The Dao of Scimat

人 科 之 道

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In One Sentence

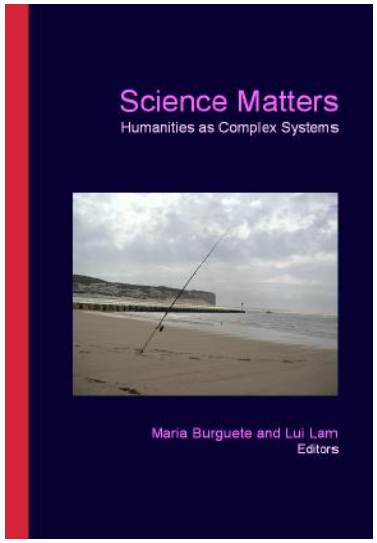
Scimat (Science Matters, 人科), a new multidiscipline introduced by Lam in 2007/2008, deals with the science of humans. It aims to raise the scientific level of the humanities by encouraging interaction between humanists and natural scientists.

In one sentence:

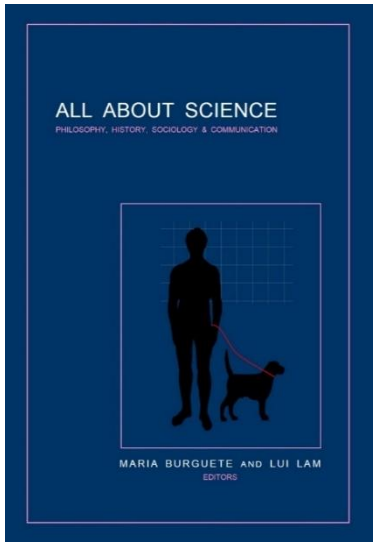
Everything in Nature is part of science !

That is, everything in Nature, humans included, are legitimate subjects of study in science.

Scimat website:
www.sjsu.edu/people/lui.lam/scimat



2008



2014

Four Tenets

Conceptually, scimat represents the four tenets:

1. Science is humans' effort to understand Nature without bringing in God or any supernatural.
2. Science covers everything in Nature.
3. Nature includes humans and all nonhuman systems.
4. All research on human matters, humanities in particular, are part of science.

Disciplinarily, scimat represents the collection of research disciplines that deal with humans:

Scimat = Humanities + Social Science + Medical Science

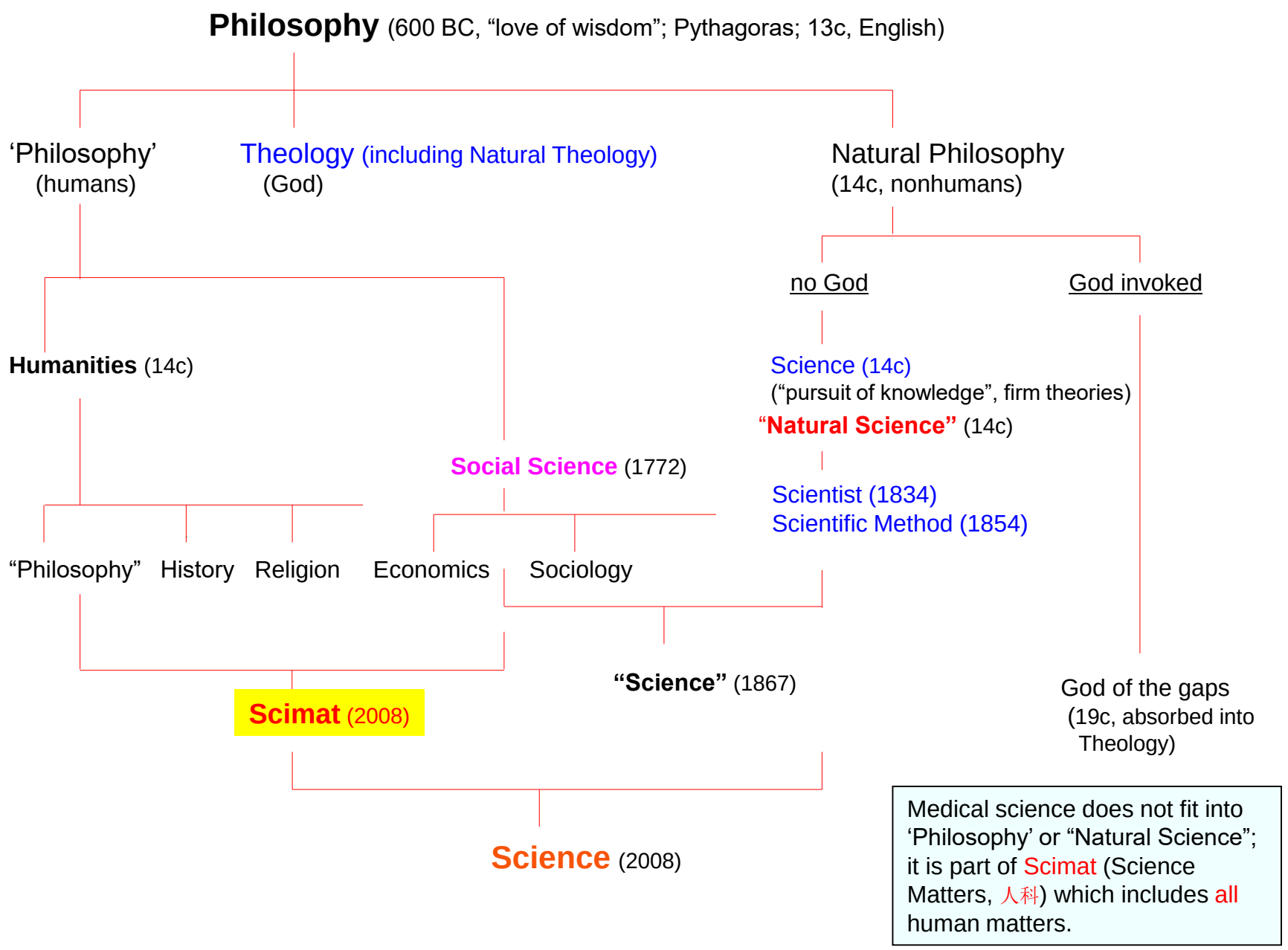
One Insight

The 1-2-3 insight:

One culture, two systems, three levels !

- There is only one culture—the scientific culture.
- All systems are simple or complex systems; the two are quite different.
- There are always three research levels (empirical, phenomenological, bottom-up) in any discipline.

Birth of Disciplines & of Science



Medical science does not fit into 'Philosophy' or "Natural Science"; it is part of Scimat (Science Matters, 人科) which includes all human matters.

Relationships of Disciplines

Science = Natural Science

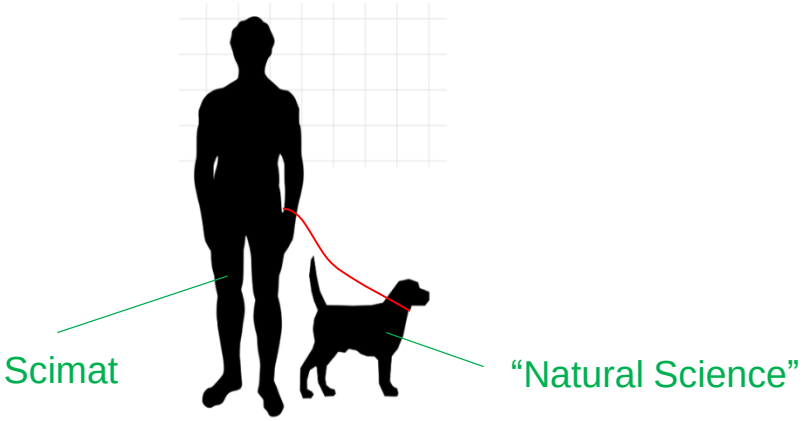
= Science of nonhumans + Science of humans

"Natural Science"

Scimat

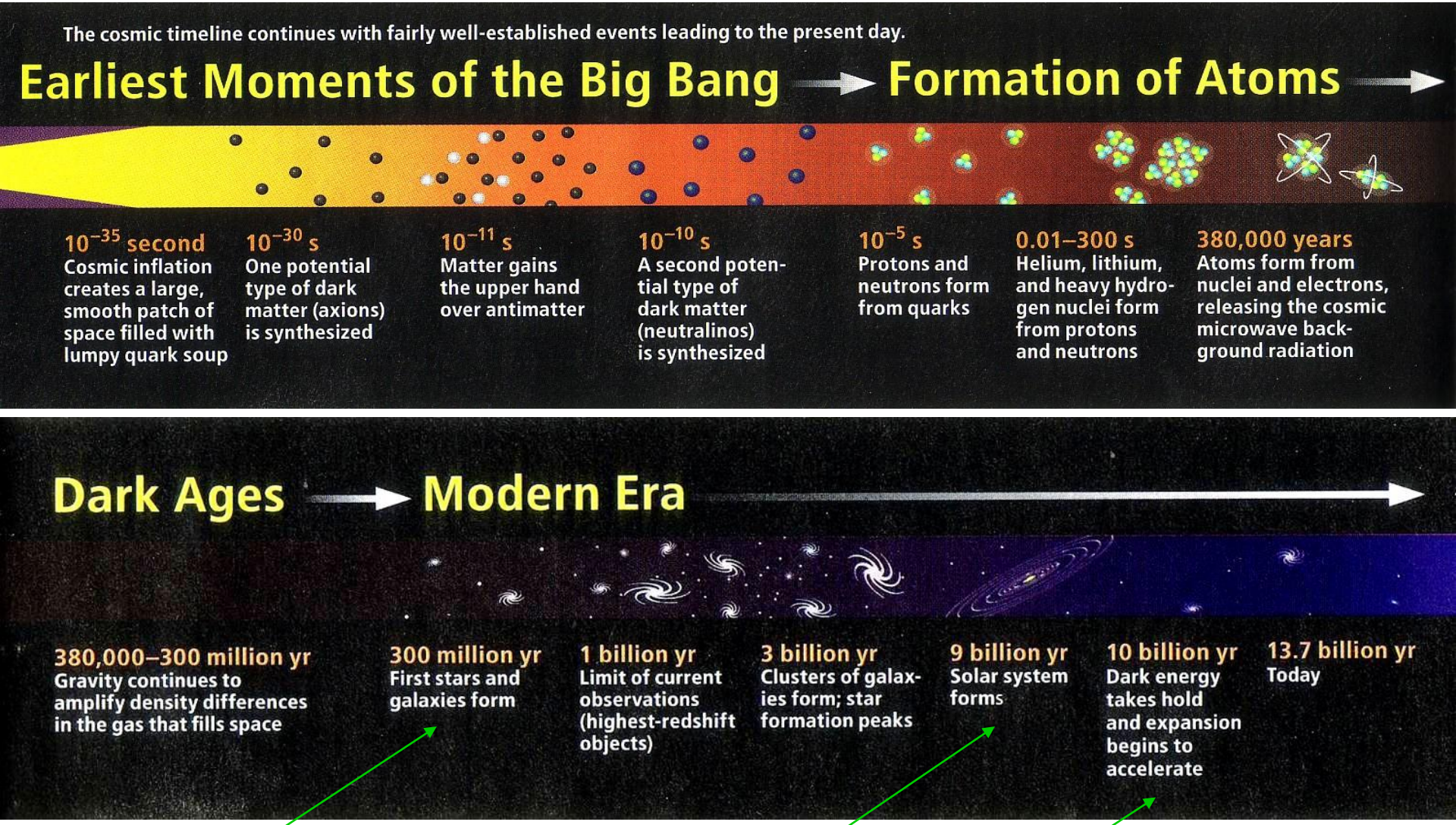
Humanities + Social Science + Medical Science

The proper image of science:
Two linked animals (one controls the other)



(not test tubes or nuclear symbol…)

Basic Message 1: It All Started with the Big Bang



Atoms formed in stars

Earth formed

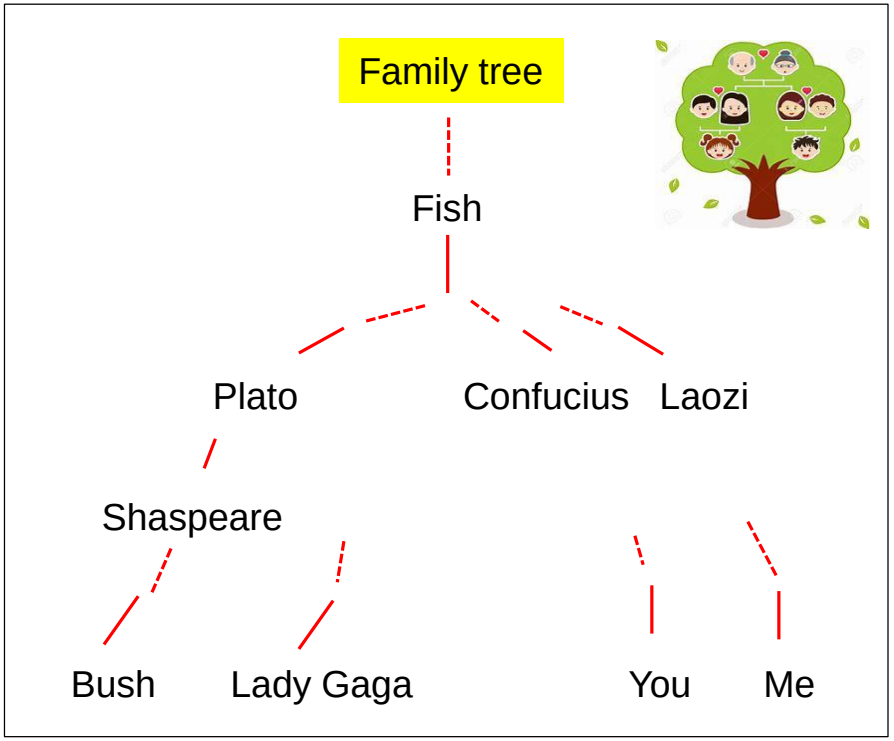
Life began

Basic Message 2: We Are One Family, Descendants of Fish

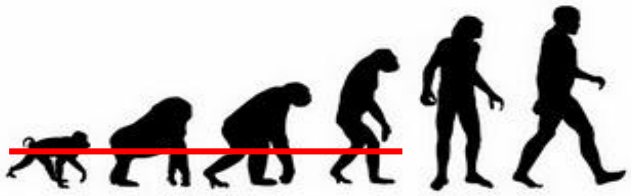
Our ancestor

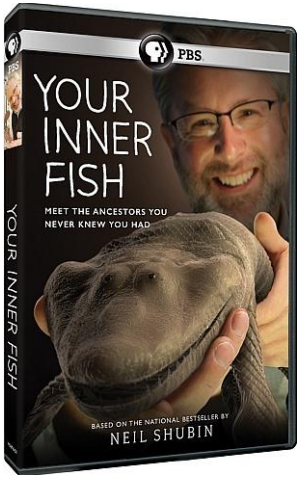
Microbrachius

8 cm, 0.4 billion years ago

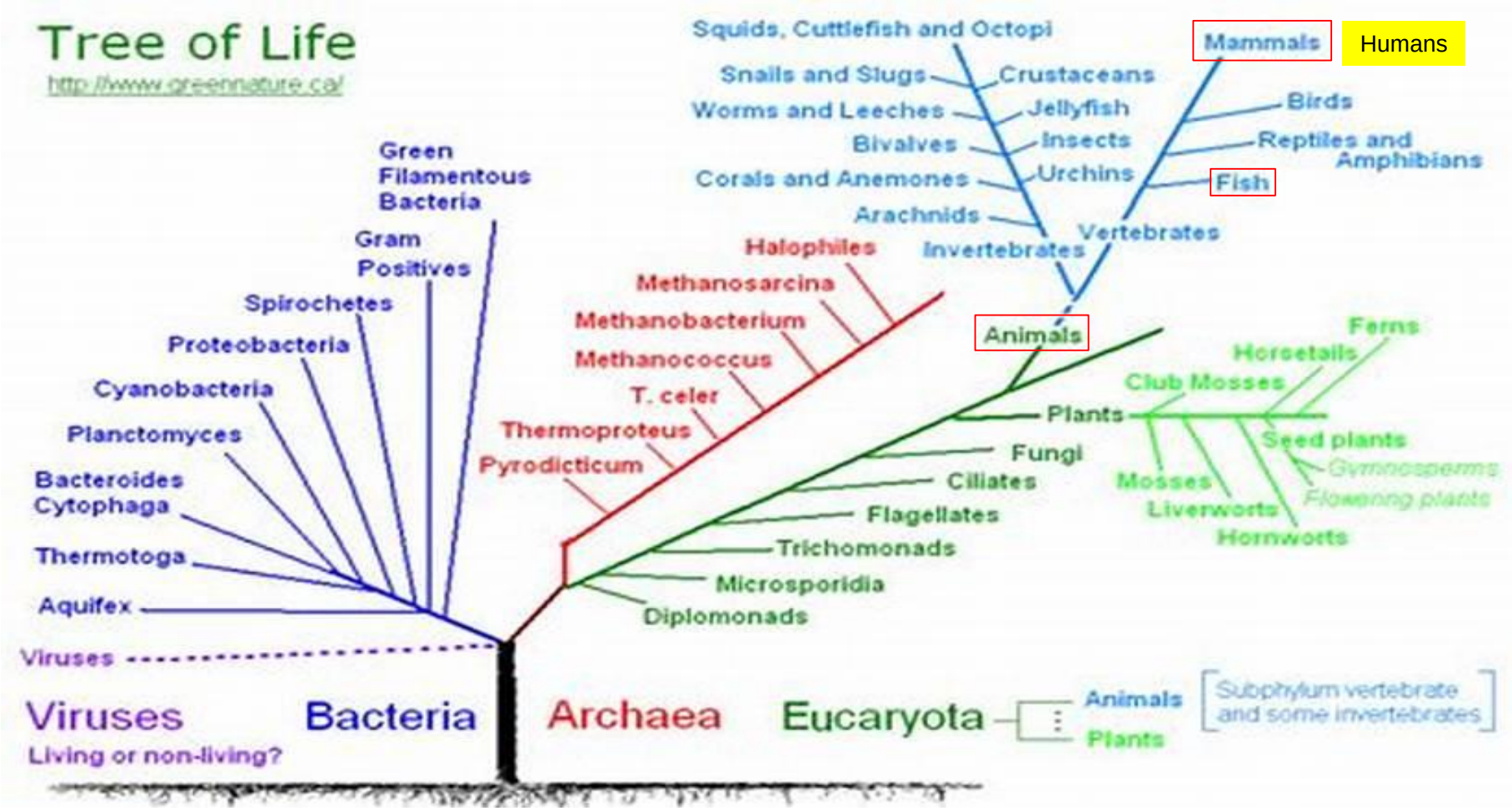


Darwin's evolutionary theory (1859)



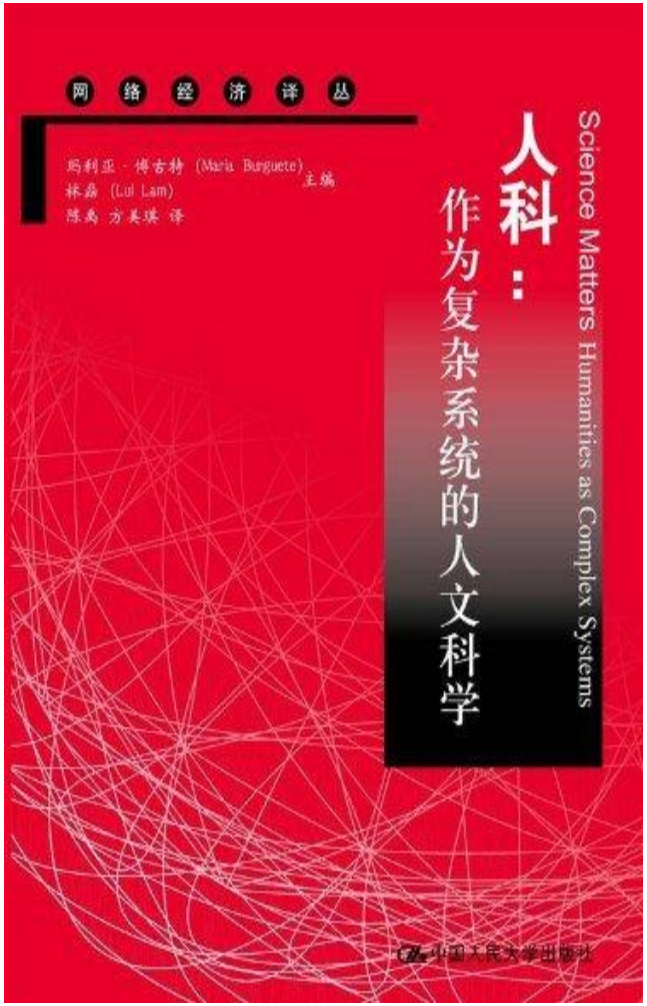


- Some 375 million years ago, the first fish crawled up onto land
- Fish Tiktaalik had enough strength in its front fins to do pushups and heave itself out of the water
- Our arms, legs, necks and lungs can be traced to fish (supported by DNA trace)
- Every one of us is just a (jury-rigged) fish



Basic Message 3: We Are Recycled Stardust

- Everything on Earth, humans included, is made up of atoms.
- All atoms came from the stars (except H, He, and Li were formed soon after the big bang; Ag and Au, produced from neutron-star mergers). We are thus stardust
- Every atom in our body is recycled from somewhere else (which could be other peoples' body, dead or alive, which you never know).
- We thus could be related to each other physically. We are recycled stardust



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