

The breath of life connects us all

scientific reflections on our planetary connections & their political ramifications

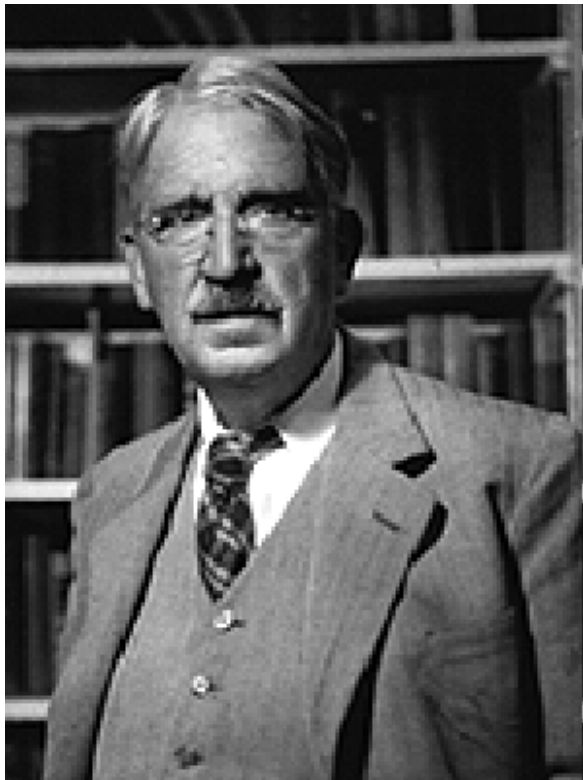


Greens Institute Conference, 2017, Old Parliament House, Canberra

Professor Brendan Mackey, PhD
Director, Climate Change Response Program, Griffith University
email: b.mackey@griffith.edu.au



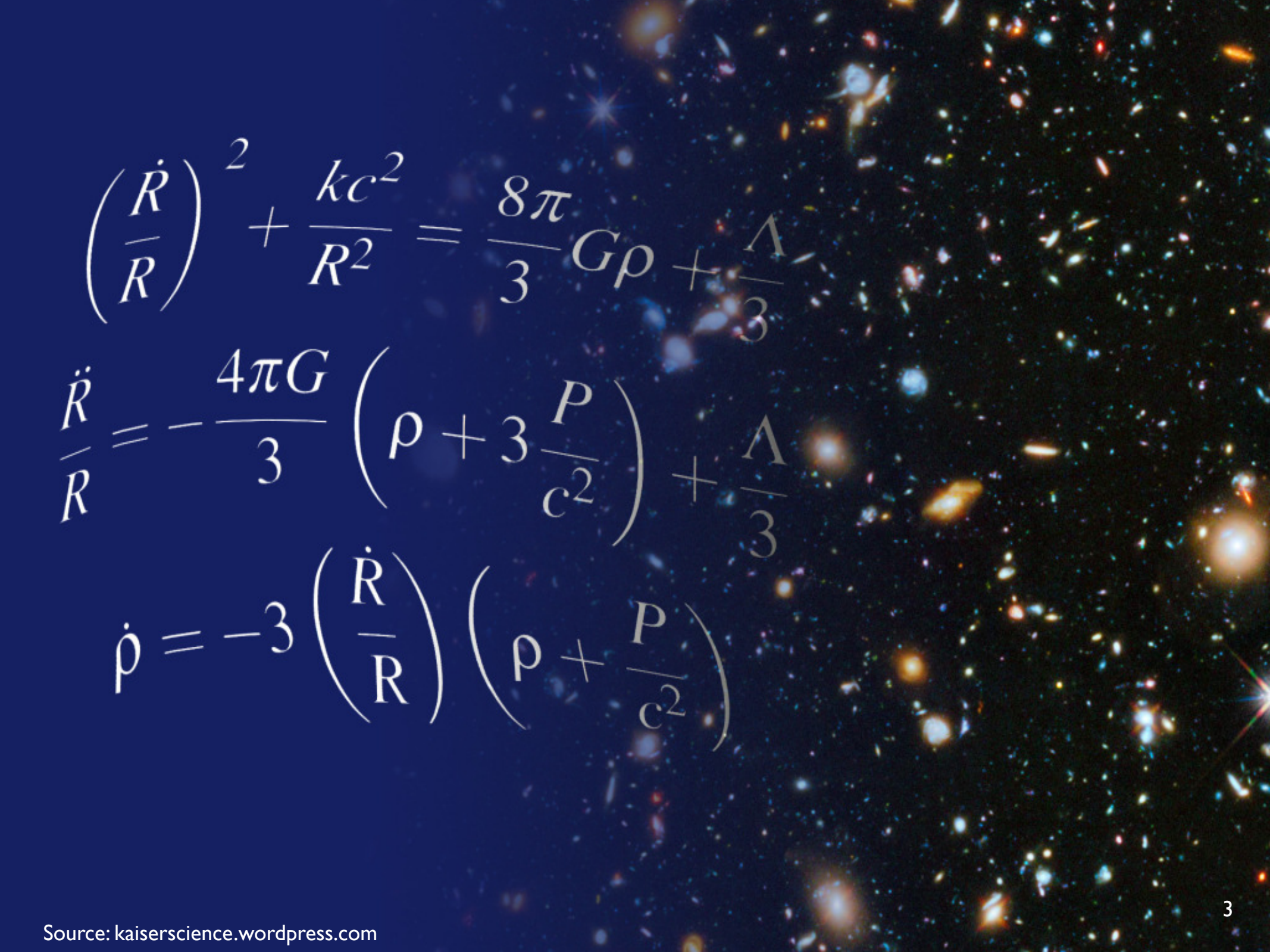
Scientific knowledge?



John Dewey



Marie Skłodowska Curie



$$\left(\frac{\dot{R}}{R}\right)^2 + \frac{kc^2}{R^2} = \frac{8\pi}{3}G\rho + \frac{\Lambda}{3}$$

$$\frac{\ddot{R}}{R} = -\frac{4\pi G}{3}\left(\rho + 3\frac{P}{c^2}\right) + \frac{\Lambda}{3}$$

$$\dot{\rho} = -3\left(\frac{\dot{R}}{R}\right)\left(\rho + \frac{P}{c^2}\right)$$



Margaret Lucas Cavendish
(1623-1673)

<https://plato.stanford.edu/entries/>

I perceive man has a great spleen against self-moving corporeal nature, although himself is part of her, and the reason is his ambition; for he would fain be supreme, and above all other creatures, as more towards a divine nature: he would be a God, if arguments could make him such...

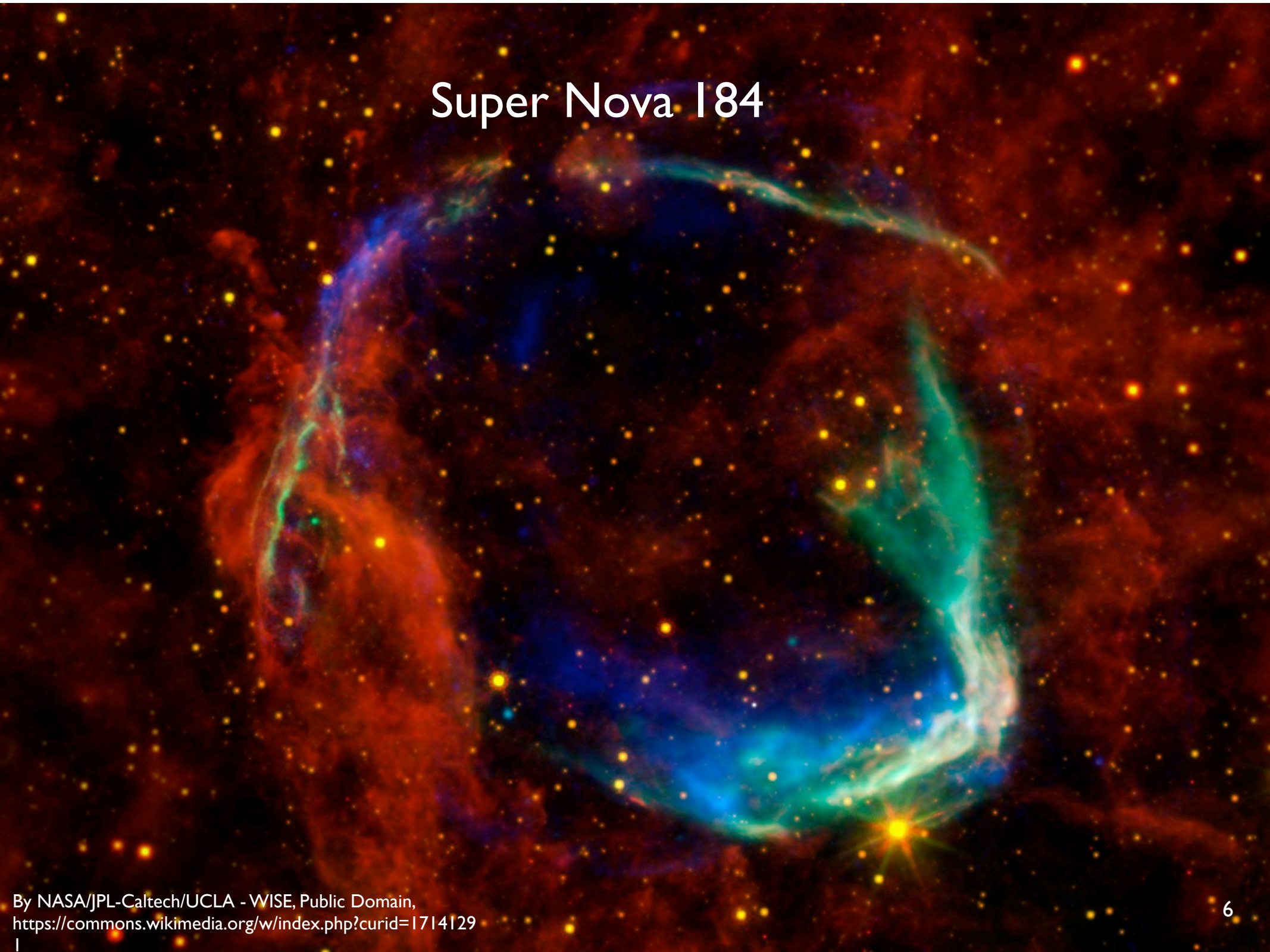


<https://plato.stanford.edu/entries/whitehead/>

...recognition that the world is organic rather than materialistic is essential for anyone wanting to develop a comprehensive account of nature... The result is that nature is no longer thought to be simply atoms in the void, but instead “a structure of evolving processes. The reality is the process...

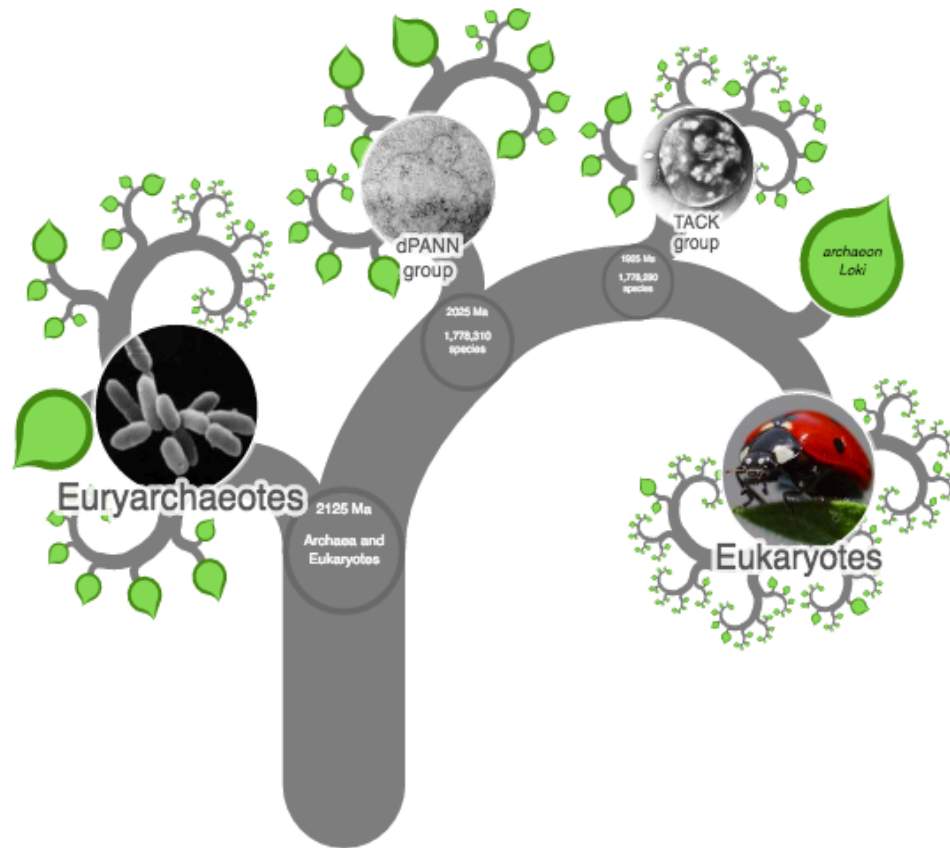
Alfred North Whitehead
1861-1947

Super Nova 184



The Tree of Life

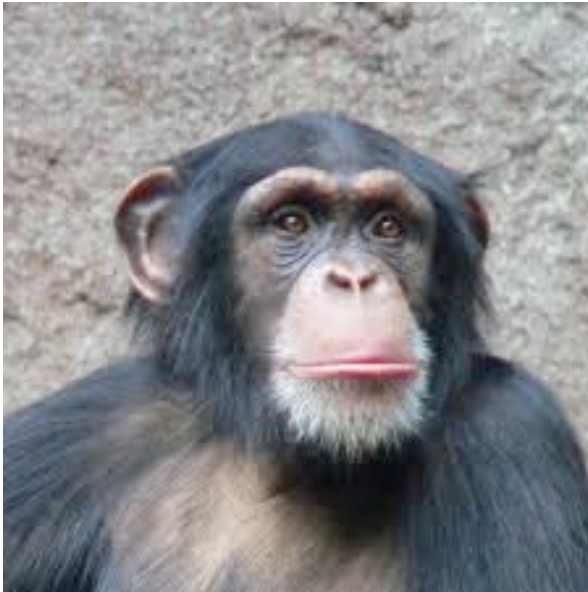
All life on Earth evolved from a single, common ancestor and all species are related to all other species through inherited DNA, including us



Source: Open Tree of Life

<https://tree.opentreeoflife.org/about/open-tree-of-life>

How much of our genes do we share with others?



99% with
Chimpanzees



60% with fruit flies



25% with a grain of rice

Sources:

<https://www.genome.gov/11509542/comparative-genomics-fact-sheet>

<https://www.scientificamerican.com/article/what-makes-us-different/>



...we are not aliens on a strange planet: our history and biology, which place us here, ensure that the facts of this planet have plenty of meaning for us...

Mary Beatrice Midgley
(age 98)

Source: [Wikipedia](#)

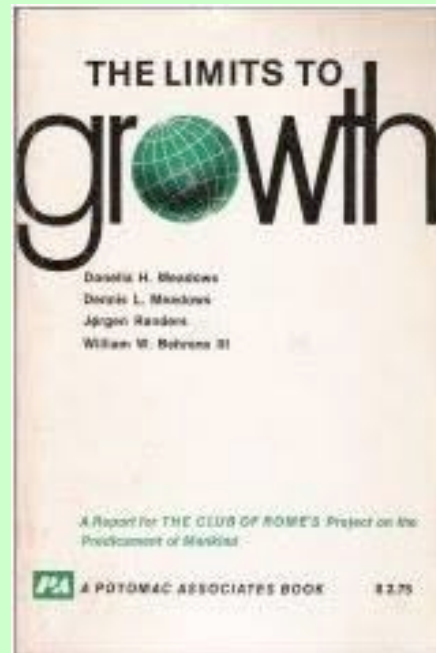
Earth is a complex adaptive system, not a simple system

A car engine – such as this Holder Straight 6 – is complicated but simple



Source: Richard Lewis - Own work, CC BY 3.0,
<https://commons.wikimedia.org/w/index.php?curid=3966286>

Donella Meadows

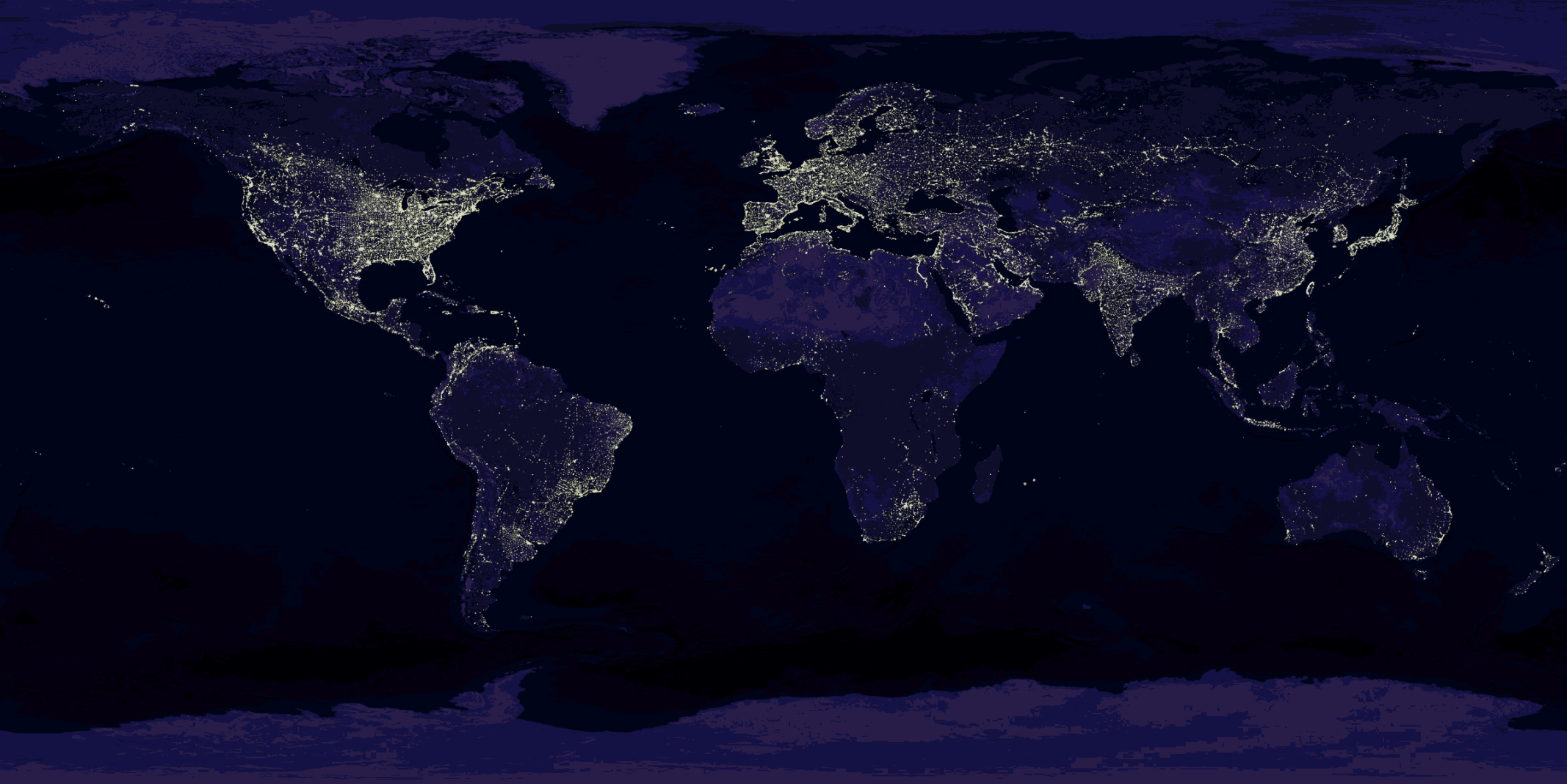




James E Lovelock
(1979)

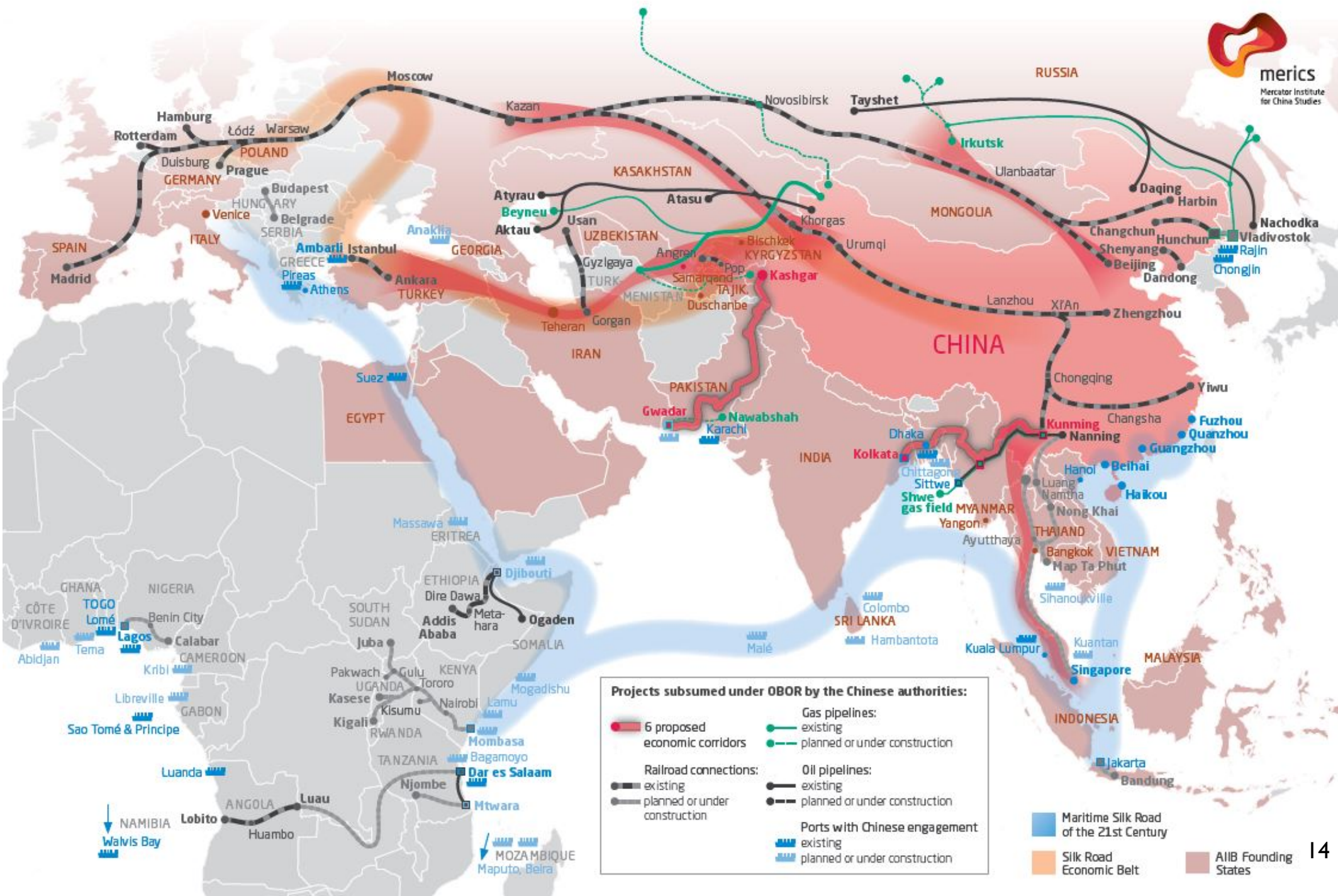
Gaia Theory
Earth functions
like an organism

Earth night lights



Source: NASA satellite

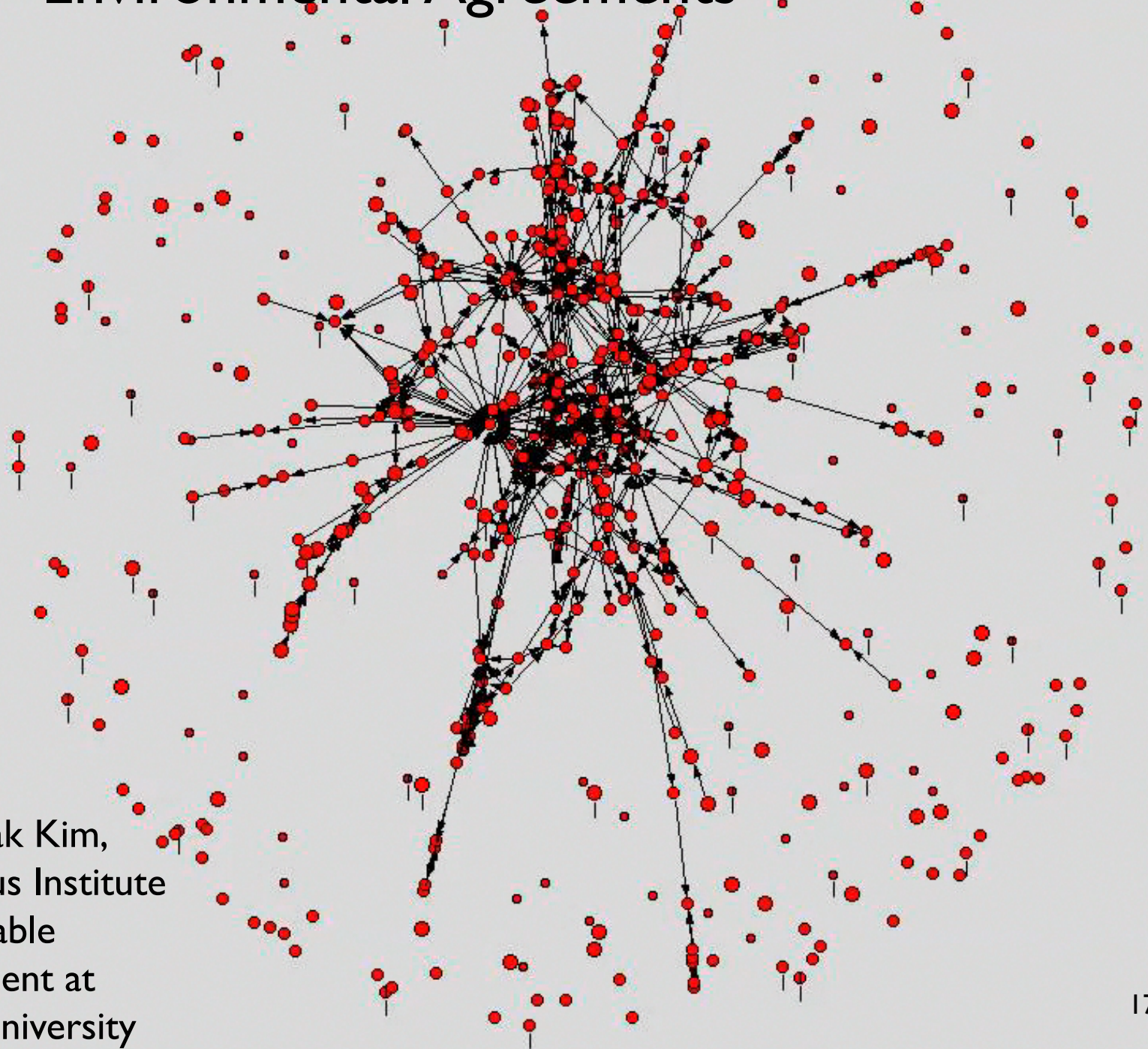
China's 'One Belt, One Road' initiative







The formal connections between the >700 U.N. Multilateral Environmental Agreements



Source: Rak Kim,
Copernicus Institute
of Sustainable
Development at
Utrecht University

The Machinacene



