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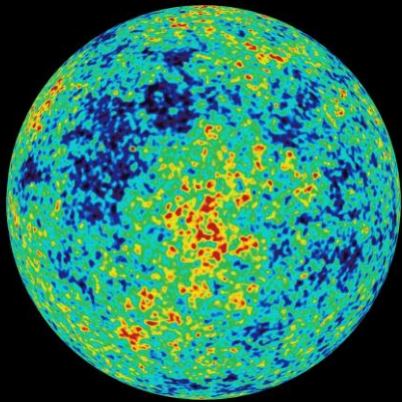
# ***Profiling 'Threshold 9'***

***Using Big History as a Framework for Thinking  
about the Contours of the Coming Global Future***



# *Big History*

seeks to understand, in a unified inter-disciplinary way, the integrated history of the



*Cosmos*



*Earth*



*Life*



*Humanity*

using the best available empirical evidence  
and scholarly methods

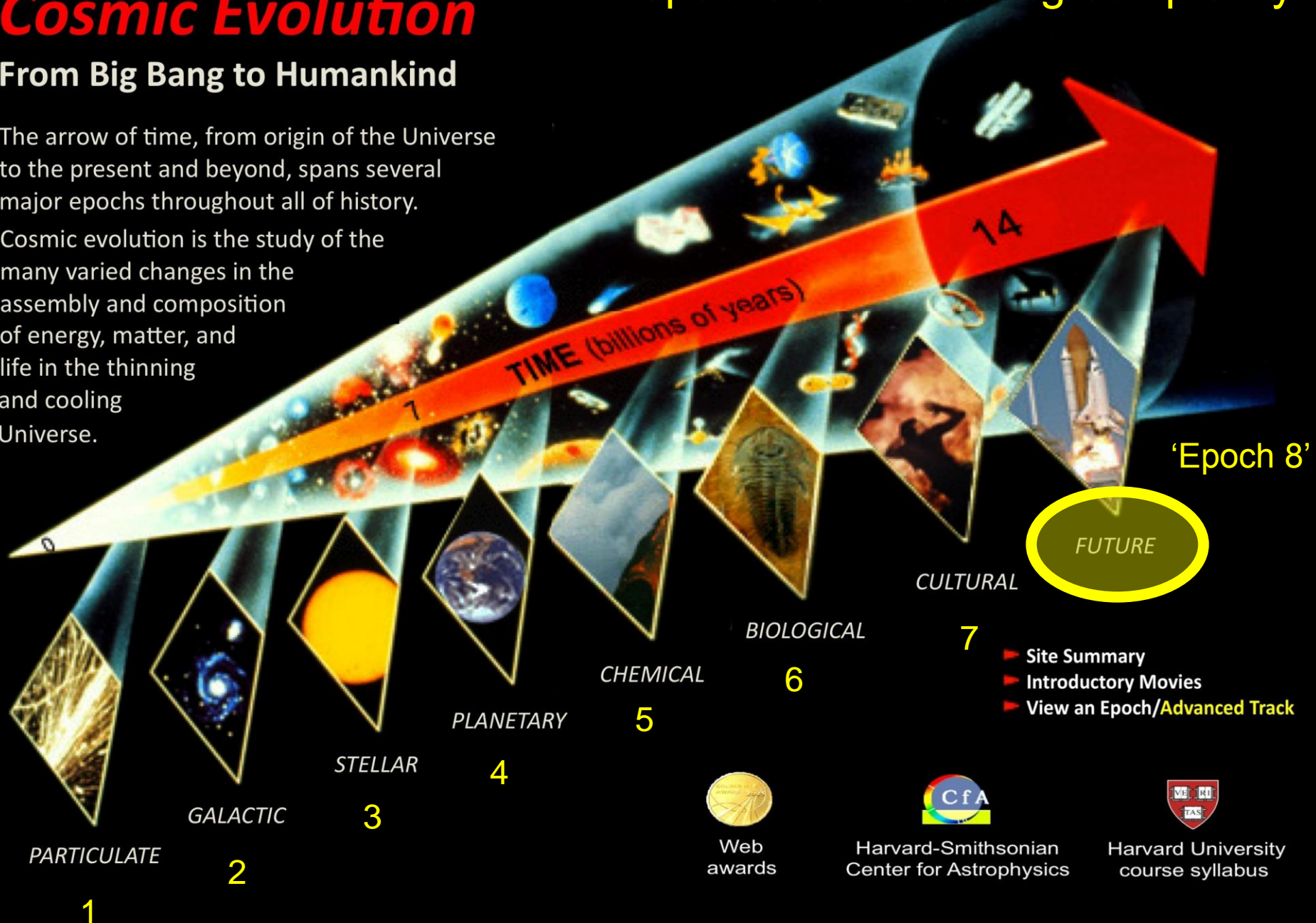
# Cosmic Evolution

7 'epochs' of increasing complexity

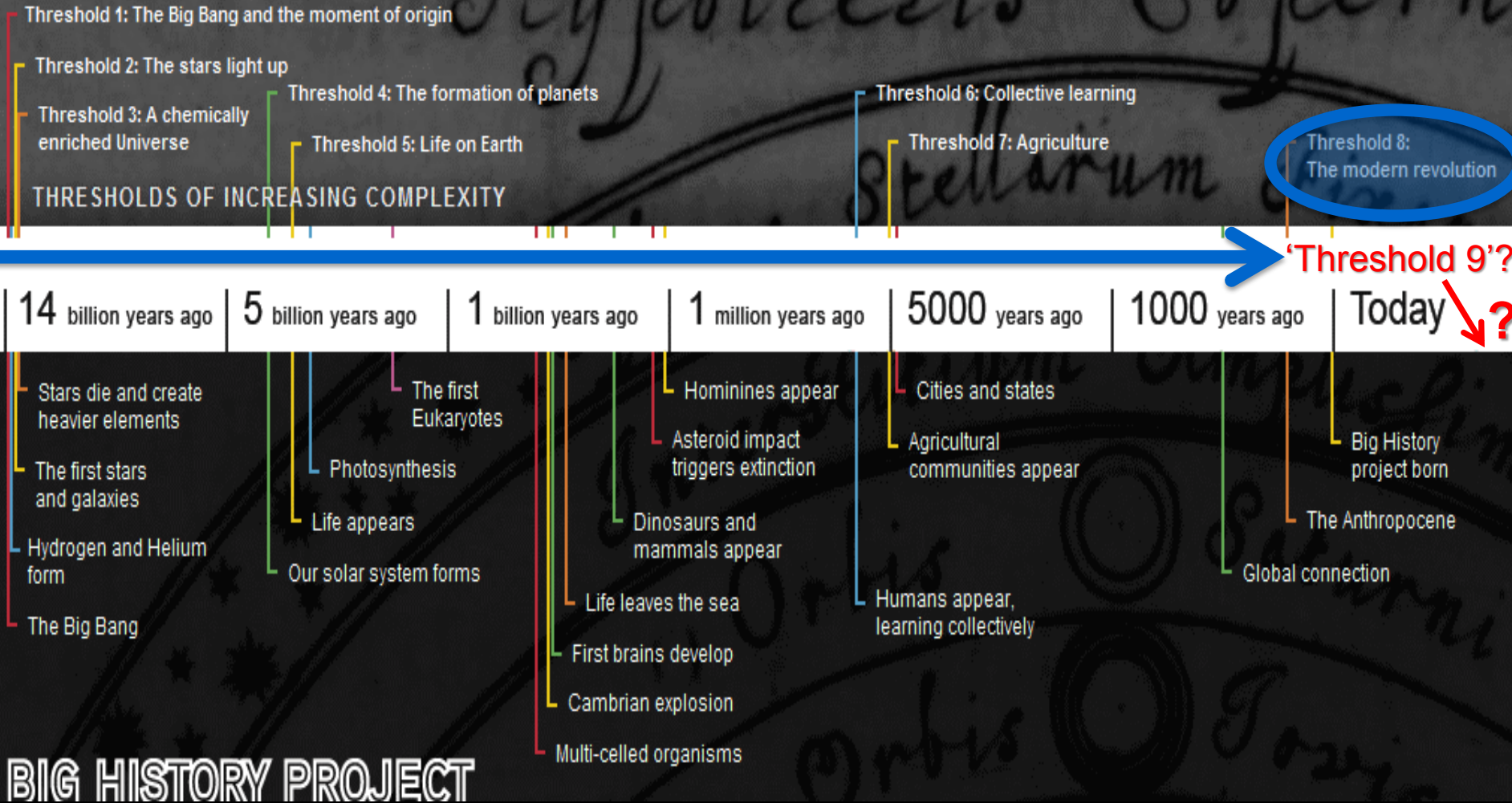
## From Big Bang to Humankind

The arrow of time, from origin of the Universe to the present and beyond, spans several major epochs throughout all of history.

Cosmic evolution is the study of the many varied changes in the assembly and composition of energy, matter, and life in the thinning and cooling Universe.



# 8 'thresholds' of increasing (material-energetic) complexity



Contemplating 'Epoch 8' – The future....

We are currently living in a  
'fossil-fuelled civilisation' (Vaclav Smil)

So, of course, as a futurist, I like to ask the question:

Contemplating 'Epoch 8' – The future....

What comes *after*  
'fossil-fuelled civilisation' ?



## Contemplating 'Epoch 8' – The future....

### 'Profiling Threshold 9'

→ the (future) historical transition when fossil-fuels are no longer the primary energy source powering human societies ...

Oil is finite, so it will eventually become scarcer...

This fact puts current argumentation about whether 'peak oil' is or is not imminent into a *Big-Historical timeframe* and context...

What 'images' of the future exist to 'contour' our thinking?



# Dator's 4 futures archetypes

Swinburne

Continuation



Collapse



Disciplined Society



Transformational Society



## Continuation



### **Continuation** –

current historical trajectory continues on as it has been;  
most usually conceived of as '*continued economic growth*'

## Collapse



**Collapse** – breakdown of the social order due to one or more of a number of possible causes, such as: economic instability, environmental overload, resource depletion, moral degeneration, military conflict such as an external attack or internal civil war, meteor/comet impact, etc;

**Disciplined Society** – a society organized around some set of over-arching values, whether ancient, traditional, ideological, natural, environmental, God-given, etc...

Disciplined Society



**Transformational Society** – sees the end of current forms of behaviour, beliefs, norms, or organization, and the emergence of new forms (rather than a return to older or traditional ones), possibly even including intelligent life-forms.

Two main sub-variants:  
'high-tech' (technological) &  
'high-spirit' (spiritual or  
consciousness)  
transformation.

Transformational Society



Continuation



Collapse



Disciplined



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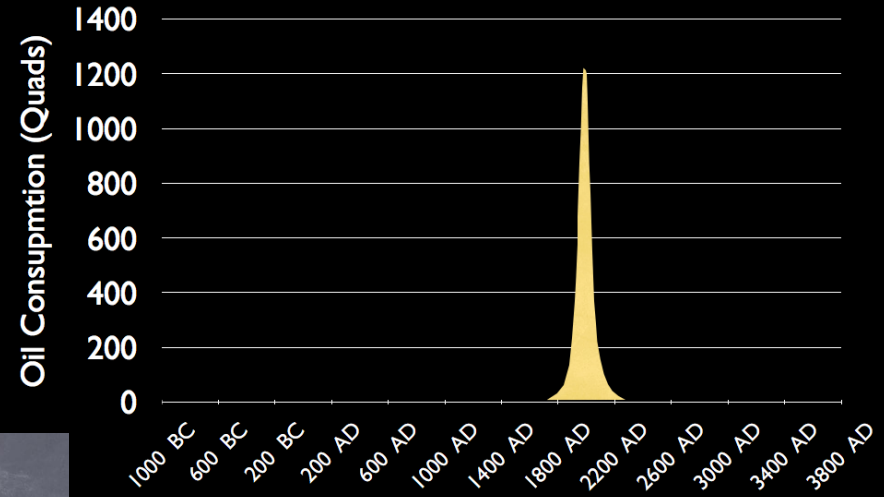


Society

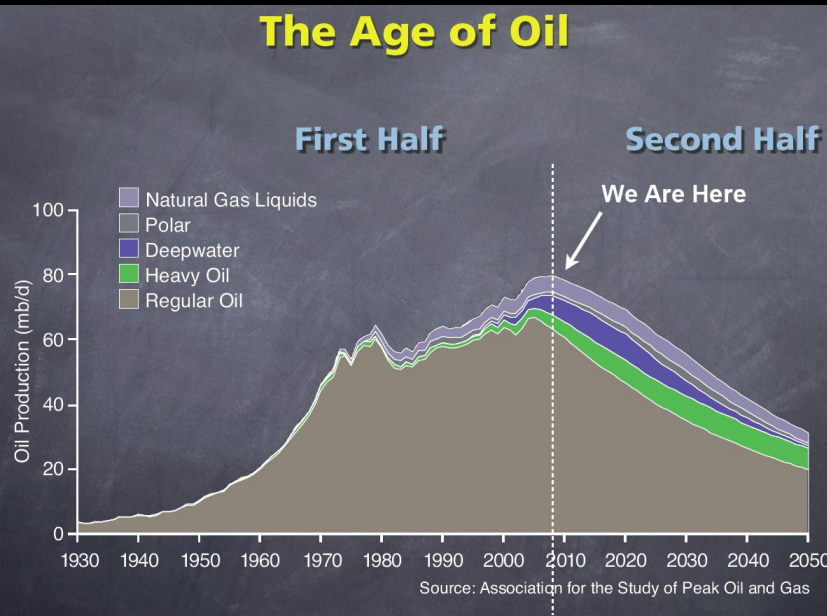




## Peak Oil – The Big Picture

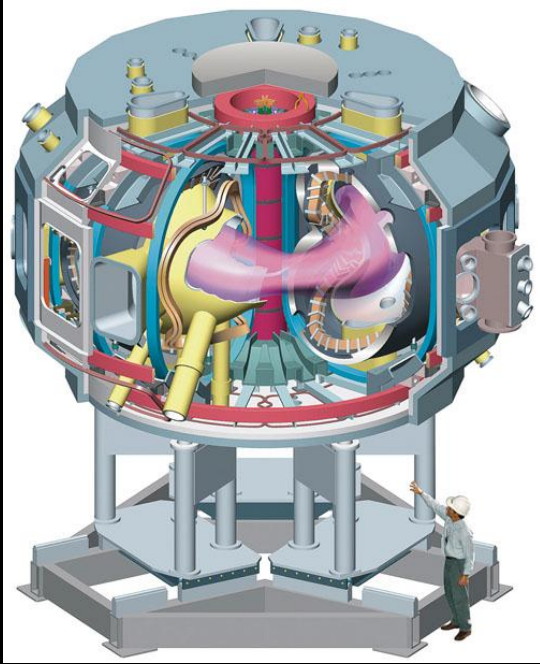


### The Age of Oil



It will take ~100 million years to renew the fossil fuels we have used.

Not a practical timeframe.



Energy Bonanza  
Spiritual Awakening  
Brain/Mind Upload  
'Childhood's End'







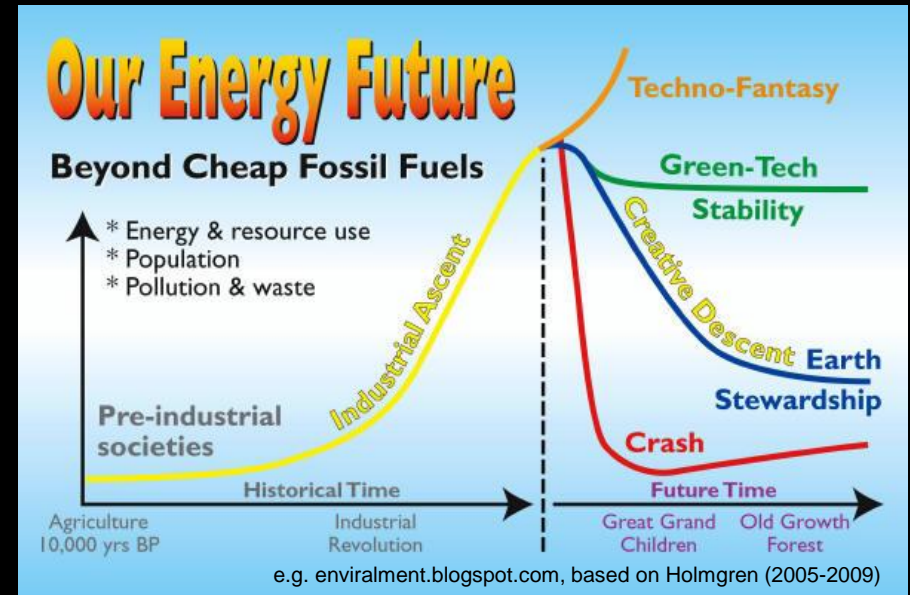
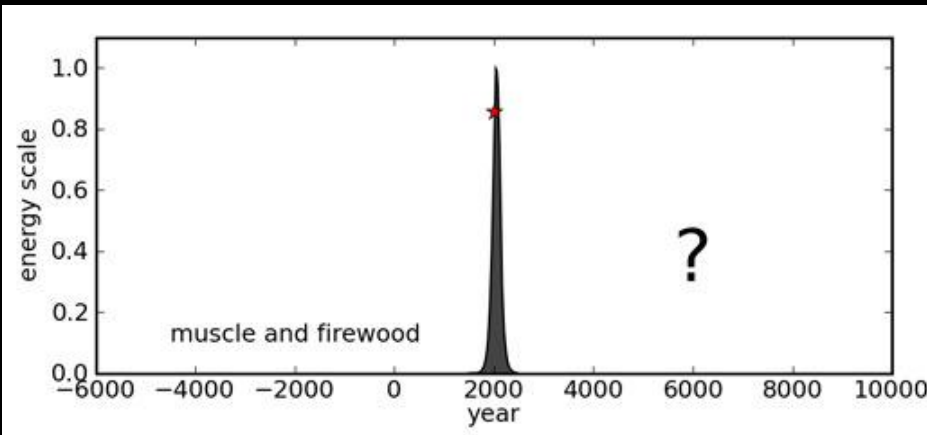
These remain possibilities – but there is no ‘society’ left to power.

We see previous historical “collapses” from a very foreshortened perspective; timeframes ~ decades to centuries (e.g. Tainter, Diamond)

The term “collapse” connotes a rapidness that may not be useful as a mental model for seriously considering our medium-term future

A better term for this is  
“descent”





A “Long Descent” to a ...

Disciplined Society



Holmgren – *Future Scenarios*  
 Heinberg – *Peak Everything*  
 Smil – *Energy Transitions*  
 Greer – Long Descent / Ecotechnic Future  
 (Concept of *Catabolic Collapse*)

- *Abundance Industrialism*
- *Scarcity Industrialism*
- *Salvage Economics*
- *Eco-technic Age (~ 1-3 centuries)*



## Insights by analogy from other Thresholds? – *Threshold 6*

### Agriculture

- Paleolithic era → 'extensification' (foraging for food energy)
- ran out of 'range' space → 'intensification' *in situ*
- → agriculture (farming food)

### Energy

- Modern era → extensification (foraging for fossil-fuel energy)
- running out of f-f deposits → ~intensification *in situ*
- → energy farming now starting to happen

*What ideas for potential insights (if any) might be drawn from this (rather rough) analogy?*

## Insights by analogy from other Thresholds? – *Threshold 8*

### Modern Era

- → discovery & use of 'ancient fossilised energy'
- → geographical concentration of people
- Geopolitical advantages to those countries that had these reserves
- eg, OPEC

### Energy

- are there any other kinds of 'ancient fossilised energy'?
- → Geothermal
- Geog<sup>l</sup> conc<sup>n</sup> of people?
- Any geopolitical advantages to countries with easy access?
- eg, an 'OGAC'?

*What ideas for potential insights (if any) might be drawn from this (rather rough) analogy?*

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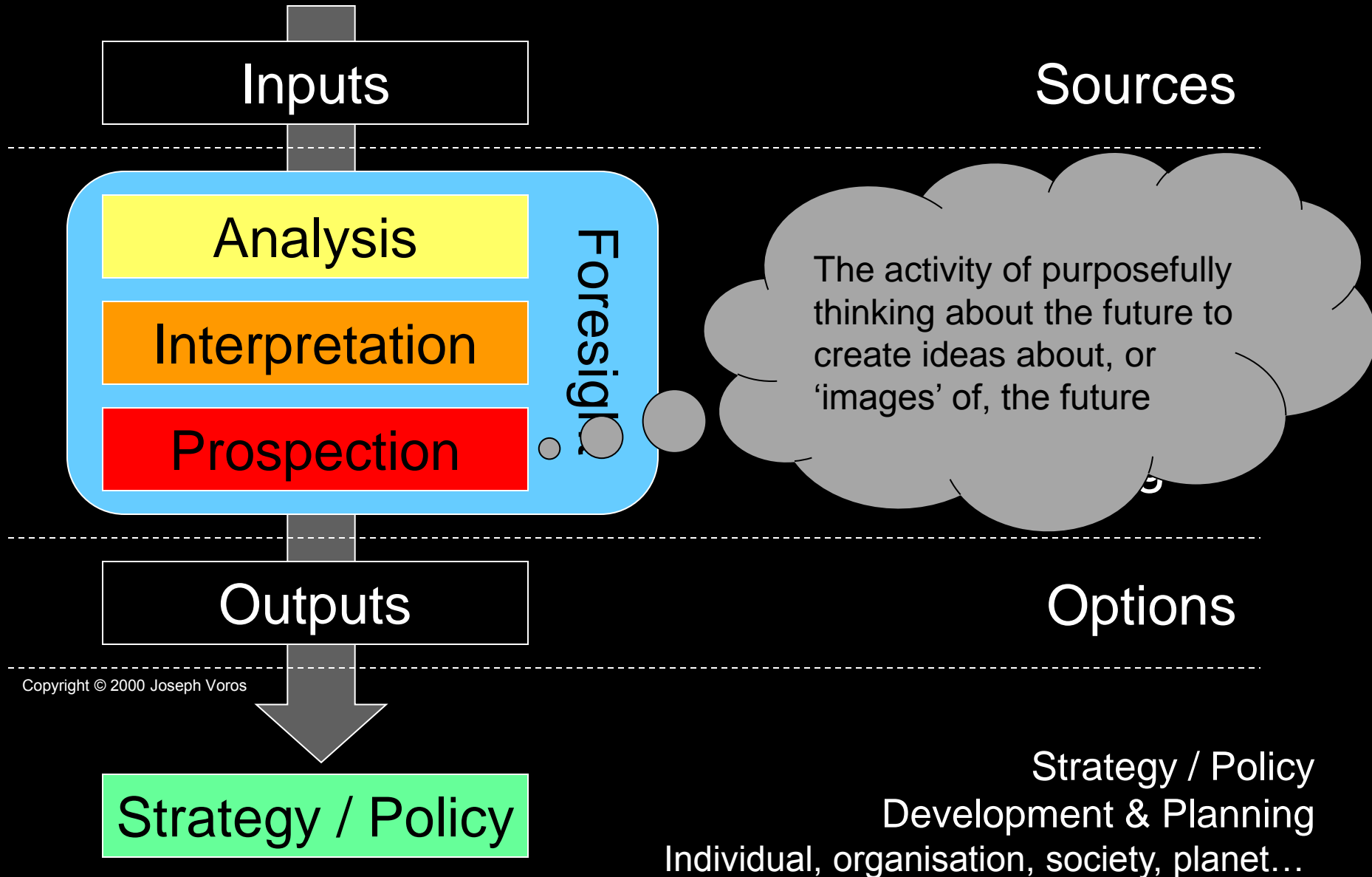
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Thank you

Questions / Discussion

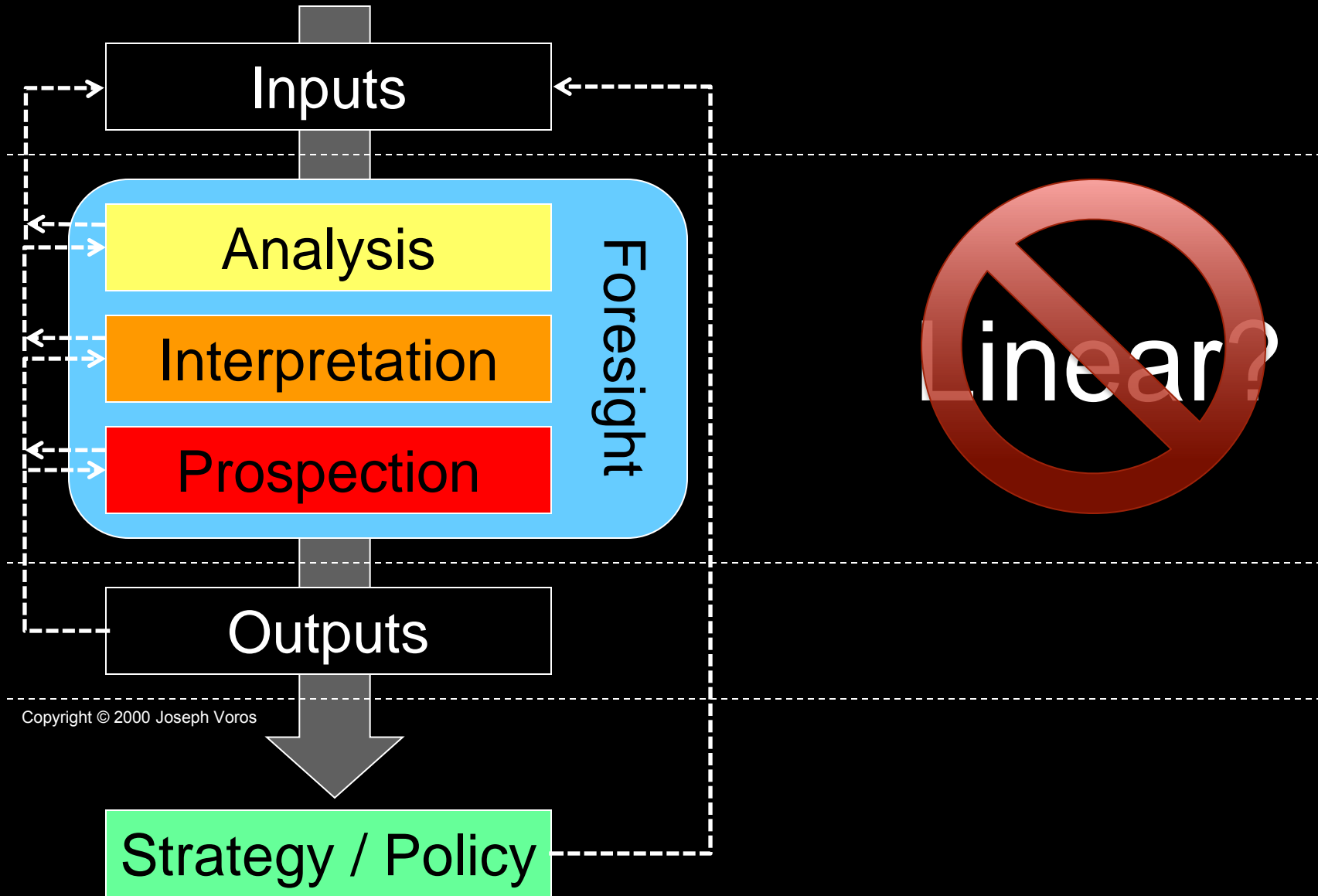
# The generic foresight process

Swinburne





# The generic foresight process

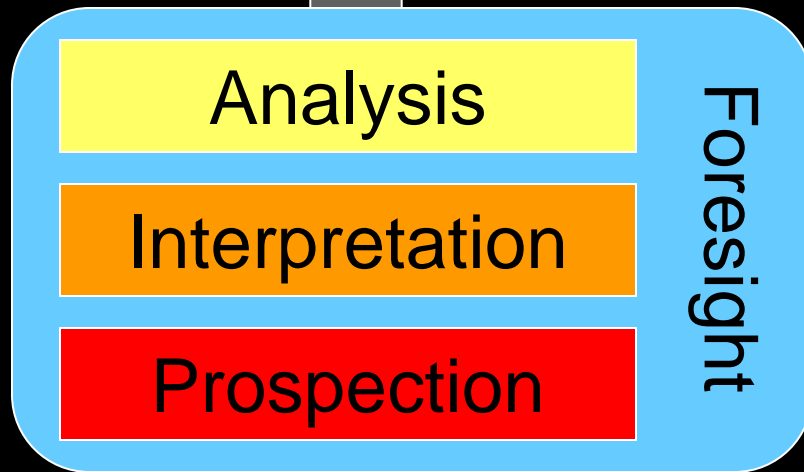


# Example Methods

Swinburne

Inputs

Delphi, Environmental Scanning  
Desk-based & Internet research



Emerging Issues  
Trends, Cross-impact

Systems Thinking  
Layered Analysis

Scenarios, Visioning  
Normative methods, Backcasts

Outputs

Reports, Presentations  
Workshops, Multimedia

Inputs

Sources

Analysis

Categories

Interpretation

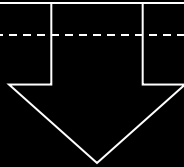
Frameworks

Prospection

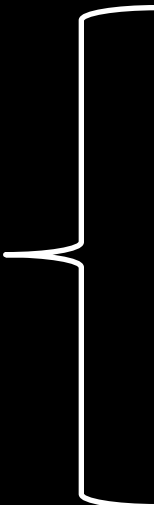
'Images'

Outputs

Options



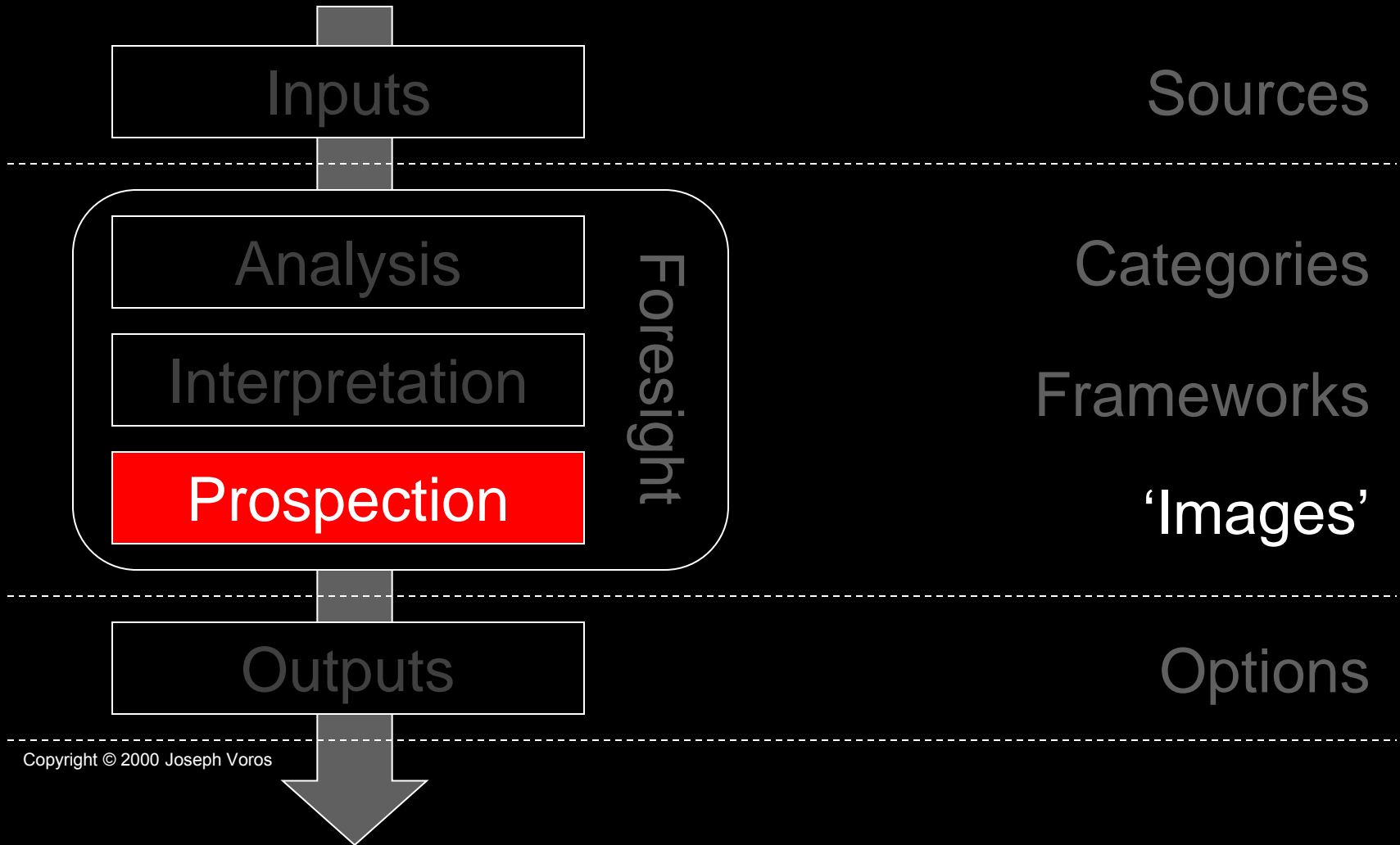
<b>event</b>	discrete events & occurrences
<b>trend</b>	patterns, trends, 'pop futurism'
<b>system</b>	system drivers, social causes, policy analysis
<b>worldview</b>	mental models, discourses, perspectives
	myths, metaphors, symbols, images
	intelligences, modes, structures of consciousness
<b>historical</b>	social change & related factors & forces
	historical & macro-historical factors & forces



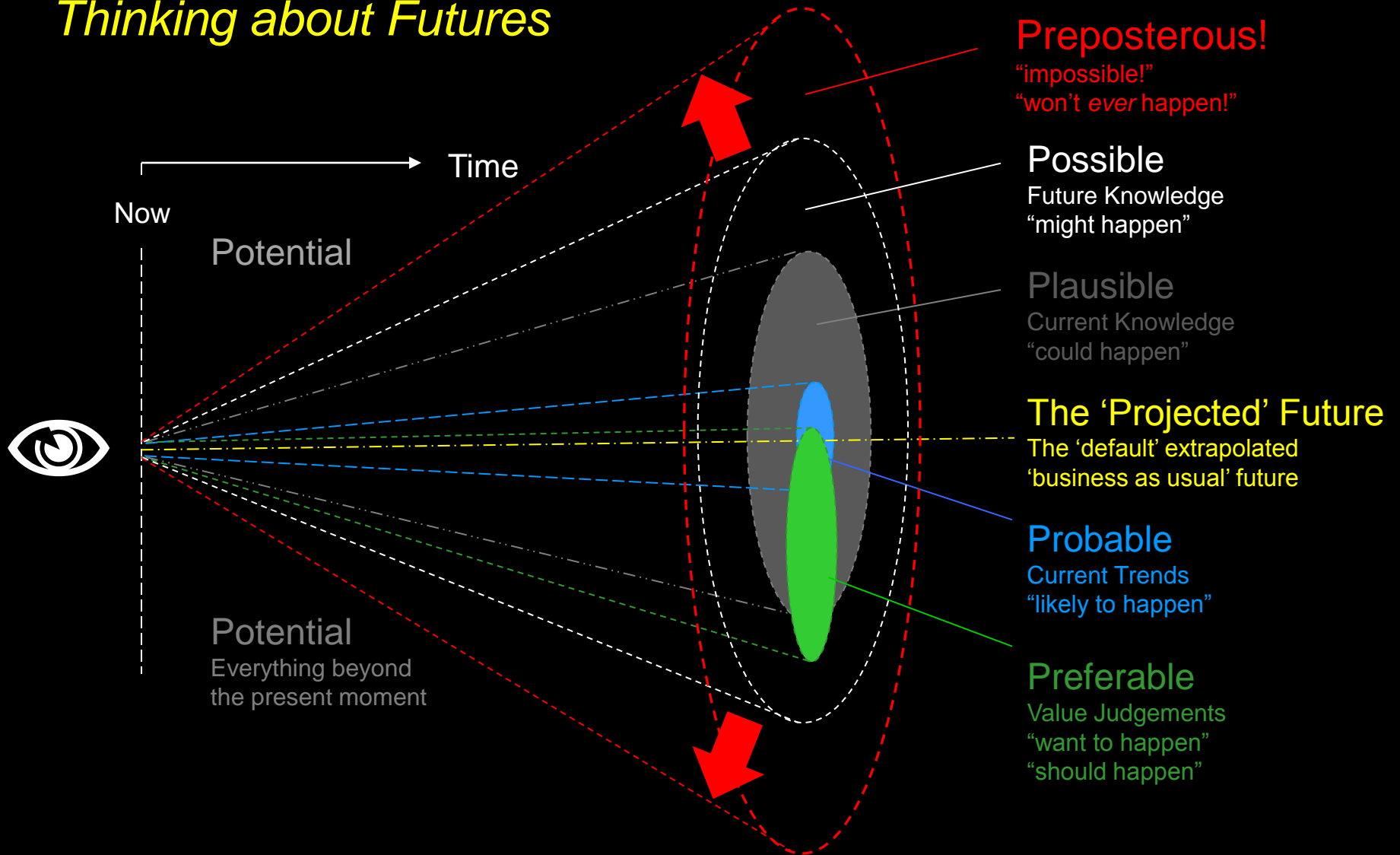
**Big History**

**Astrobiology**

**Cosmic Evolution**



# Thinking about Futures



## *Expanding the Mind's Eye...*

### **“Clarke’s 2<sup>nd</sup> Law”**

The only way of finding the limits of the possible is by going beyond them into the impossible

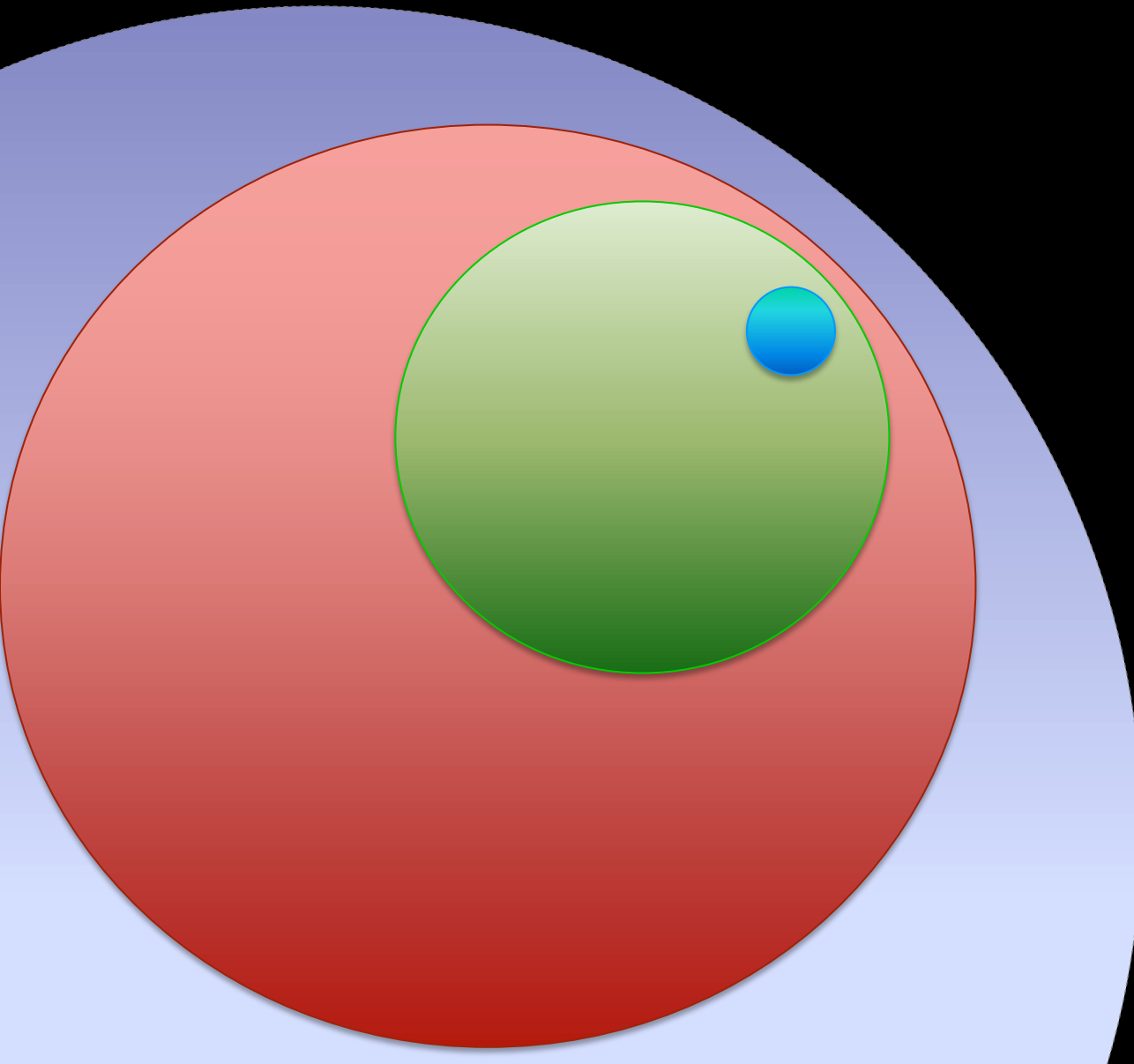
### **“Dator’s 2<sup>nd</sup> Law of the Future”**

Any useful idea about the future should appear ridiculous

Otherwise they’re not ‘new enough’

**But...**

This is only a *necessary* condition, it is not a *sufficient* condition



Big History

Astrobiology (& SETI)

Cosmic Evolution

Multiverse?





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Thank you

Questions / Discussion

