

# Does natural selection tell us anything about society?

***There are parallels between how natural selection operates in nature and the survival and development of ideas, language and social structures in human society.***

## ***Economics - survival of the fittest?***



*In a landscape filled with abundant capital and easy credit, hedge-funds thrive on easy pickings and banks flourish on a diet of cheap mortgages.*

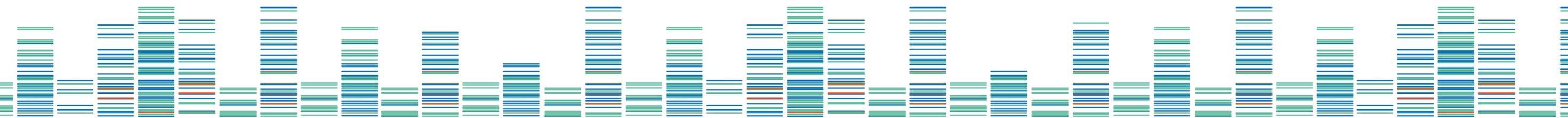
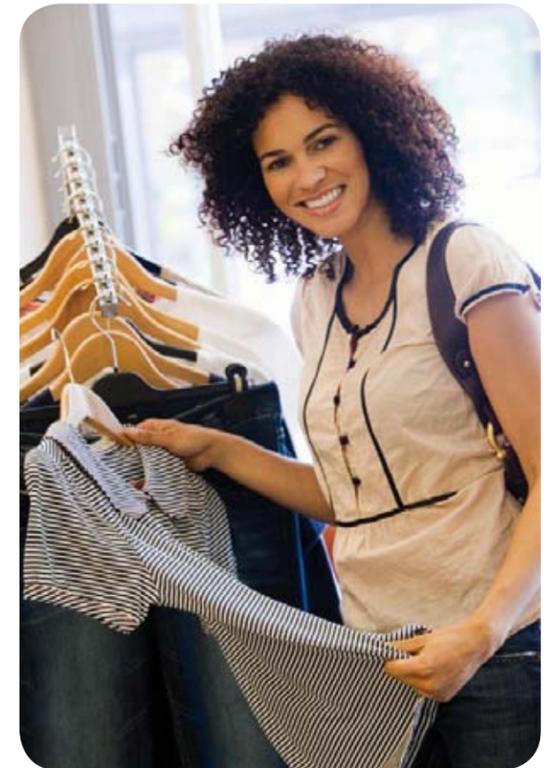
*When times are good, in both economics and the natural world, diversity abounds as organisms (and organisations) evolve to fill specific niches. In bad times those that can't adapt, perish.*

*Today, financial institutions find themselves in an unfamiliar landscape; to survive they must conform to new regulations and market conditions. Those that can respond to the selection pressures in the new environment will live to fight another day.*

## ***Why have leaders evolved?***

*Leader-follower relationships almost always emerge when groups of people interact because these relationships help groups (including companies) to function effectively.*

*By studying how leadership/followership works, from a Darwinian point of view, we may better understand why it matters and how it comes about. Insights from studies of leadership can explain the success and failure of business leaders, fashion and consumer trends, financial trading strategies and pricing in competitive markets.*

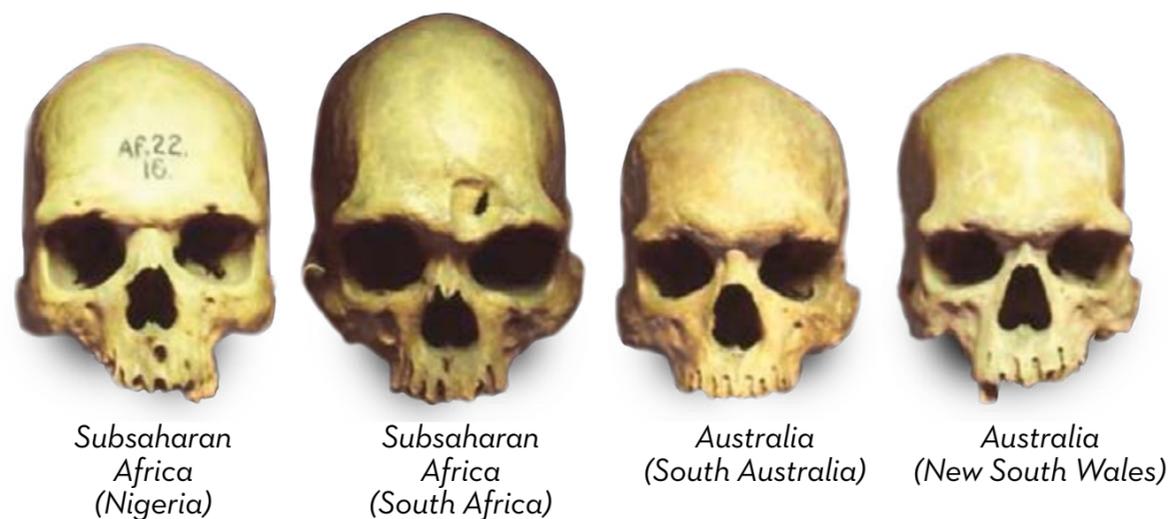


# We are all one, but are we alone?

**Our species evolved only once, so all humans are related to the same ancient African ancestors. If life exists on other planets then we expect natural selection to operate on it - so what might our galactic neighbours be like?**

## We are all one

Researchers have measured variation in the skulls and genetic diversity in people around the world. The further populations were from sub-Saharan Africa, the less the genetic diversity and variation in skull measurements within the groups. As genetic diversity and variation in physical characteristics are usually highest in the places where new species originated, this demonstrates that humans evolved once from an ancestor in Africa and not several times in different locations around the world.

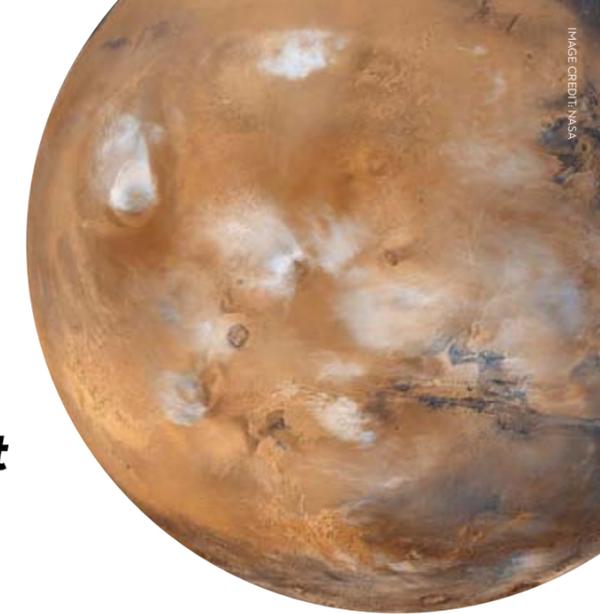


## Is there life on other planets and what might it look like?

We know of one place in the entire universe that harbours life - Earth. However, most scientists agree that it is unlikely that Earth is unique.

Extremophiles - organisms that thrive in conditions normally detrimental to life - have been found in many unexpected places on Earth and this has encouraged our search for extra-terrestrial life. Simple microbes adapted to harsh environments may exist, or have existed, on Mars, on Jupiter's moon Europa or on Saturn's moon Titan.

Astronomers are searching for planets outside our solar system ('extra-solar' or 'exo' planets). So far over 300 exoplanets have been discovered; most are huge, gas planets like Jupiter, but a few are rocky planets like Earth. Astronomers have studied the light reflected from these planets and found some signs of chemicals that we associate with life, such as water and organic molecules.



Mars

