

Strategic Foresight



Change & The Future



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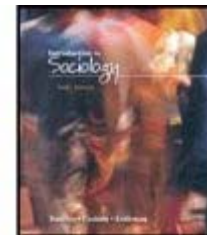
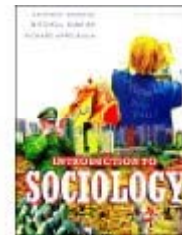
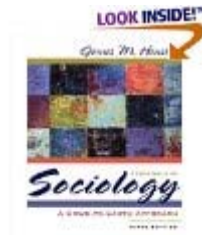
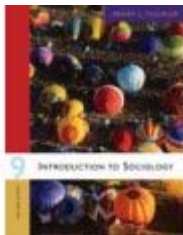
Emerging Technologies and Environmental Law
UH Law Center
April 18, 2011



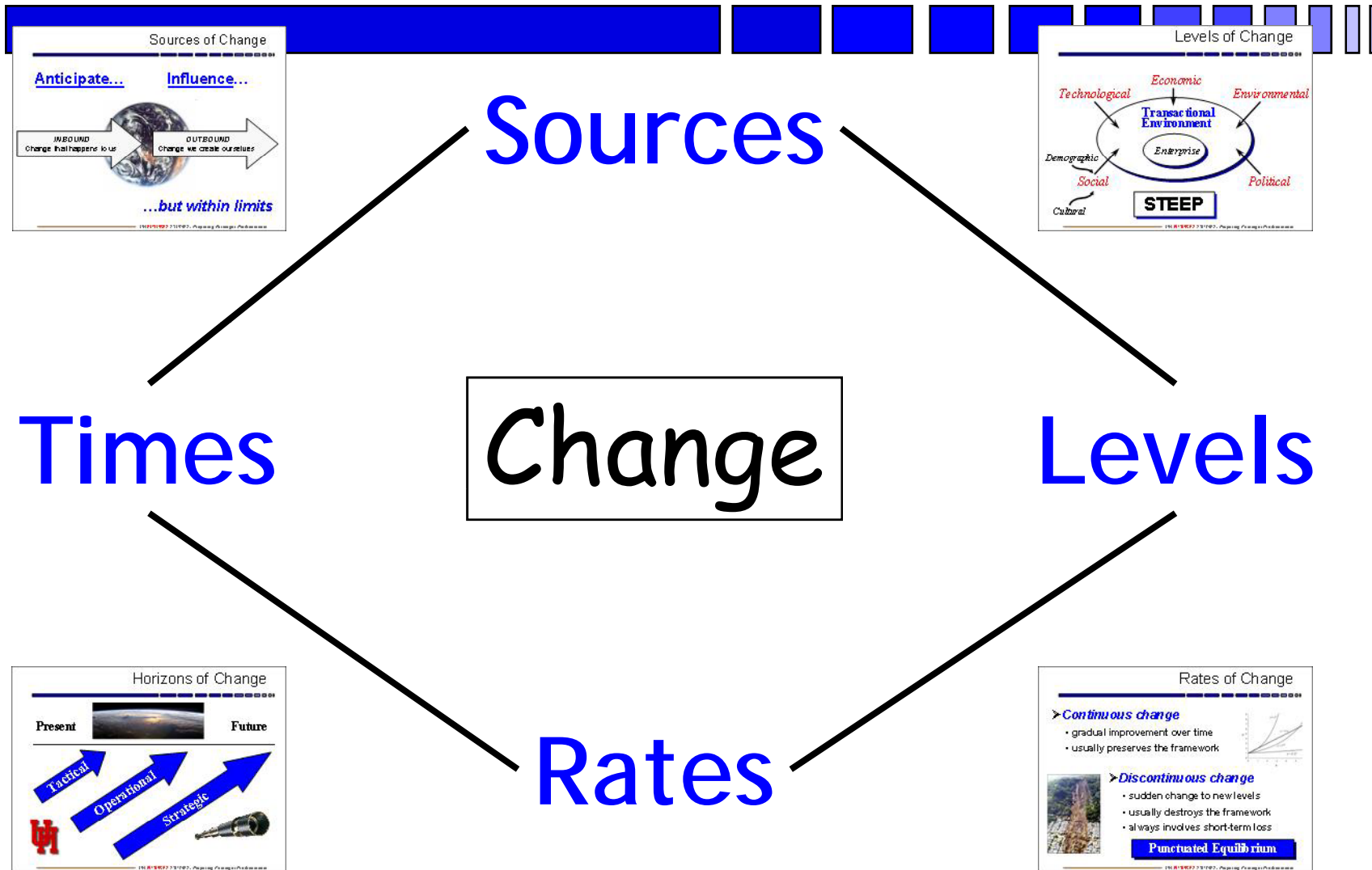
Nature of Change

Sociology and Social Change

- Tables of contents from the 10 highest ranked sociology textbooks on Amazon.com
 - Average of 15 sections in each book (15 weeks in a semester)
 - Three did not have a chapter on social change
 - Seven did...
 - » 7% of the chapters
 - » 3% of the pages
- No social change textbook in print for a years



Four Basic Concepts

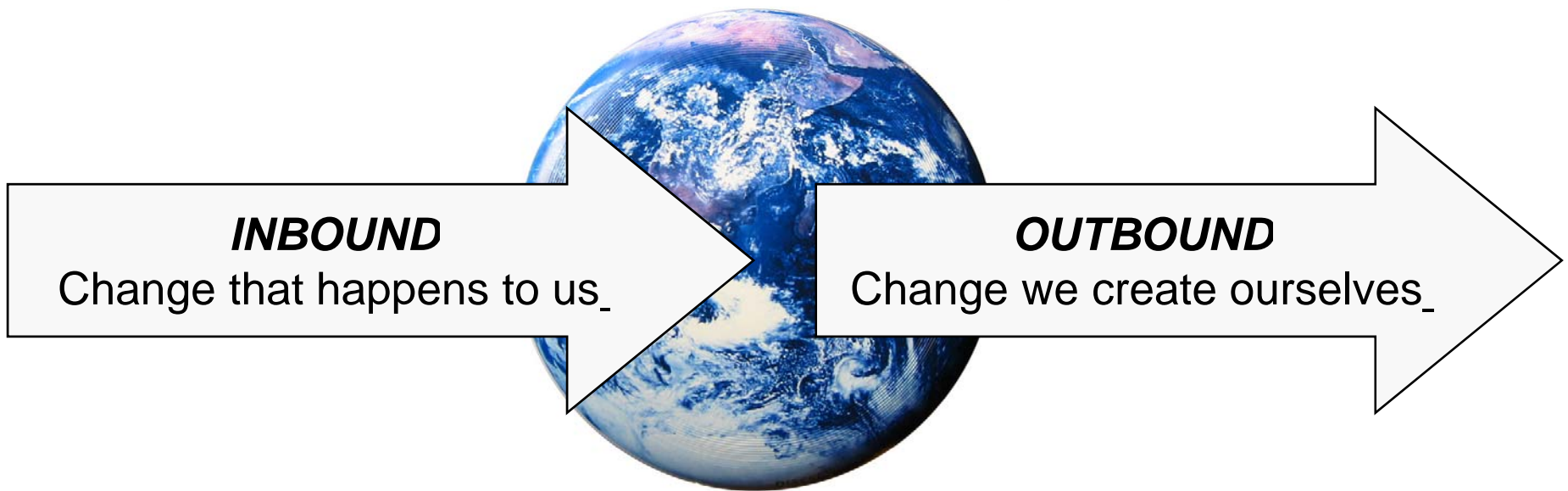


Sources of Change



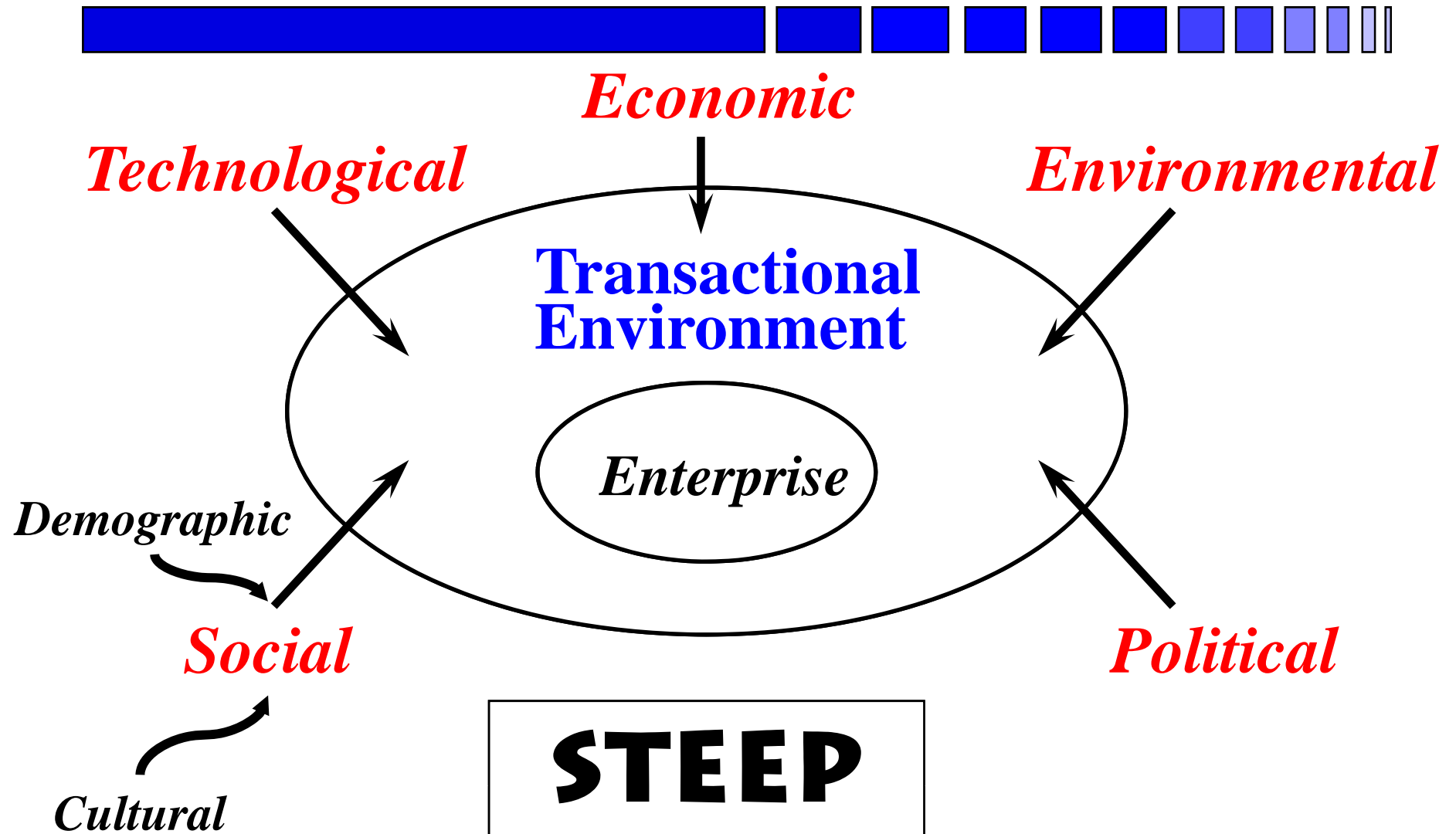
Anticipate...
Intelligence

Influence...
Policy



...but within limits

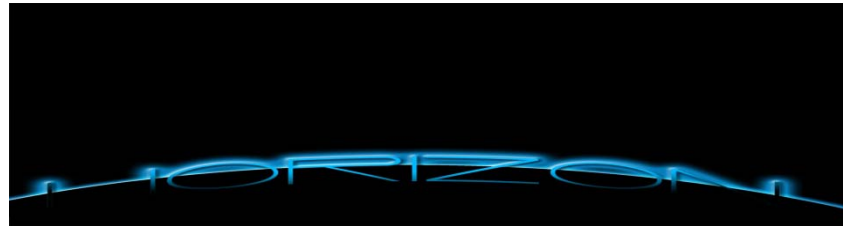
Levels of Change



Horizons of Change



Present



Future

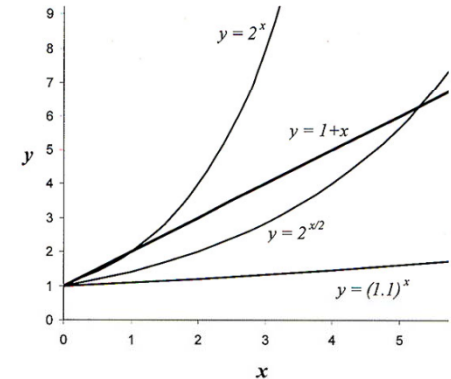


Rates of Change



➤ *Continuous change*

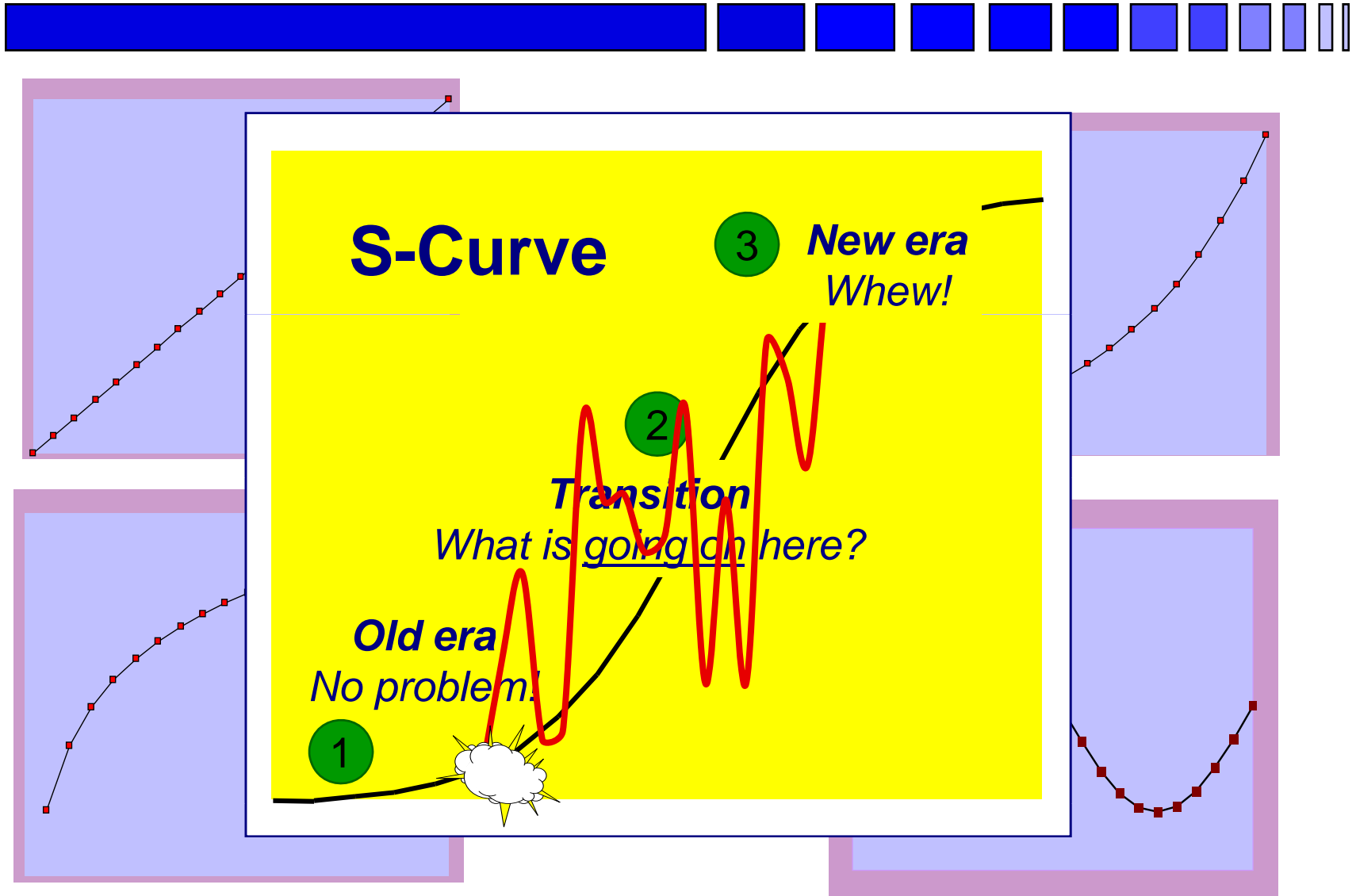
- gradual improvement over long periods
- usually preserves the framework/context



➤ *Discontinuous change*

- sudden change to new levels
- usually destroys the framework/context
- always involves short-term loss

The Real Shape of Change



Past Disruptions

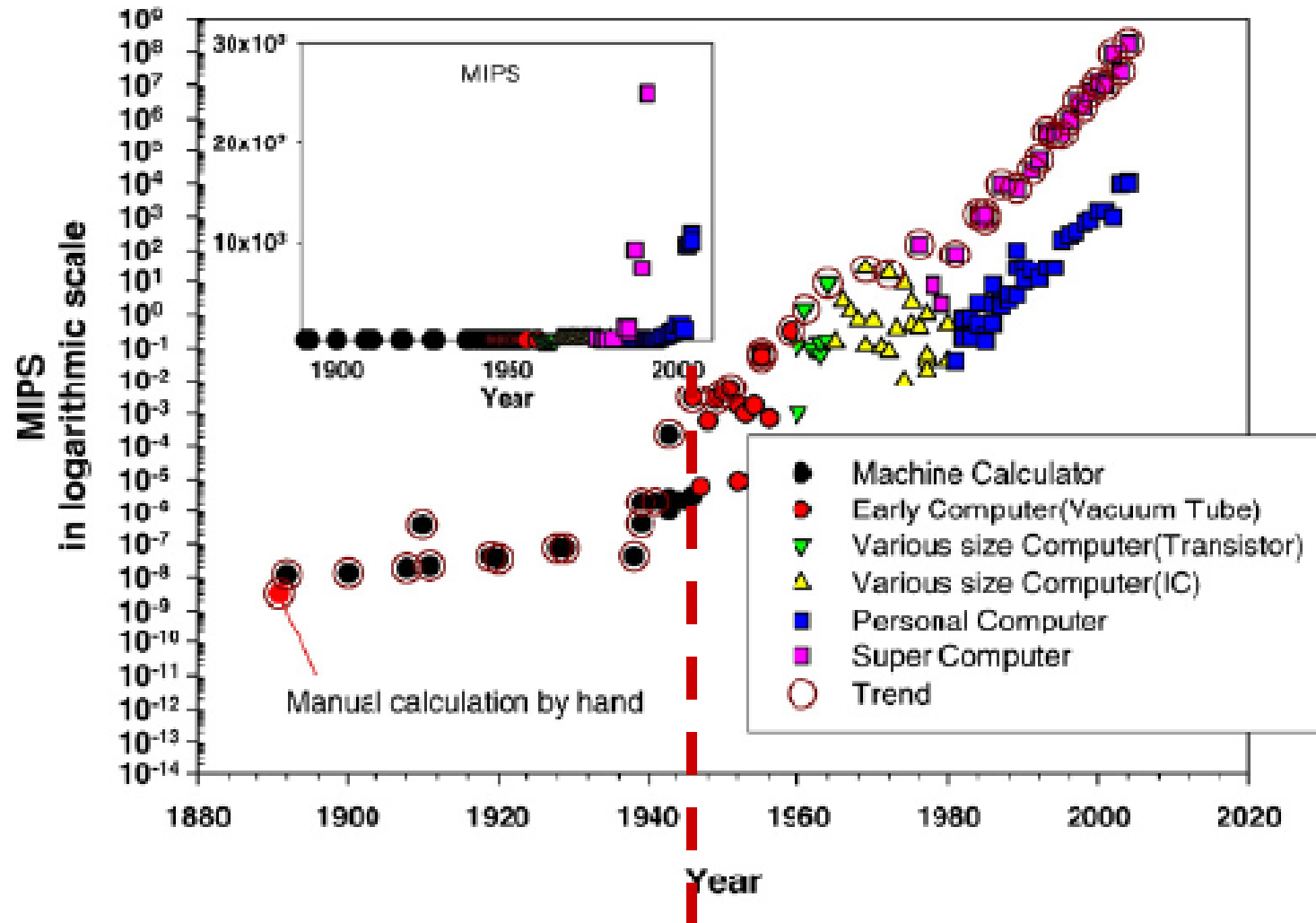
- Airlines
- Automobiles
- Telephones
- Television
- Health care
- Retail
- Utilities

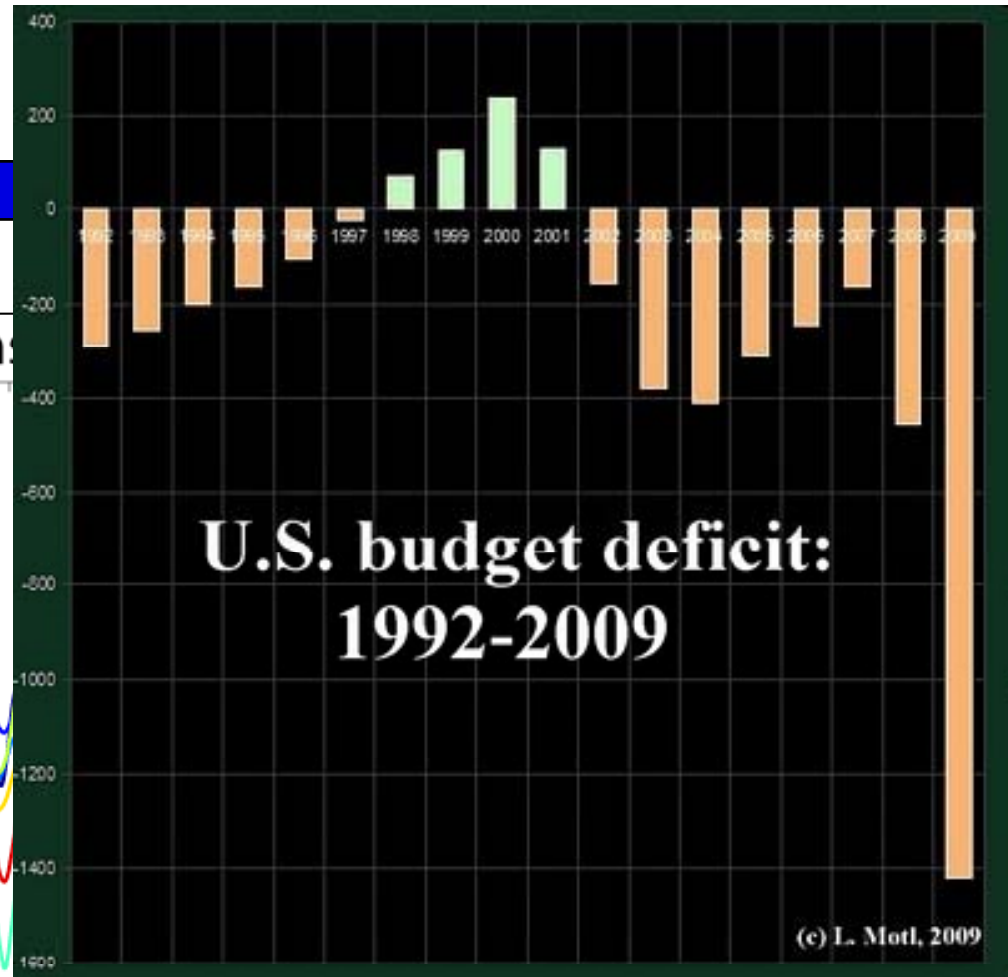
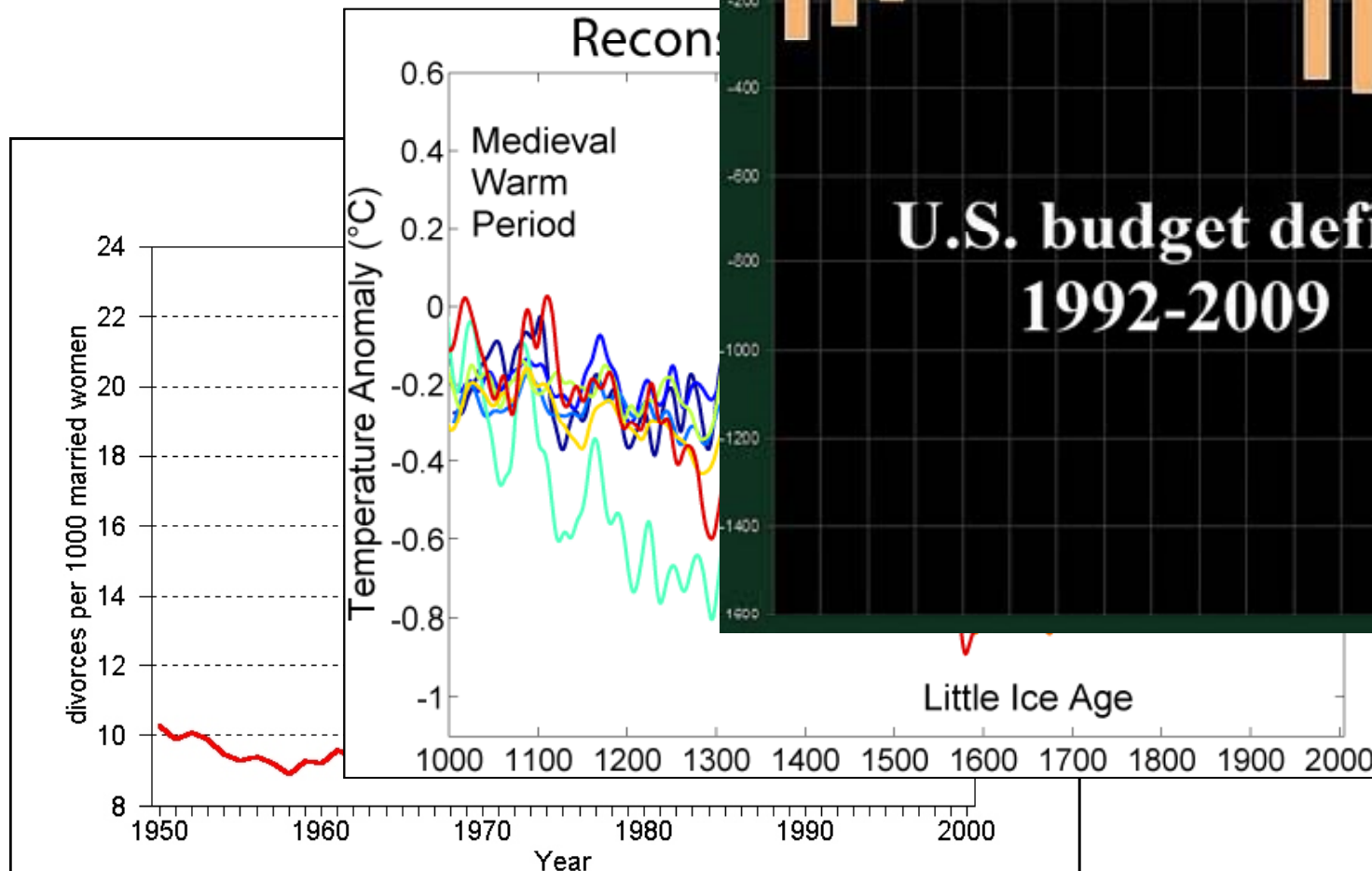
- Newspapers
- Military
- Elections
- Schools?

The Common Element
Destruction of Monopolies
Appearance of Competition



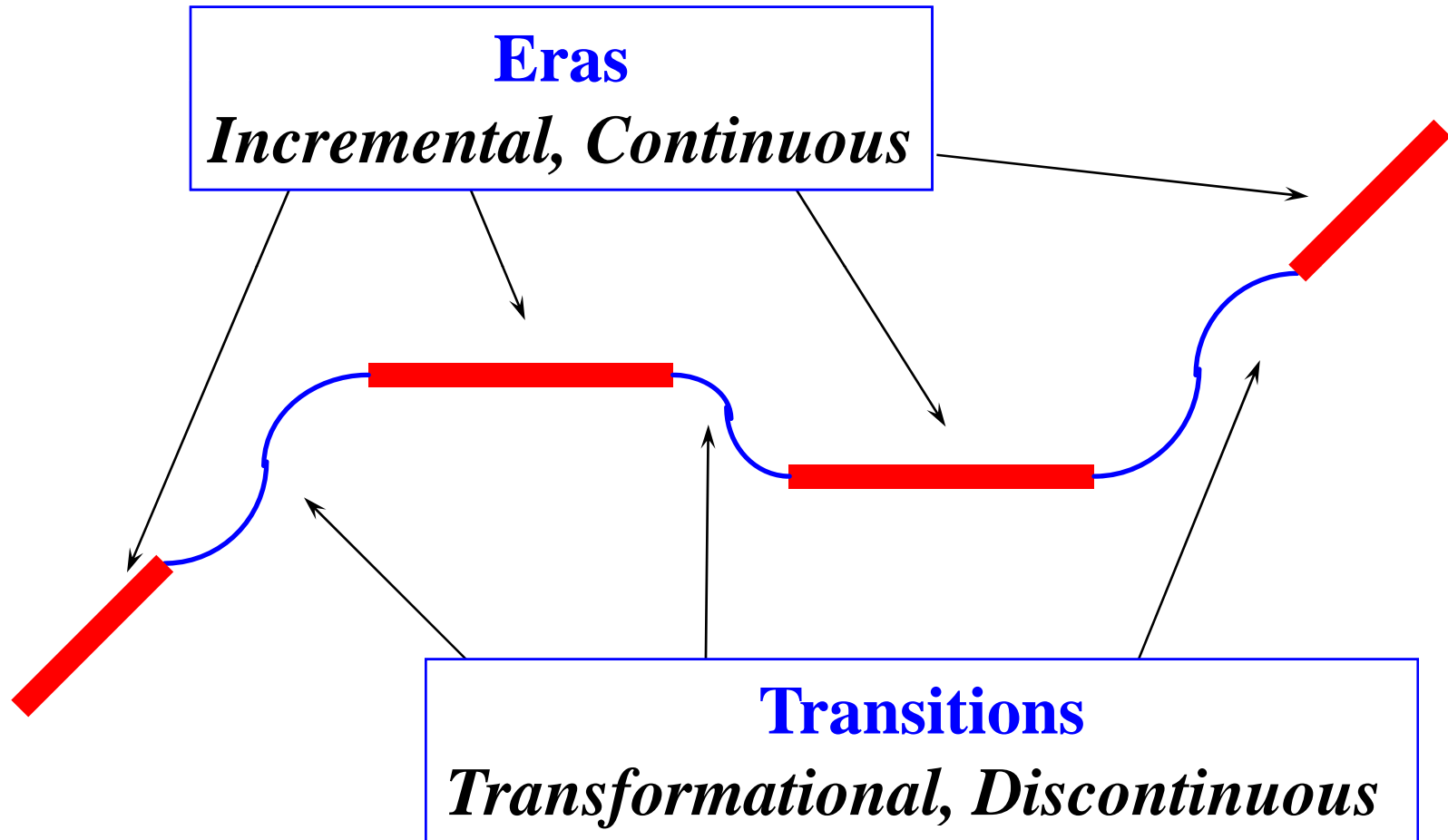
Eras in Information Technology



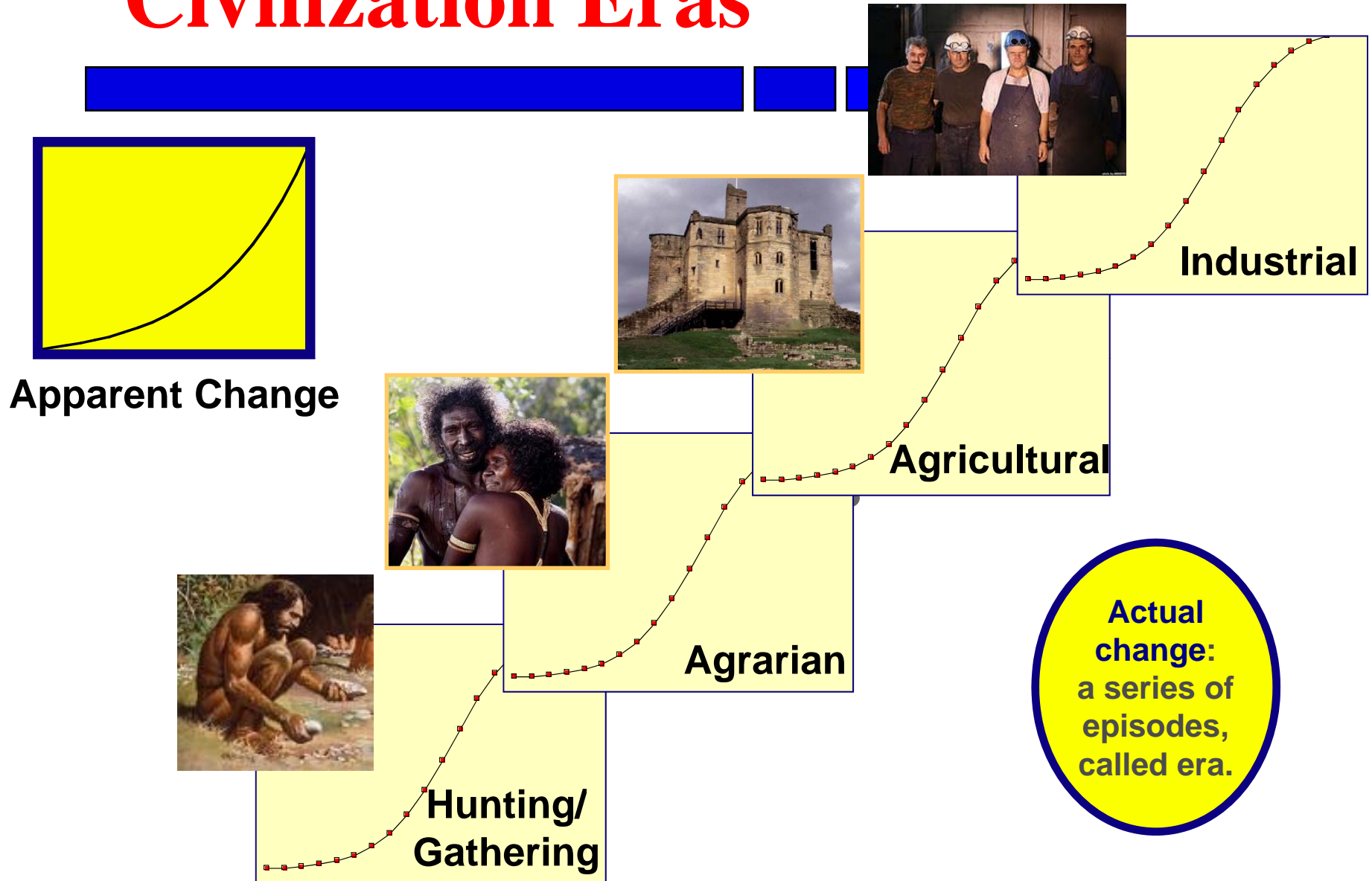


Source: <http://www.bsos.umd.edu/socy/vanneman/socy441/trends/divorce.jpg>

Punctuated Equilibrium



Civilization Eras



Energy Eras

Different types of society have different primary energy sources.



**Human/
somatic**



**Fire/
Tools**

Era 3



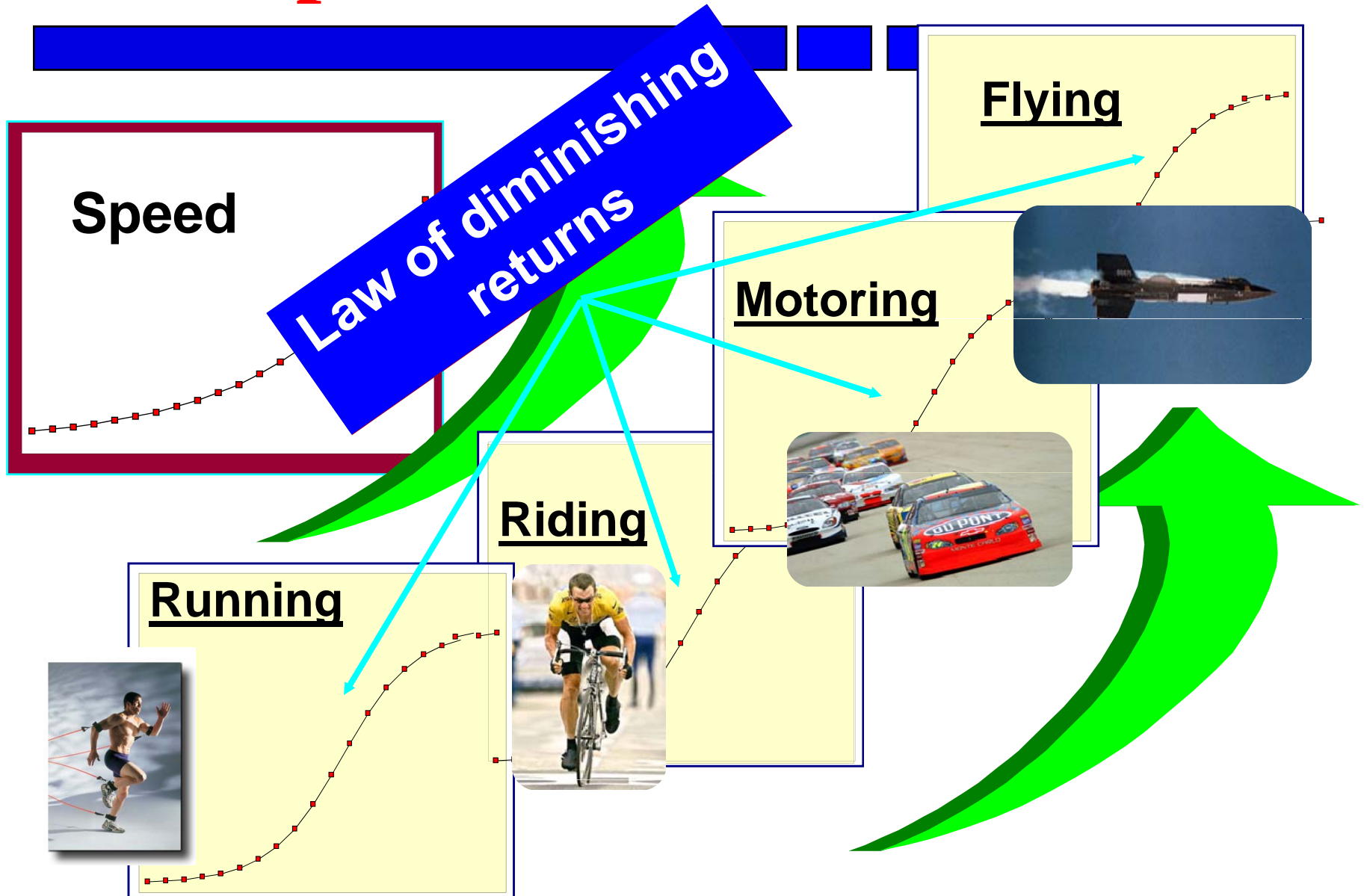
Animals



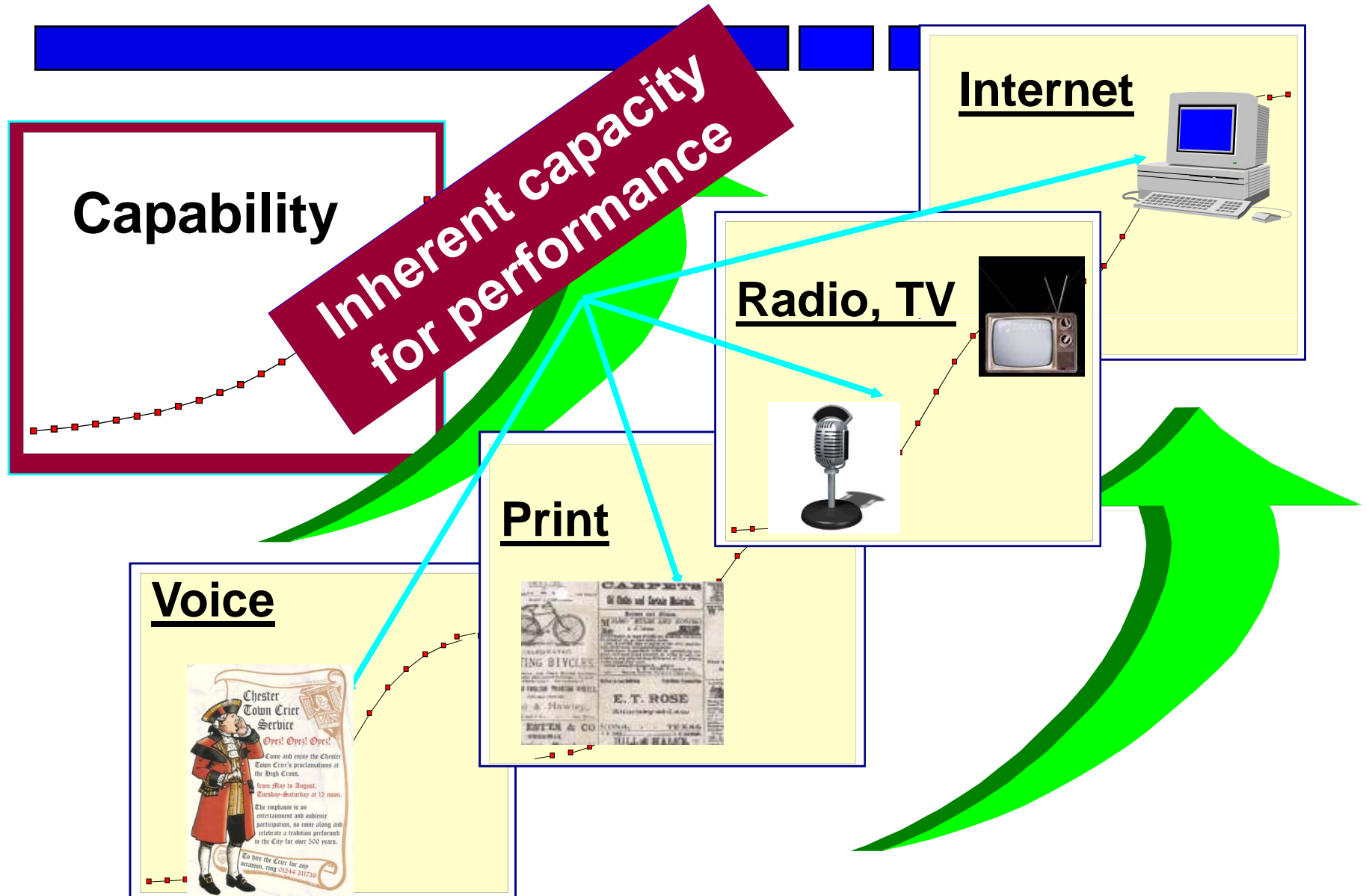
Fossils

The complexity of a society is a function of the energy it has.

Transportation Eras



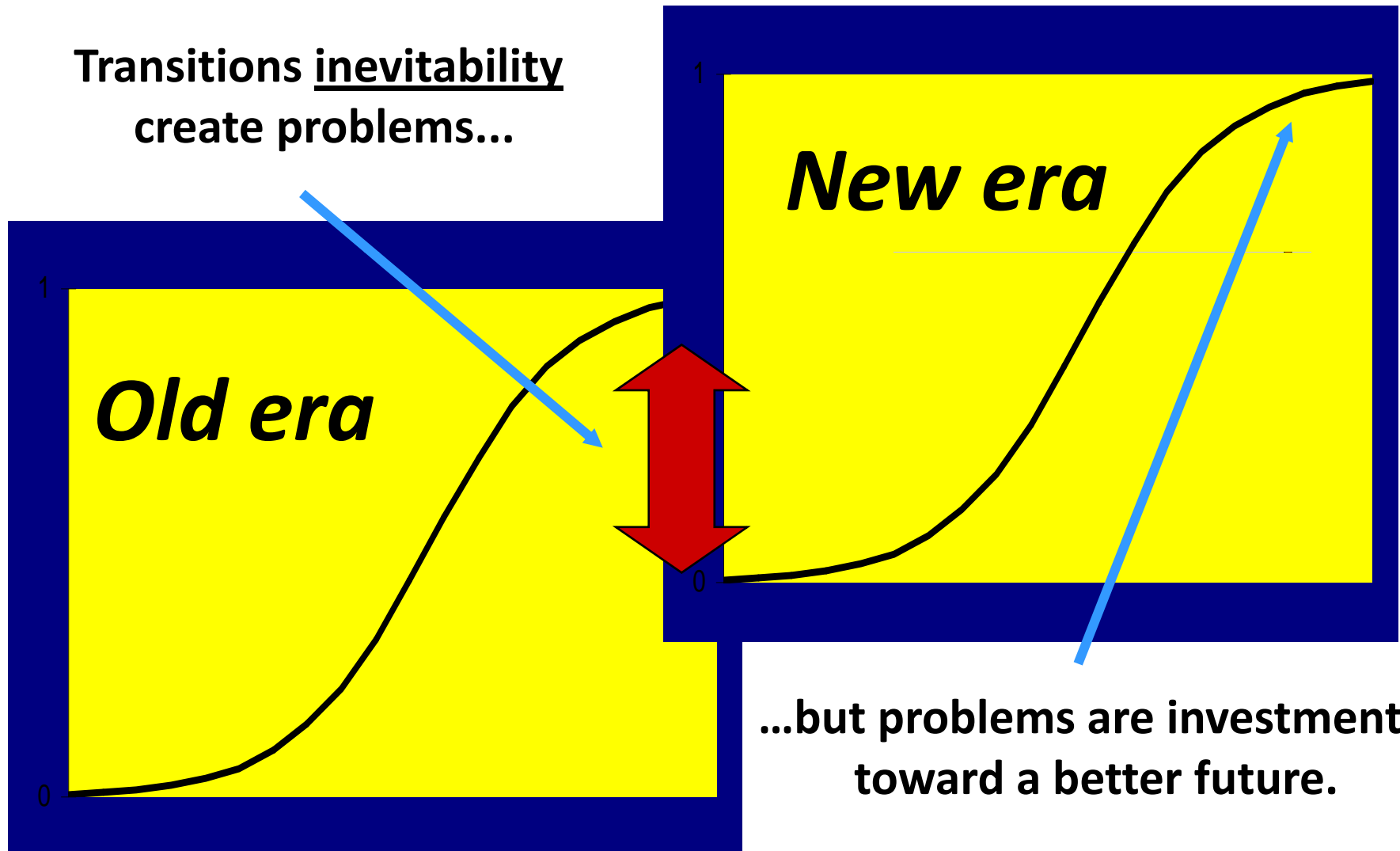
Communication Eras



The Gap



Transitions inevitability
create problems...



The Types of Change



Improvement

Substantive

solving problems

Procedural

altering procedures

Normative

changing attitudes

Cognitive

adjusting assumptions



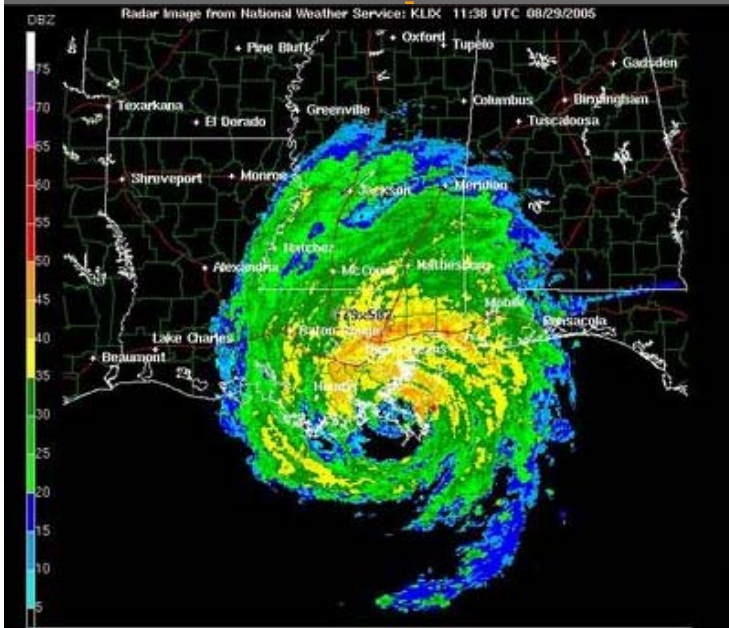
Transformation



Change and Stability



Nothing
changes
everything



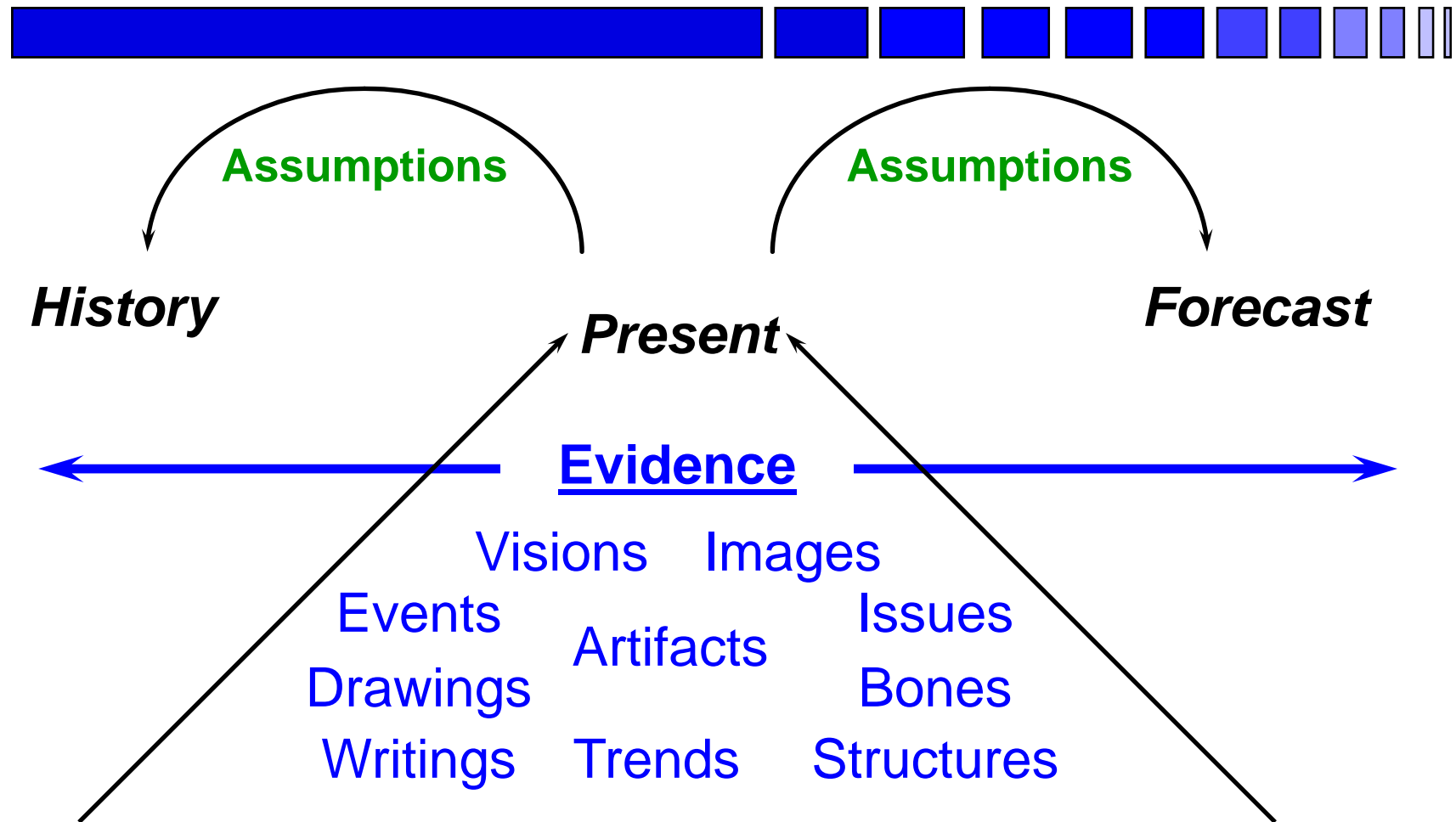
Strategic Forecasting

The Purpose of Forecasting



- Knowledge of a future state
 - single prediction or multiple possibilities
 - evidence and assumptions explicit or implicit
- Understanding the dynamics of change
 - general feel or specific causal relationships
 - general domain or focus on a specific issue
- Discovering assumptions about change in general or current conditions in particular
 - accept or challenge those assumptions

Knowing Different Times



The Language of Predictability



Indicative

Will

Must

Should

Doubt is an unpleasant state,
but certainty is a ridiculous one.

-- **Voltaire**, from Richards Heuer,
The Psychology of Intelligence Analysis

Past

Present

Future

Sources of Uncertainty



- Insufficient or incorrect *information*
- Insufficient or incorrect *understanding*



- Inherently *unpredictable* systems (chaos)
- Inherently *critical* systems
- Inherently *novel*, creative self-organizing systems
- Human *choice*



Making the call



Assumptions resolve uncertainty...
...but resolving uncertainty may not be
the right thing to do.

Resolve as much uncertainty as you can, but no more.

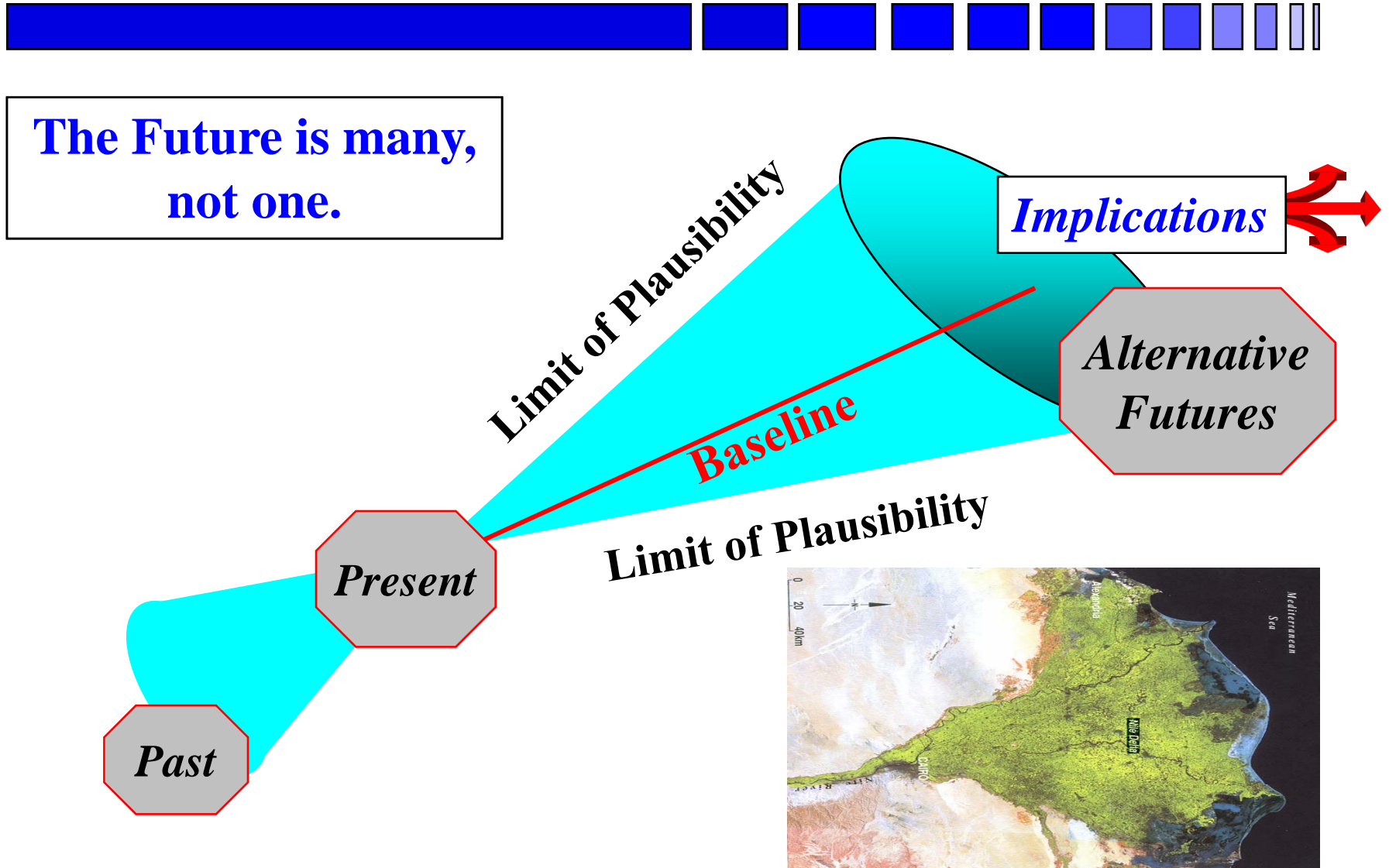


Katrina



Rita

The Cone of Plausibility



Source: Charles Taylor, Army War College

Two Types of Futures Thinking



| <u>Futures</u> | <u>Forces</u> | <u>Thinking</u> | <u>Techniques</u> |
|-----------------------------------|------------------------------|----------------------------|-------------------------------------|
| <i>Expected</i> (baseline) | Constants Trends | Definite Scientific | Historical analogy Extrapolation |
| <i>Plausible</i> (alternative) | Discontinuities Surprises | Speculative Imaginative | Scenarios Simulation |



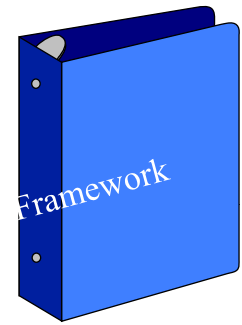
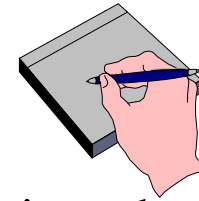
Scanning

The Two Phases of a Scanning Project



➤ Research

- establishes what the general consensus about the future is today
- traditional research activity
- consists of filling in a framework document
- acts as the active benchmark for scanning

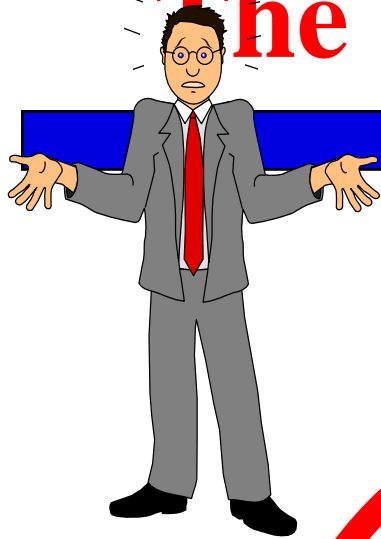


➤ Scanning

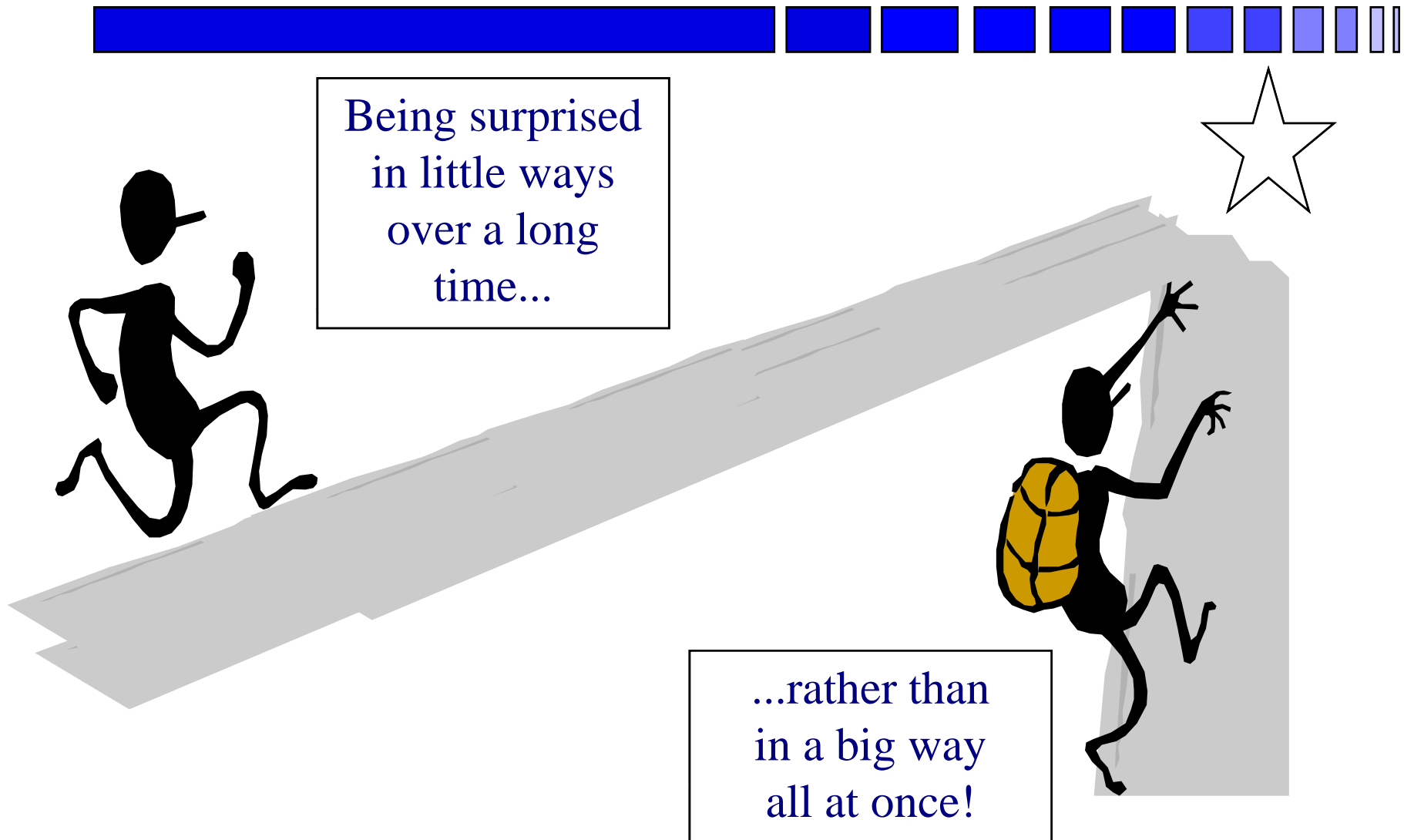
- identifies what has changed or could change since the last framework exercise
- must change something in the framework
- optimizes the twin criteria of novelty and impact/relevance
 - » novel hits tend to have longer term impacts
 - » more relevant hits tend to be shorter term
- update the framework periodically to incorporate all hits since the last time



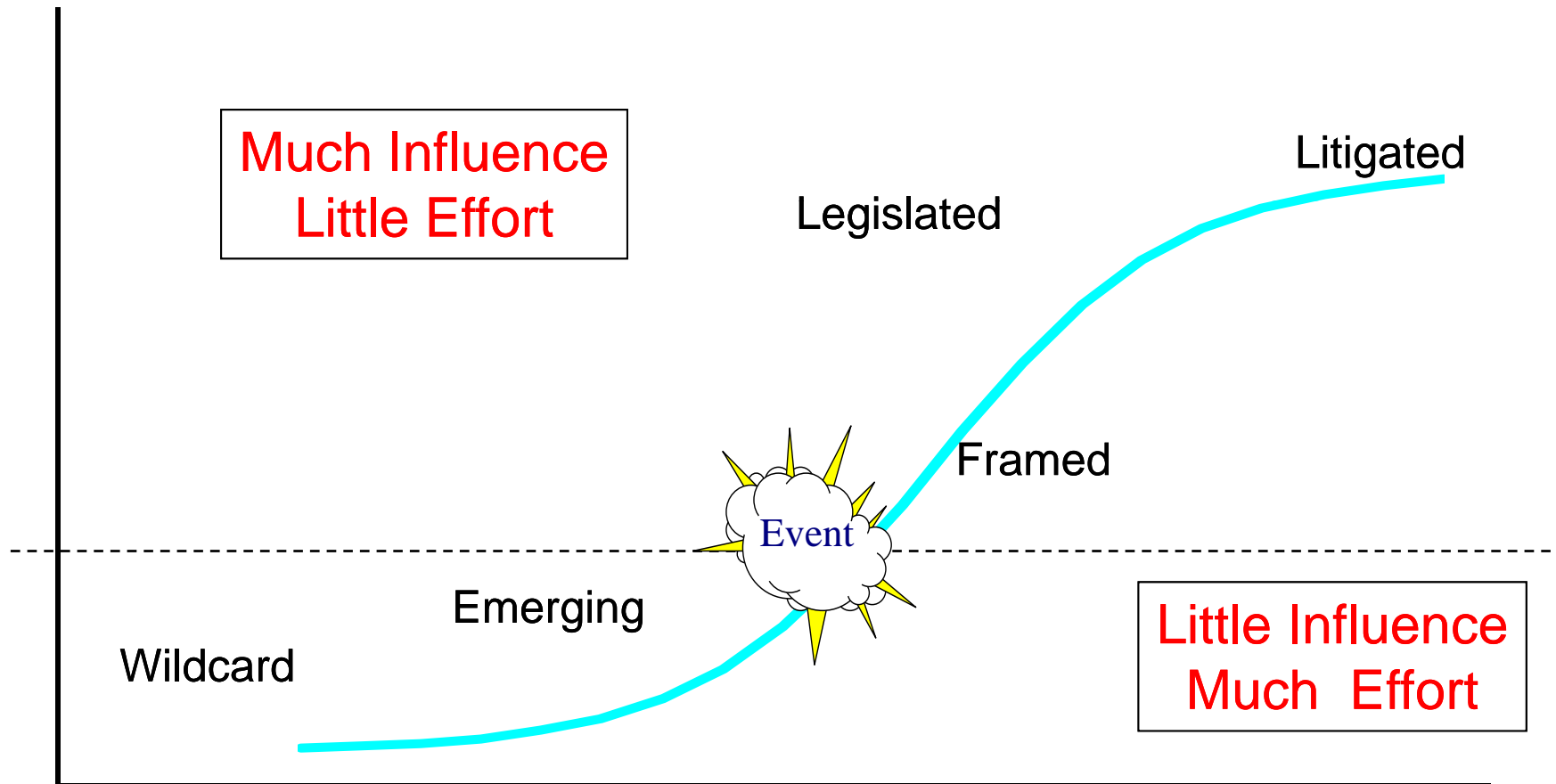
The Real Purpose of Scanning



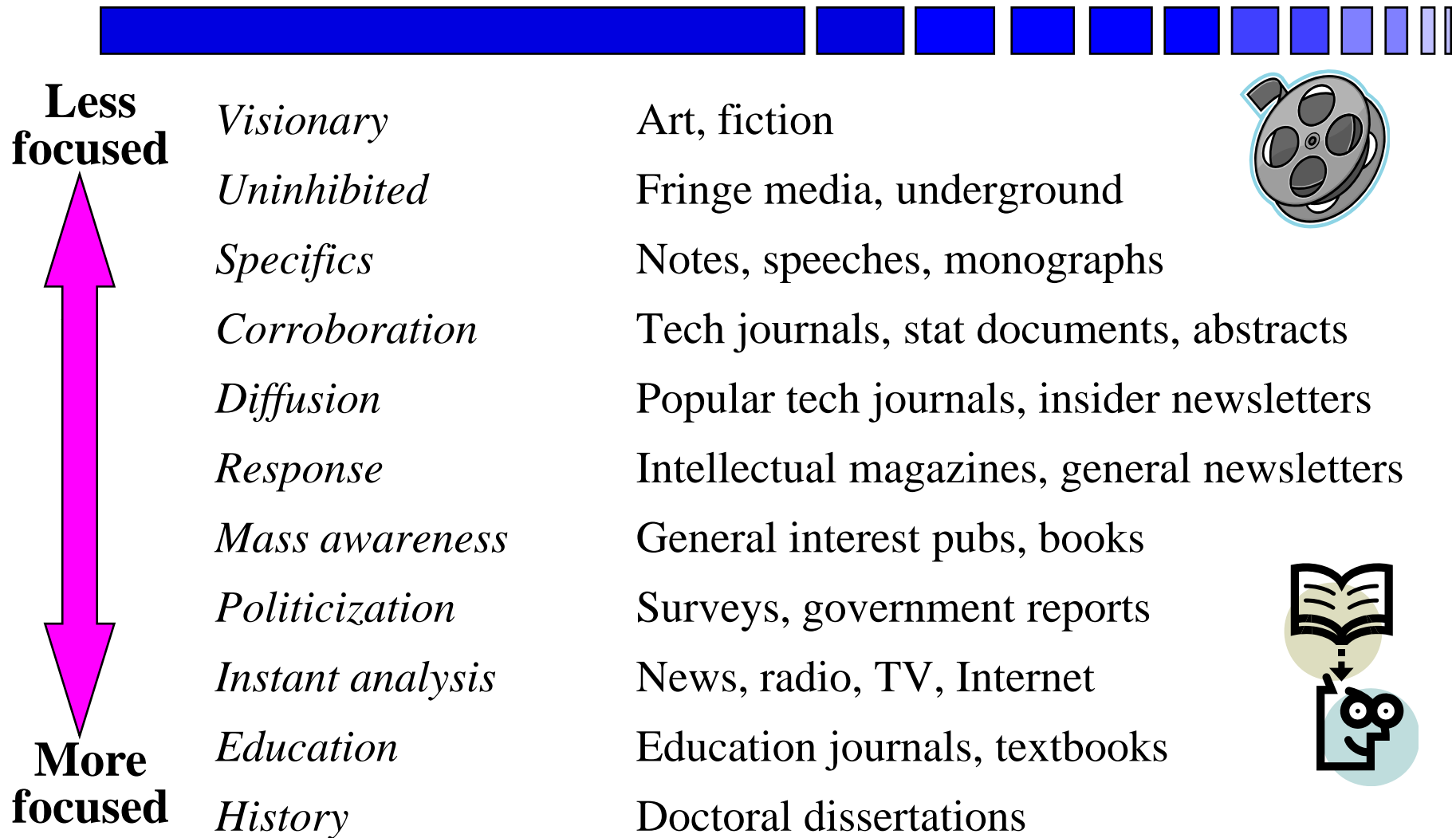
Two ways to the top



Issue Emergence



Data Sources

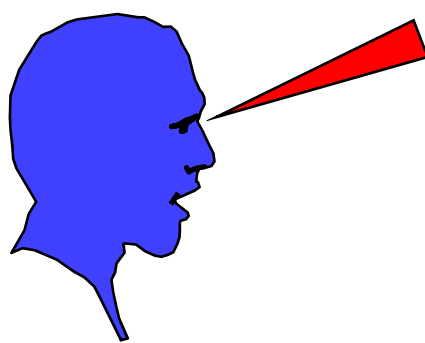


Source: G. Molitor,
Public Policy Forecasting, Inc.

Scanning hits

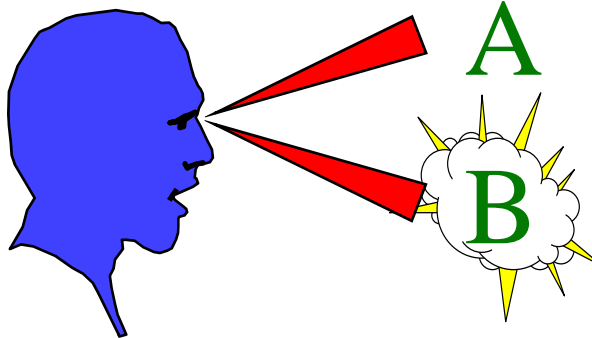


Changing our image of the future

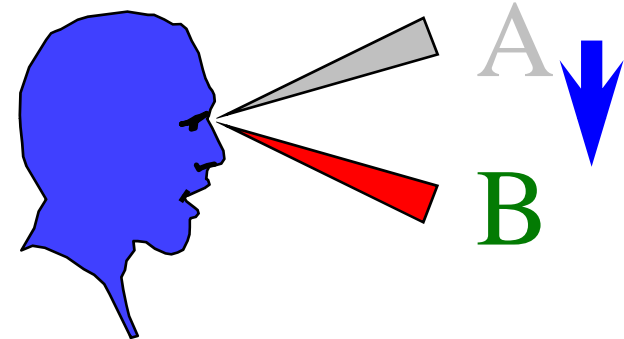


Confirming - 1

Being surprised
in little ways
over a long time



Creating - 5



Resolving - 3

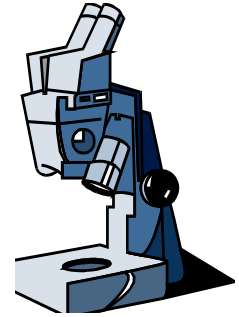
rather than
in a big way
all at once.

Criteria for a Good Scanning Hit



➤ **Credibility**

- Is the source reputable?
- Are there confirmations elsewhere?

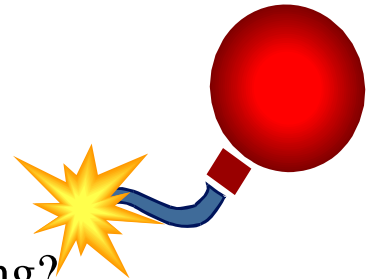


➤ **Novelty**

- Is the hit new? Or has it been widely reported?
- Is it new to the client/audience?

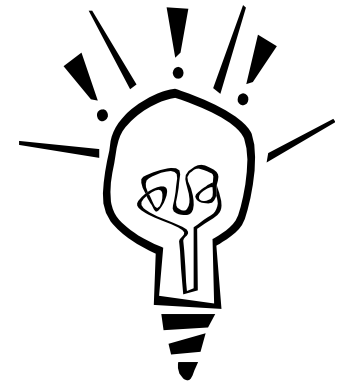
➤ **Likelihood**

- What are the chances that the hit will amount to something?
- Will it change the future?



➤ **Impact**

- If it does, how big a change will that be?
- Will it change the framework document?

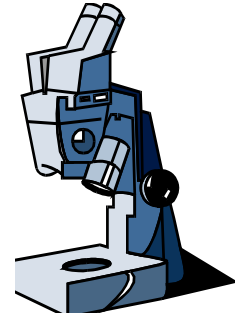


Criteria for a Good Scanning Hit



➤ **Relevance**

- How important is that change to the client or the domain?
- Is the relevance direct or indirect?

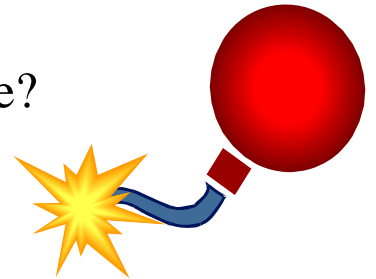


➤ **Timeliness 1** (time to awareness)

- How long before this information is widely known?
- When will it appear in a mainstream newspaper or magazine?

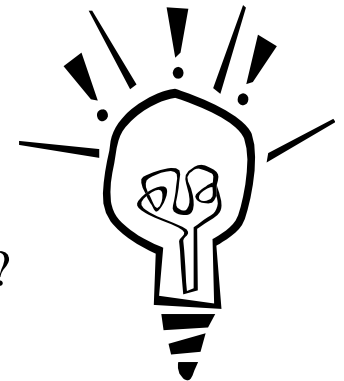
➤ **Timeliness 2** (time to prepare)

- How long before this hit begins to change the future?
- Is it too late to do anything about it?
- Is it so far off that action now would be premature?



➤ **Ability to influence**

- Can we do anything to prepare for or capitalize on this future?



For Additional Information



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