



**First International Symposium of
UNESCO Chairs in Anticipatory Systems,
Futures Studies and Futures Literacy**

June 19 - 20, 2019

Department of Sociology and Social Research
Via Verdi 26, 38122 Trento - Kessler Room



Con il patrocinio della
Commissione Nazionale Italiana
per l'UNESCO
Organizzazione delle Nazioni Unite per l'Educazione, la Scienza e la Cultura

 **UNESCO Chair**
in Anticipatory Systems
United Nations Educational, Scientific and Cultural Organization

 **UNIVERSITY OF TRENTO - Italy**
Department of Sociology and Social Research

**The Coming
Civilisational Transition:**

Profiling the Implications for
Energy, Economy, Environment,
Politics, Society, and Culture

Dr Joseph Voros

Swinburne Business School
Swinburne University of Technology
Melbourne, Australia

June 20, 02019

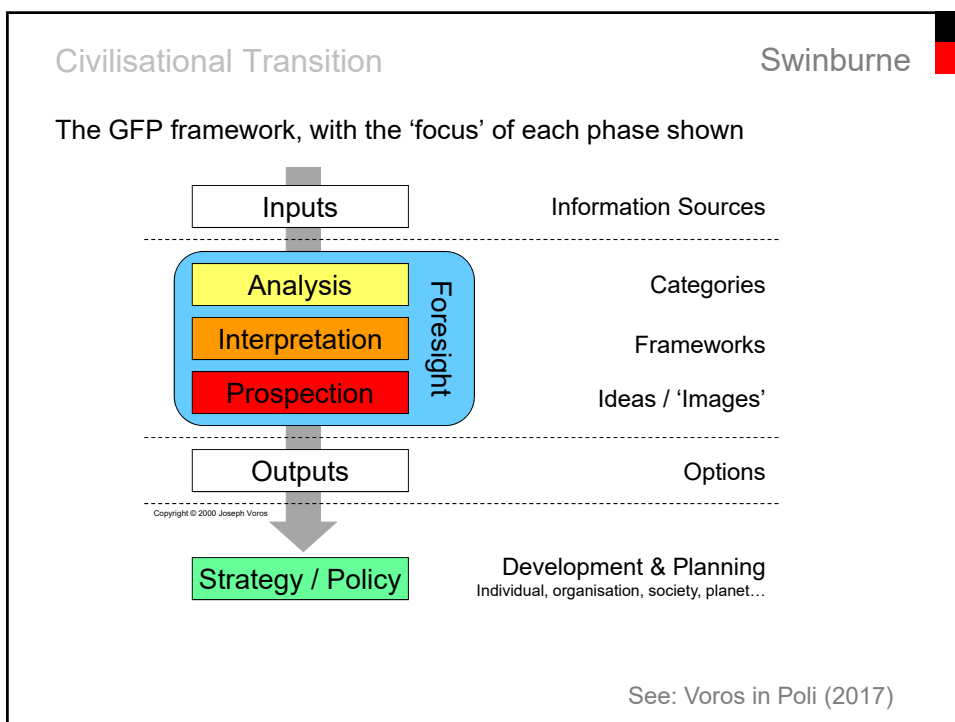
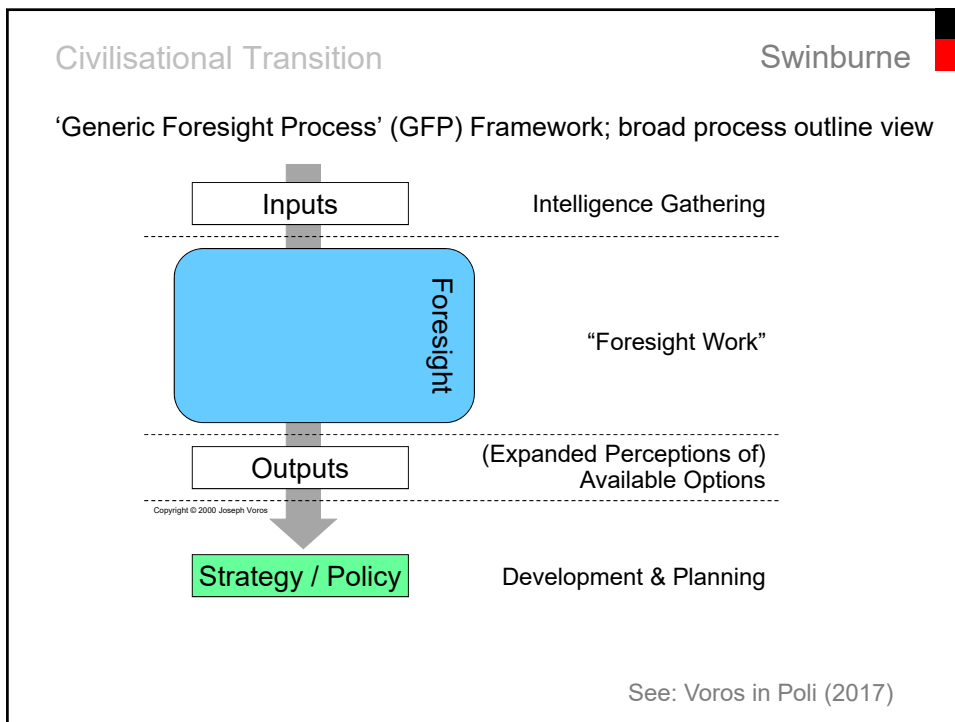
The basic idea:

- **“Fossil-fuelled civilisation” will (sooner-or-later) have to *transition*** to whatever comes *after* fossil-fuelled civilisation
 - The flow-on effects of a change in energy system will affect human systems and all other activities that depend on them
- What form(s) this transition could take can be ‘profiled’ as a form of ‘civilisation-scale (Scharmer’s “mondo”) anticipation’
- What model(s) might be useful for this ‘profiling’? There are many, of course. I will use only a couple here to illustrate the general technique (which is *highly* customisable):
 - **The generic foresight process (GFP) framework**
 - ‘Big History’ – energy flows through complex systems
 - Arnold Toynbee – civilisational-scale ‘challenge & response’

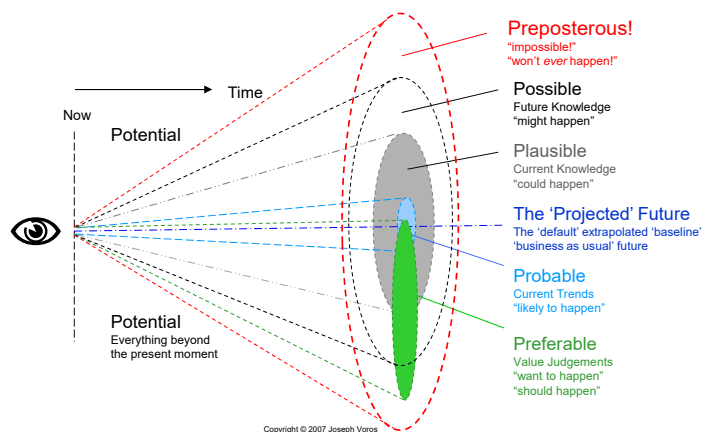
Types of Foresight*

- **Pragmatic** – compete within industry; new markets, challenges, competitors, etc
- **Progressive** – re-define / transform industry; sustainability
- **Civilisational** – re-conceptualise human activities; transform human society; take a global view
 - “*Civilisational Challenge*” of the early 21st century

* From the work of Richard Slaughter



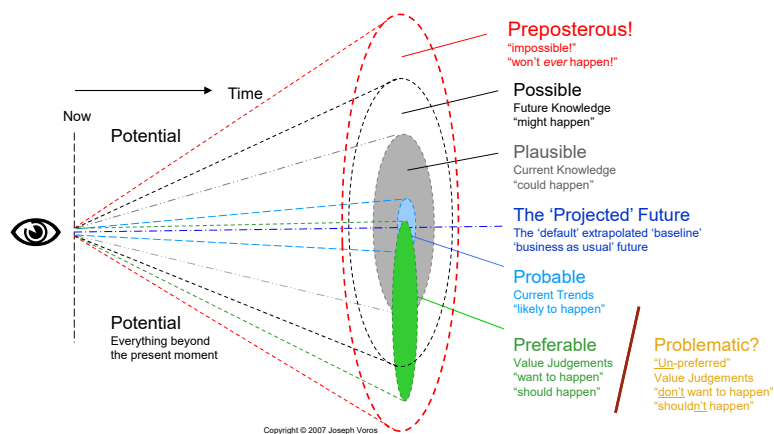
Types of Alternative Futures



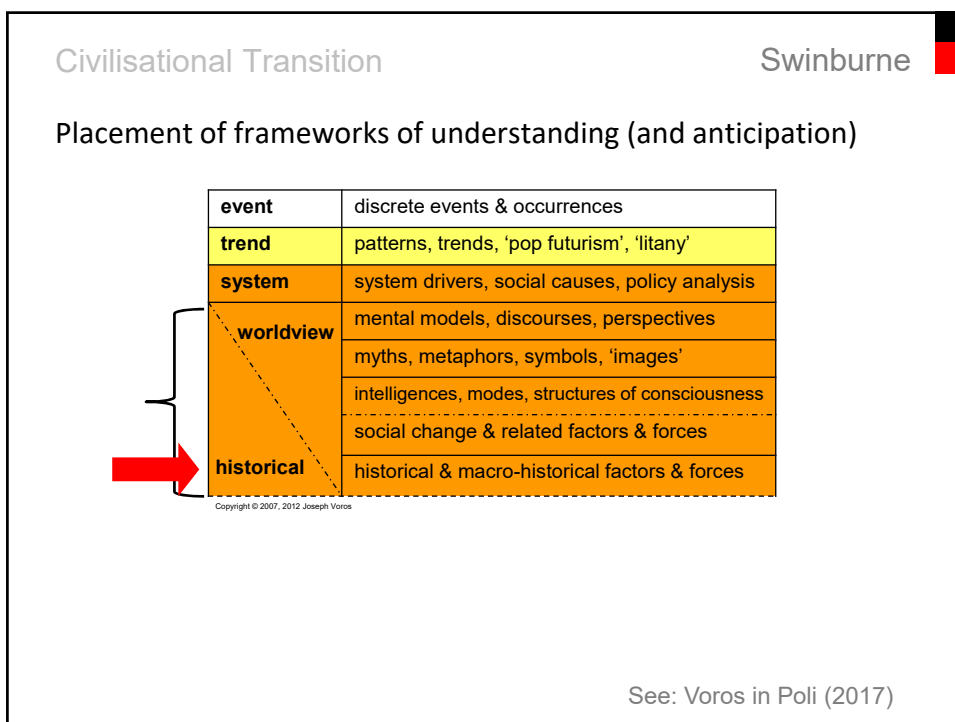
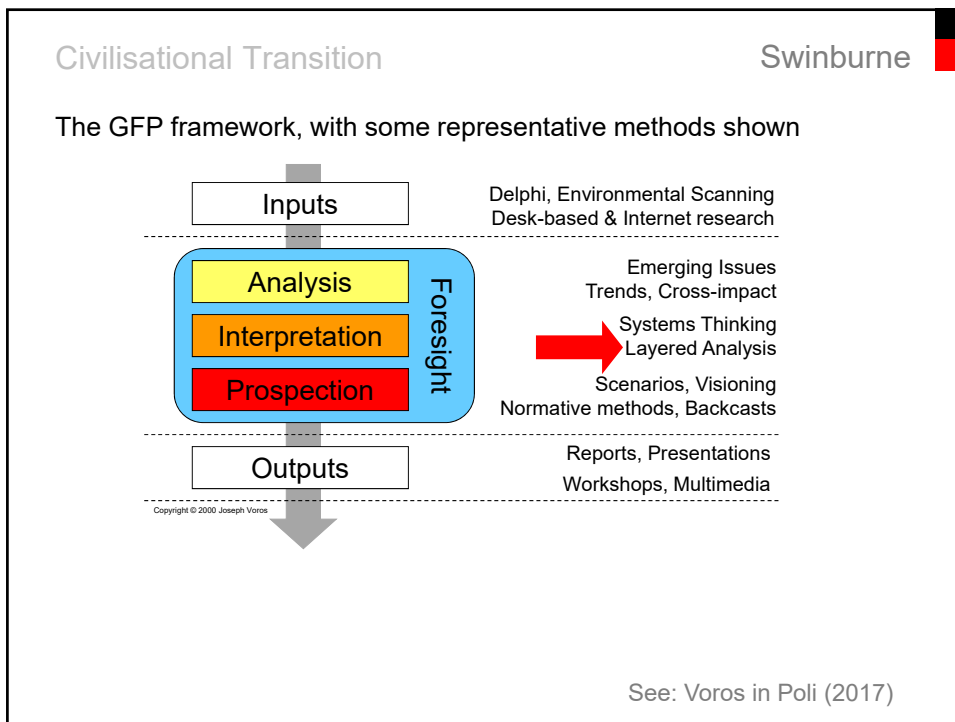
The "Futures Cone". Based on & extended from an earlier form by Hancock and Bezold (1994).

See: Voros in Poli (2017)

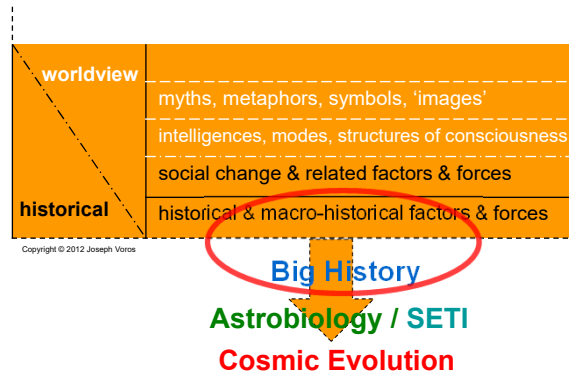
Types of Alternative Futures – another P?



The "Futures Cone". Based on & extended from an earlier form by Hancock and Bezold (1994).



Location of “Big History” and related macro-perspectives



See: Voros in Poli (2017)

Forms of social analysis

		Synchronic	Diachronic
Level 1. Person systems	Idiographic	Interviews	Biography
	Nomothetic	Psychology	Microhistory, genetic psychology
Level 2. Social systems	Idiographic	Anthropology	History
	Nomothetic	Sociology, economics, political science	Social macrohistory
Level 3. World systems	Idiographic	Yearbooks	World system history
	Nomothetic	International relations	World macrohistory

From Voros (2006). Adapted from Galtung & Inayatullah (1997), p.2.

- Erich Jantsch wrote perhaps the first book on a model of evolution based on 'self-organising' complexity using our present understanding of non-equilibrium thermodynamics and dissipative structures
- *The Self-Organizing Universe* (1980)
Sub-title: *Scientific and human implications of the emerging paradigm of evolution*
- In it he described the rise of complexity both in individual entities, as well as in collectives of entities
 - > Individuals and collectives self-organise together in a co-evolutionary dynamical process
 - > Material as well as informational exchanges take place in three main phases of co-evolution
 - Physical, Biological, Sociocultural

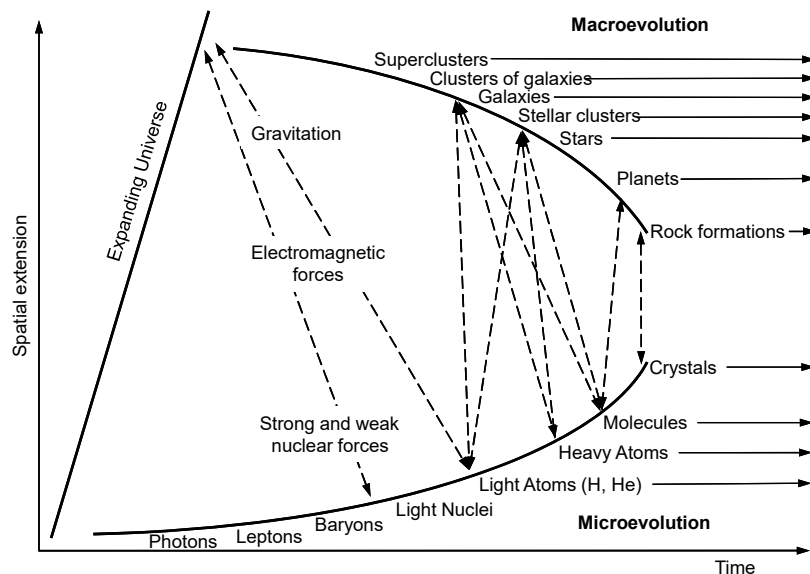
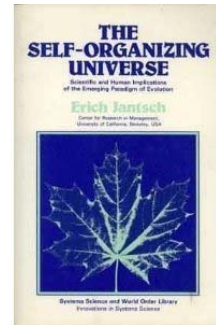
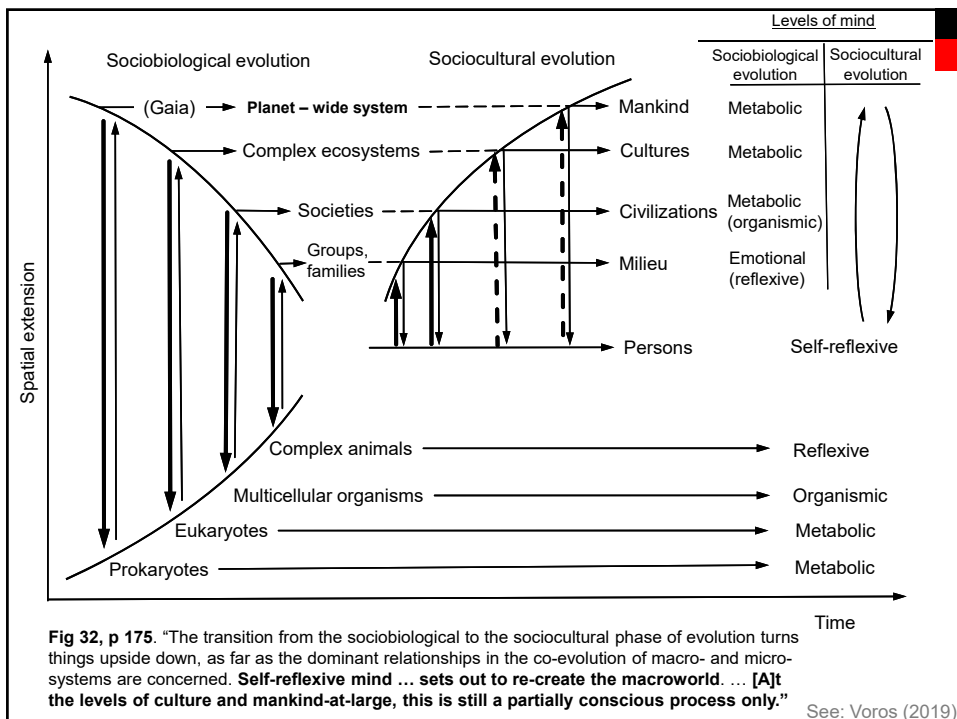
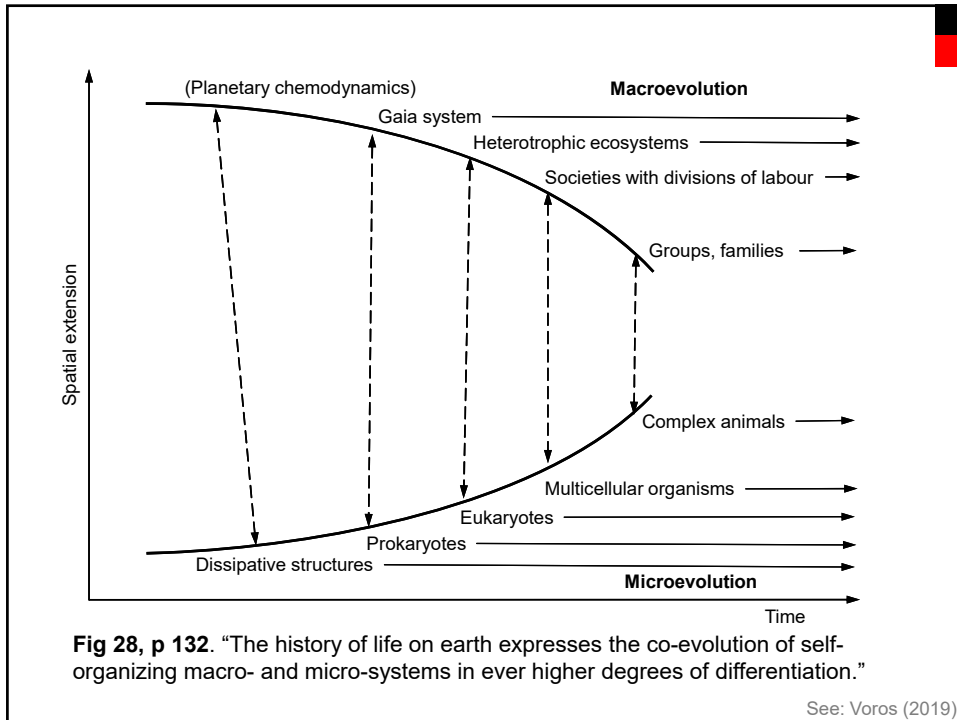
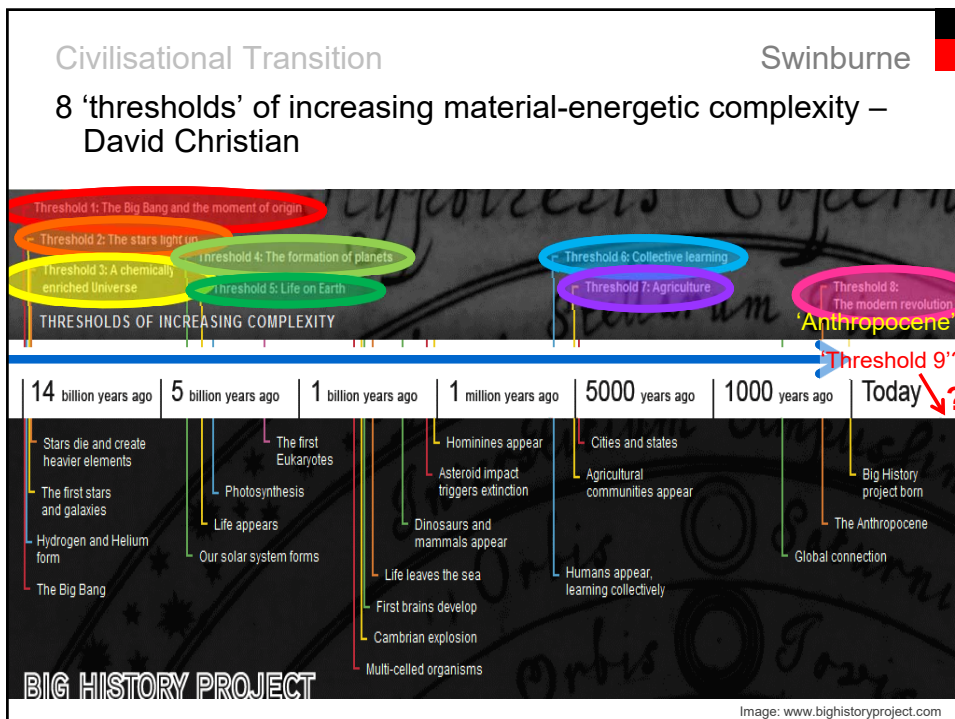
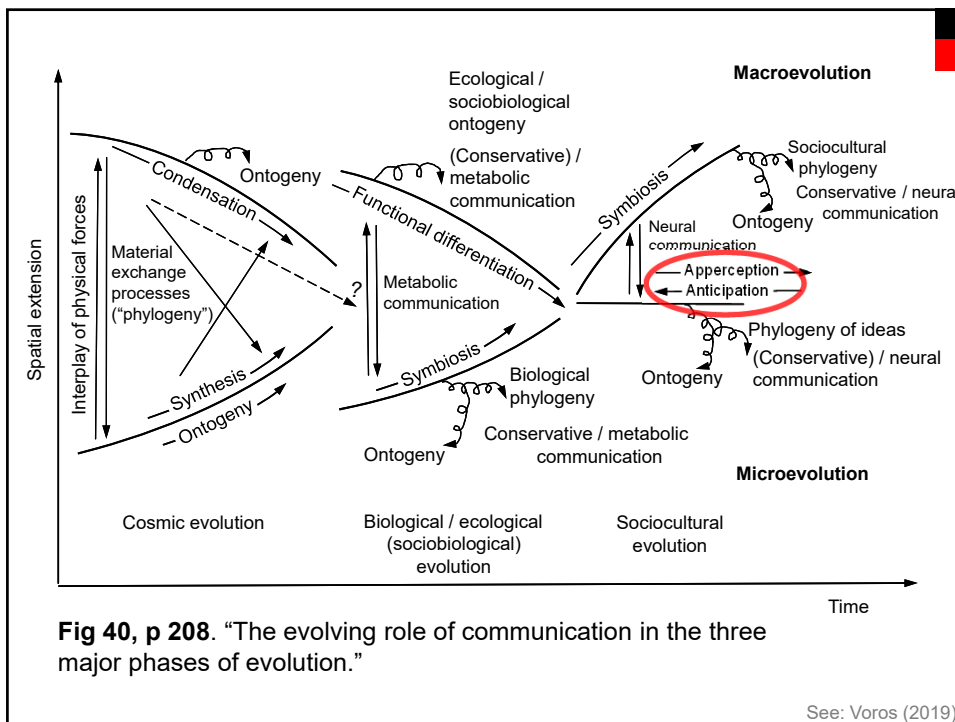


Fig 24, p 94. "Cosmic evolution of macro- and micro-structures. ... These levels mutually stimulate their evolutions."

See: Voros (2019)





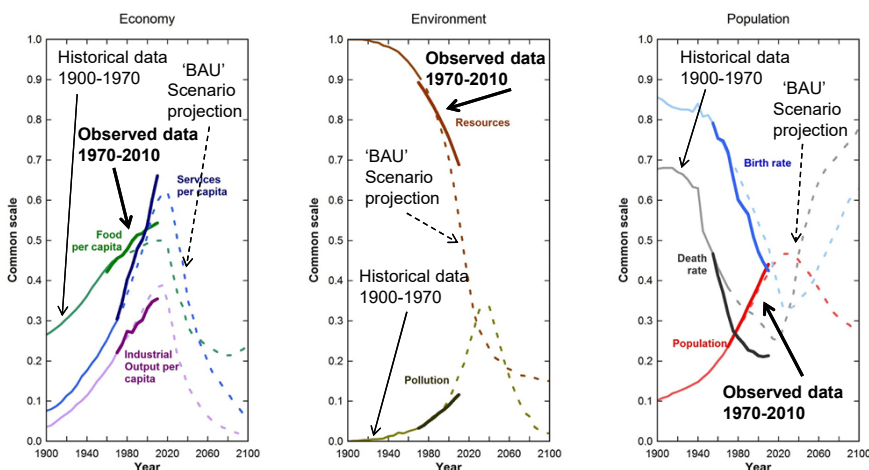
Contemplating the future ...

“Profiling ‘Threshold 9’ (here defined by analogy to ‘Threshold 8’)

→ the (future) historical transition when fossil fuels are *no longer* the primary energy source powering human societies ...
 (other definitions are also possible)

I make no *a priori* assumption about whether these sources are *more* or *less* energy-dense than fossil fuels, but there are clear implications for human societies and global civilisation based on the ‘projected’ future – declining easy access to cheap energy

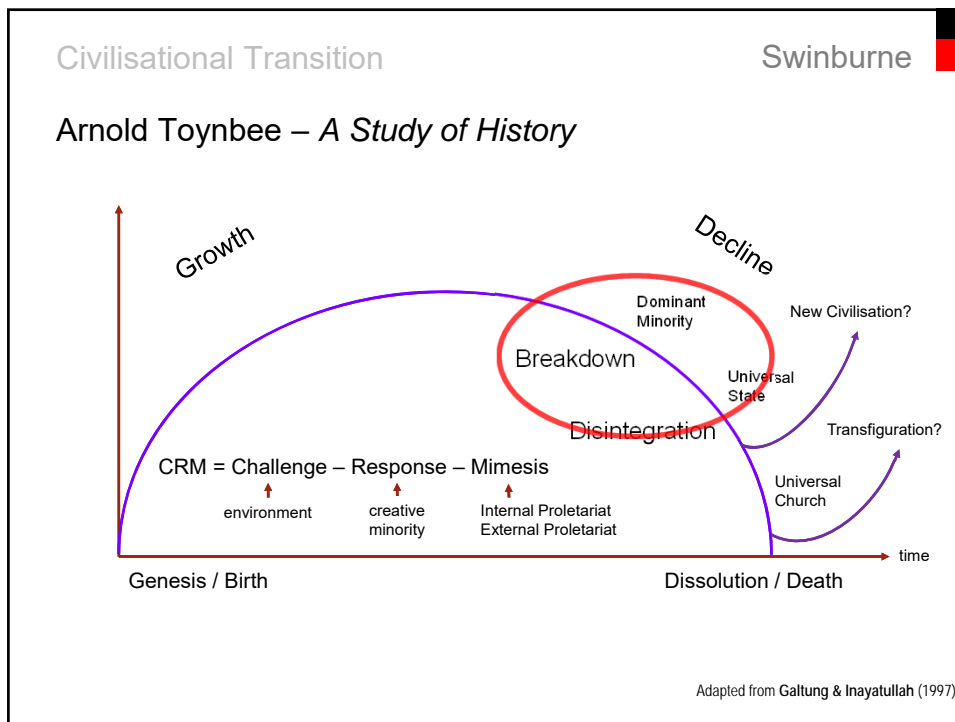
See my chapter in Poli (2017) for the analysis.



Comparison of the *Limits to Growth* ‘Standard Run’ / ‘Business-as-Usual’ scenario with 40 years of empirically-observed data (Turner 2008, 2014)

Perhaps the ridicule the *Limits to Growth* received was premature... (Bardi 2011)

Images: From Turner 2014



Civilisational Transition Swinburne

Arnold Toynbee – *A Study of History*

If **CRM cycle falters** / arrests, civilisation goes into **decline**:

- **Breakdown** – ‘creative’ minority no longer creative; proletariats withdraw mimesis; unity breaks down; ‘petrified life in death’ or ‘fossil’ (no vitality); proletariats increasingly disenfranchised & alienated; Internal Proletariat responds with: archaism, futurism, detachment, transcendence
- **Disintegration** – **creative minority becomes dominating, using force to control proletariats**; internal class wars & external wars; could last a while - *Universal State* (‘a shell within which the civ is dying’); Internal Prol may create *Universal Church*, which may form basis for new civilⁿ
- **Dissolution** – social disunity: drift, sin & promiscuity grow and become dominant; vulgarisation invades arts, sciences, philosophy, language, religion, ethics, manners & institutions; External Prol attacks instead of trying to integrate; *coup de grace*; maybe a leap to a transfiguration to new civilisation via transfigured ‘religious saviour’

Galtung & Inayatullah (1997)

Welcome to The “Surveillocene”

Swinburne

– The Era of *Surveillance Everything*

Surveillance State; *Surveillance Capitalism*; S. economy, society, culture, etc – look at your smartphone apps...



Civilisational Transition

Swinburne

My assessment of the projected future

We face a “civilisational transition”

- Unless there is a ‘miracle’, access to energy will decline leading to an ‘energy-disciplined’ future (per Dator’s ‘disciplined society’ archetype)
 - ‘Big History, Threshold 9’ analysis in Voros (2017)
- From Toynbee’s model – some insights emerge:
 - A **‘breakdown’** is occurring with regard to the legitimacy granted to societal ‘elites’ (politics, technology, finance/economics, etc)
 - Elites are becoming more **dominating & attempting to create stronger systems of coercion/control & wealth extraction**
 - Some push-back is evident in **emerging ideologies**
 - **‘minimalism’** & voluntary simplicity; (online) **privacy activism**; etc
- From Erich Jantsch – there are some grounds for *rational hope*
 - *we have the capacity to alter the trajectory of human civilisation... but can we practice anticipation at the civilisational scale?*

References

- Bardi U. *The Limits to Growth revisited*. New York: Springer; 2011. (SpringerBriefs in Energy).
- Galtung J, Inayatullah S, editors. *Macrohistory and macrohistorians: Perspectives on individual, social, and civilizational change*. Westport, CT, USA: Praeger Publishers; 1997.
- Jantsch E. *The self-organizing universe: Scientific and human implications of the emerging paradigm of evolution*. New York: Pergamon Press; 1980.
- Poli R, editor. *Handbook of anticipation: Theoretical and applied aspects of the use of future in decision making*. Cham: Springer International; 2017.
- Toynbee A. *A study of history*. 1-volume illustrated edn. Oxford University Press; 1972.
- Turner GM. A comparison of *The Limits to Growth* with 30 years of reality. *Global Environmental Change* 2008 Aug;18(3):397-411. doi:10.1016/j.gloenvcha.2008.05.001
- Turner GM. Is global collapse imminent? An updated comparison of *The Limits to Growth* with historical data. The University of Melbourne; 2014 Aug. (ISBN: 978 0 7340 4940 7). Available from: <https://sustainable.unimelb.edu.au/publications/research-papers/is-global-collapse-imminent>.
- Voros J. Nesting social-analytical perspectives: An approach to macro-social analysis. *Journal of Futures Studies* 2006 Aug;11(1):1-21.
- Voros J. Big History and anticipation: Using Big History as a framework for global foresight. In: Poli R, editor. *Handbook of anticipation*. Cham: Springer International; 2017.
- Voros J. Big History in its cosmic context. *Journal of Big History* 2019 Jul;3(3):57-80. doi:10.22339/jbh.v3i3.3340



www.swinburne.edu.au/profile/jvoros



www.orcid.org/0000-0001-8697-0080



www.researchgate.net/profile/Joseph_Voros



twitter.com/TheVoroscope

SWIN
BUR
* NE *

SWINBURNE
UNIVERSITY OF
TECHNOLOGY

