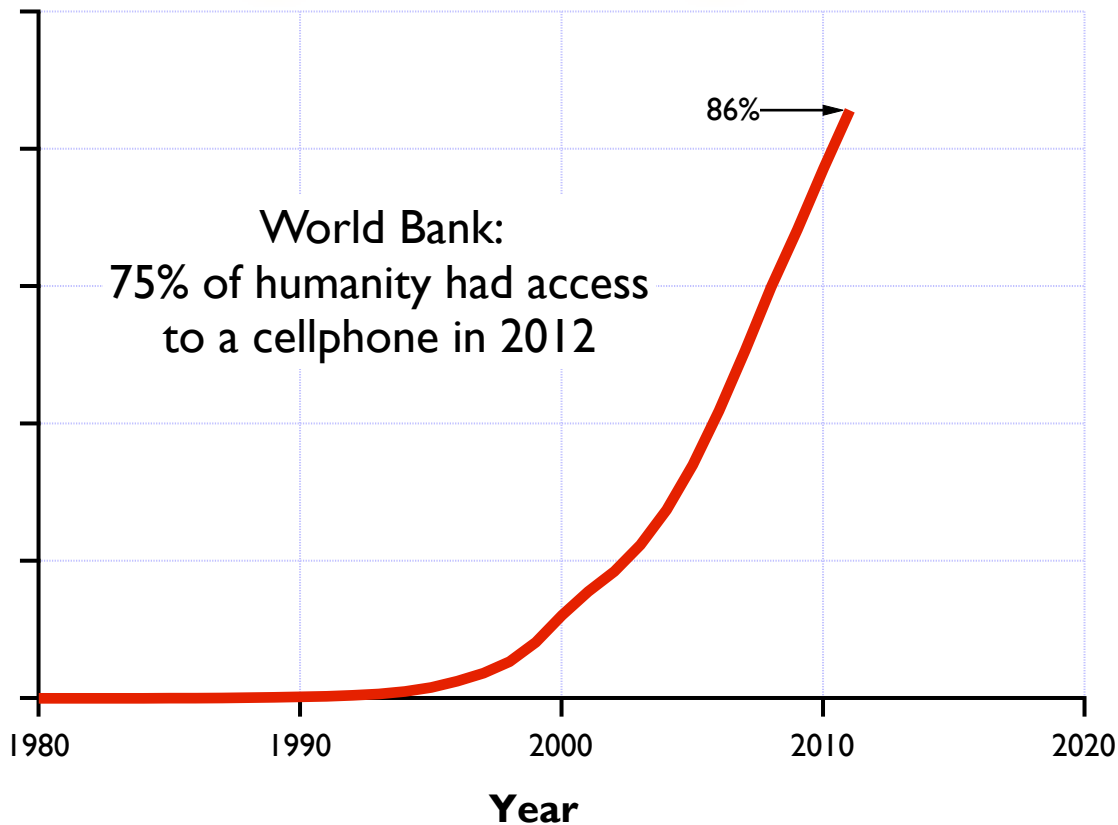
The Empire-To-Planetary Transition

<i>Quality</i>	Empire	Transition	P.E. so far
<i>Main Livelihood</i>	Agriculture	Steady growth of diverse goods and services	No more “main”; huge diversity of occupations
<i>Basis for Social Organization</i>	Violence-enforced, Religiously-sanctioned Hierarchy	?	?
<i>Communications Level of Development</i>	Elite Literacy	?	?

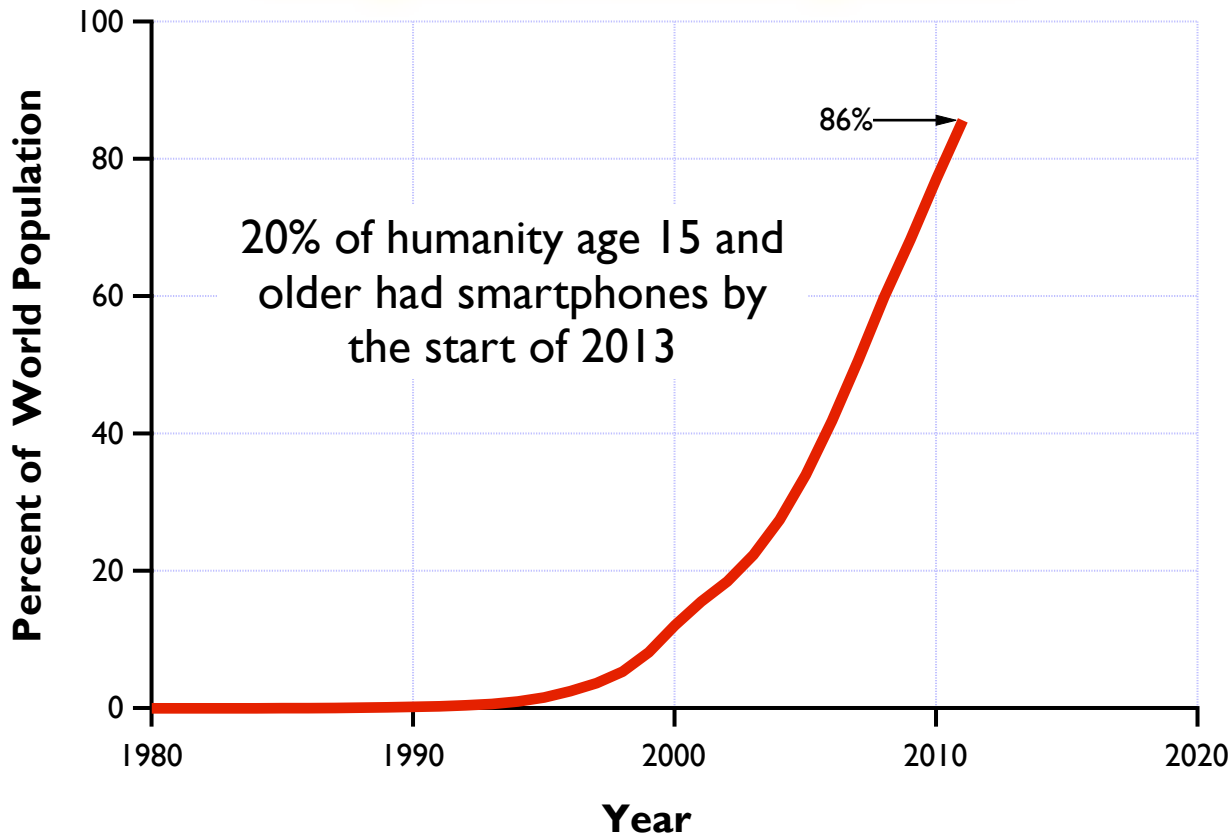
Communications Level of Development

- Expansion of travel
- Expansion of literacy (now 84% worldwide)
- Increase in speed of communications
- Beyond language: multi-media, multi-sense
- Increase in person-to-person access

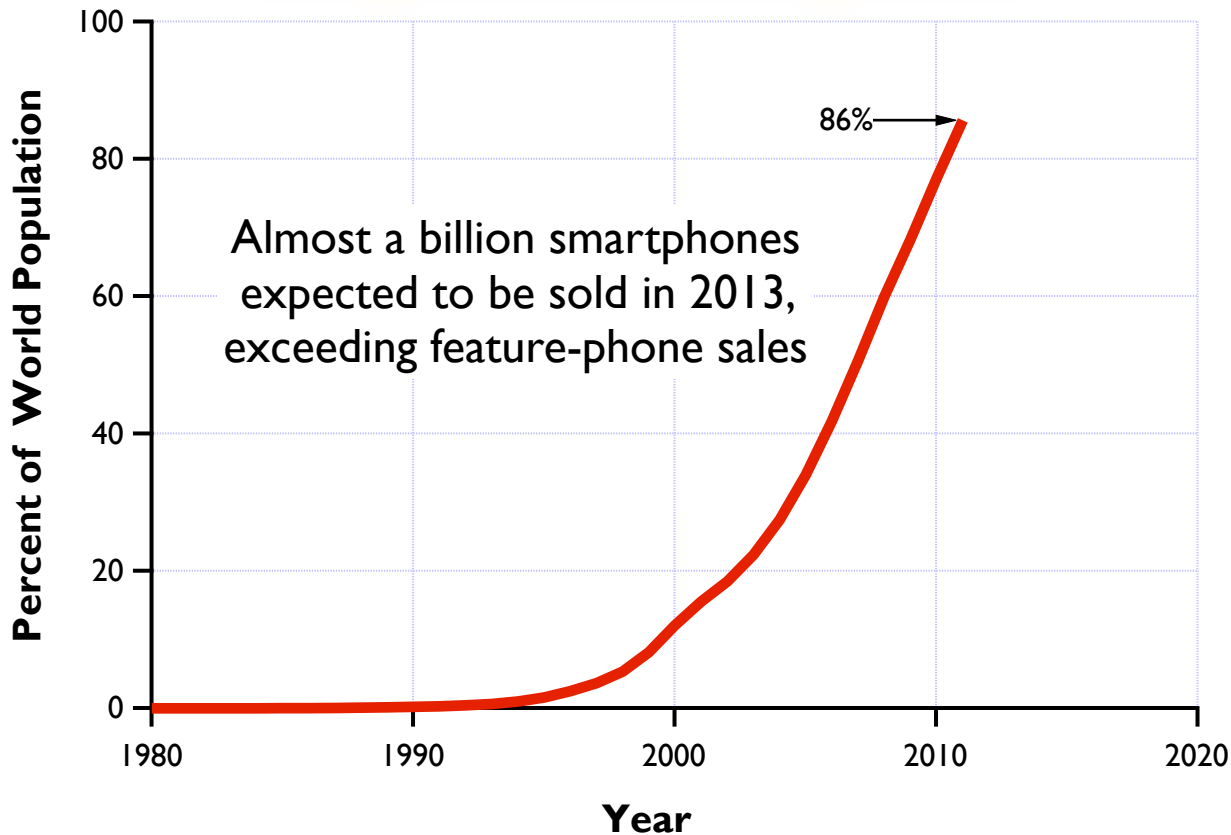
Cellphone Subscriptions



Cellphone Subscriptions



Cellphone Subscriptions



Communications Level of Development

- Expansion of travel
- Expansion of literacy
- Increase in speed
- Beyond language: multi-media, multi-sense
- Increase in person-to-person access
- Just as the Empire Era needed literacy to come into full form, so the Planetary Era needs the new electronic tools

The Empire-To-Planetary Transition

<i>Quality</i>	Empire	Transition	P.E. so far
<i>Main Livelihood</i>	Agriculture	Steady growth of commerce and industry	No more “main”; huge diversity of occupations
<i>Basis for Social Organization</i>	Violence-enforced, Religiously-sanctioned Hierarchy	?	?
<i>Communications Level of Development</i>	Elite Literacy	Major increases in literacy, modes, speed and reach	Widespread electronic multi-media

More People Get More Choice

- Choice of
 - * occupation
 - * place of employment
 - * political leaders
 - * friends and associates
 - * marriage partners
 - * where to live
 - * information sources
 - * beliefs
 - * goods and services
- All have increased dramatically in past 500 years, enabled by better communications, travel, trade and courageous pioneers
- Choice destroys the power of coercion

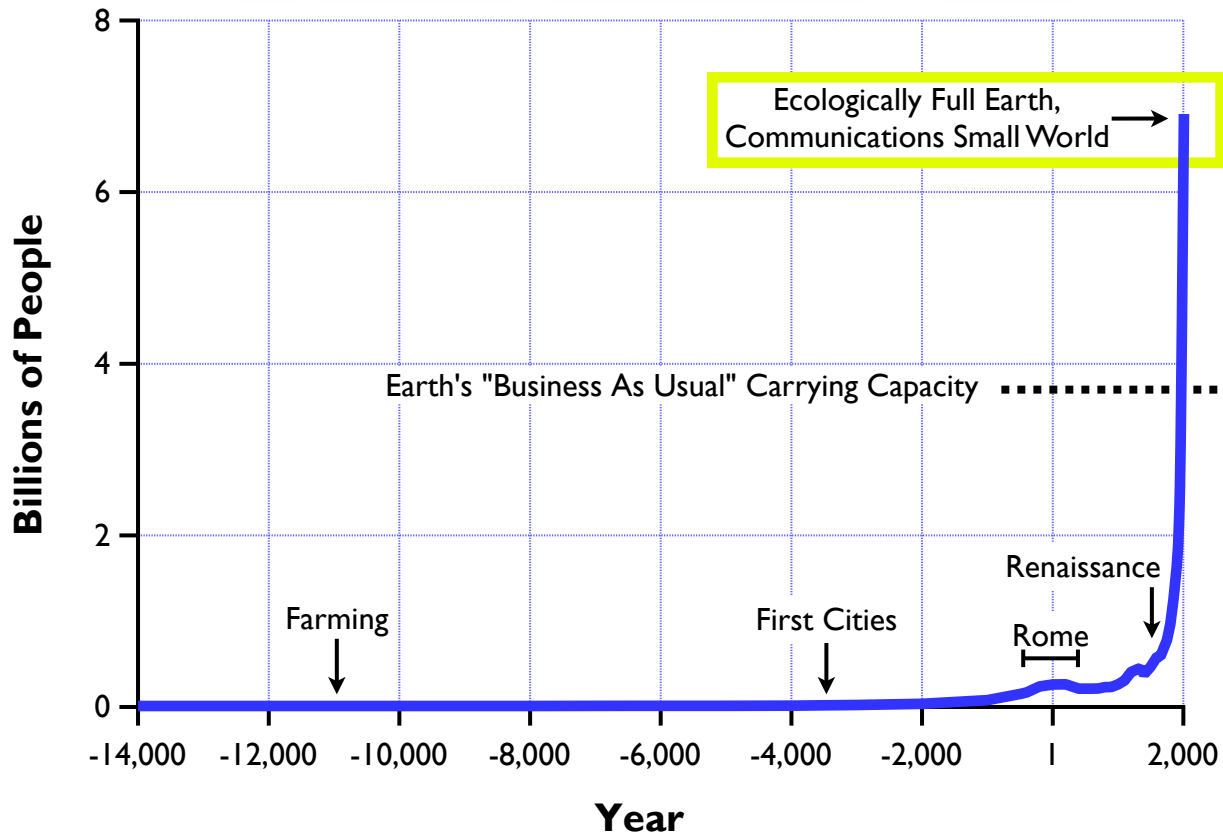
Two Responses To More Choice

- A shift to more indirect, covert and psychological methods of control
 - * Depends on control of the flow of information
- The growth of self-organized consensual collaboration on scales from personal to global
 - * This is analogous to the way nature organizes complexity -- through co-evolution and symbiosis

The Empire-To-Planetary Transition

<i>Quality</i>	Empire	Transition	P.E. so far
<i>Main Livelihood</i>	Agriculture	Steady growth of commerce and industry	No more “main”; huge diversity of occupations
<i>Basis for Social Organization</i>	Violence-enforced, Religiously-sanctioned Hierarchy	More people have more choice in their lives	Self-organizing consensual collaboration
<i>Communications Level of Development</i>	Elite Literacy	Major increases in literacy, modes, speed and reach	Widespread electronic multi-media

We Are In A Different World



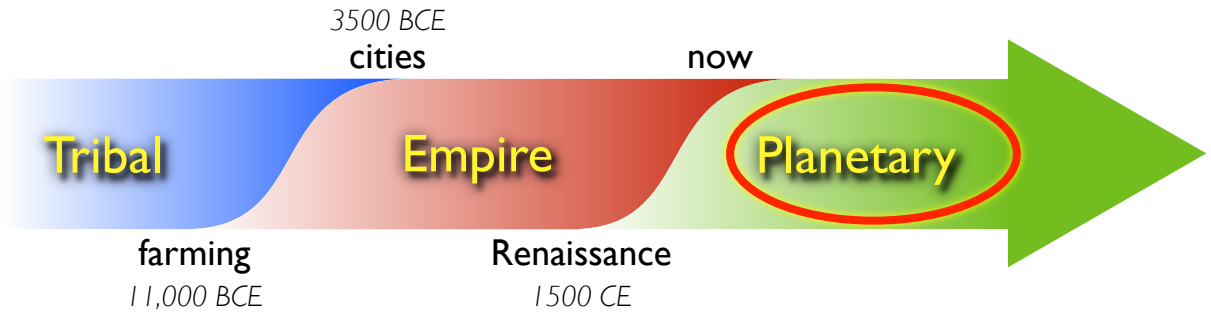
Time To Look Forward



Thinking About The Future

- The Empire Era is still strong in our minds
 - * Language and beliefs
 - * Ideas about human nature and how life works
 - * Leads to misunderstandings and cognitive dissonance
- There will be surprises
 - * Truth is stranger than fiction
 - * Some things will turn out better than we expect, some things worse
 - * Some things will just be totally unexpected
- Nevertheless, as long as we take system domains and transitions into account, the big picture is potentially discernible

The Planetary Era



Small World Meets Full Earth

How will the limits-to-growth crisis impact the Planetary Era qualities?

- Likely to spur yet more innovation
- Successful innovations will use succession species strategies
 - * high levels of diversity
 - * high levels of symbiosis (as in self-organizing consensual collaboration)
- Communications will be prioritized
- Sustainability needs to be added as the fourth domain-defining quality

Likely Changes To Come

- Every facet of culture will be affected
 - * Economics, governance, legal system, health care, education, religion, warfare, etc.
- Many of these changes will be resisted - visibly, stridently, even violently - by those who still identify with Empire Era values, but they will be on the wrong side of history and their apparent successes will not last
- On the other hand, agriculture, command & control hierarchies and literacy won't go away; they will just become secondary

Planetary Era Characteristics

- Cultural *system domain* characterized by:
 - * Sustainability
 - * Diversity (occupations, interests, groups, etc.)
 - * Self-organization (from the personal to the global)
 - * Connectivity (worldwide peer-to-peer >80% of world population)
- It will be at ease with and foster innovation
- Human relationship at all scales (personal to global) will be fundamentally consensual

The Central Issue Of Our Times

It is not whether humanity or the earth will survive; we very likely will.

We will likely find our way through the limits-to-growth crisis and in doing so, complete the transition to the Planetary Era.

The issue is how *graceful* can the transition be?
How much suffering can be avoided? How much long-term damage can be prevented?

What We Each Do Matters

- It has taken countless courageous choices by millions of people to get this far
- It will take countless more to complete the journey
- Alignment with succession strategies is the path to success
- With today's communications, learning and innovation processes have accelerated

What Shall We Do?

- Let go of the Empire Era
- Step forward into the Planetary Era
- Do it all with compassion
- Innovate - Implement - Educate

Why I'm So Encouraged

- The momentum of history is moving towards a *cultural system domain* based on:
 - * Sustainability, diversity, self-organization and connectivity
- The obstacles we face are human, cultural and solvable
- Even individuals and small groups can have a big impact through *innovate - implement - educate* if they are aligned with PE qualities
- People all over the planet are rising to the challenge and seizing the opportunity

System
domains



Where are we
in history?



Implications for
intentional communities

Opportunities For Communities

- Many needed innovations are best developed in human-scale communities
- Innovative communities can enjoy the benefits of Planetary Era sooner
- They can also serve as sources of hope and experience for the wider world by being centers of research, demonstration and training

Suggestions For Communities

- Examine and clarify your own images of the past and future; how much are you stuck in Empire Era thinking or reactions against it?
- Expect the pace of change to be even greater during the next few decades; skate to where the puck *will be*
- Work with the flow of history; lead the way toward the emergence of the Planetary Era
- Innovate - Implement - Educate



I've never been more
encouraged about the
future than I am today

Thank you

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