

PROMO

UNNATURAL SELECTION

According to current knowledge, life on Earth probably began about 4 billion years ago. This phenomenon occurred through the random combination of certain chemical elements in a chunk of ice, a pond or perhaps a cauldron. As organic molecules became ever more complex – so recounts *National Geographic* – they formed RNA molecules capable of replicating themselves, mutating and undergoing natural selection. From this point on, evolution took a surprisingly smooth course – albeit not entirely free from occasional detours. Simple cells appeared as early as 3.9 billion years ago; and complex cells, including eukaryotic cells with gene-bearing nuclei, appeared 2 billion years ago. Then, some 1.2 billion years ago, eukaryotes began to reproduce by combining genetic material from two parents. This sexual reproduction accelerated variations within the gene pool and led to a profusion of life forms and a far more rapid rate of evolution.

The Earth and its cohabitants got along well together for a surprisingly long time. Plants busily photosynthesized, and animals consumed only as much as was absolutely necessary for reproduction and the maintaining of a healthy balance among the various species. Natural selection worked more or less in proper order: the weakest usually succumbed, and the fittest had a good chance of survival.

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After billions of peaceful years, however, Nature's selection sealed its own fate. Some 4 or 5 million years ago, a new species emerged: an upright mammal, the hominid, considered the forebear of the human race; and then, 100,000 years ago, the modern homo sapiens.

Evolution boasts a number of success stories – the flu virus, the octopus or the common cockroach, to name just a few. However, with its stunted muscles, dulled senses, and an inability to breathe underwater or fly in the air, the human race had apparently little chance of taking its place among the fittest.

Still, thanks to its artfulness, imagination and foresight bestowed by a somewhat overdeveloped gray matter, homo sapiens proved surprisingly successful. He has prospered and multiplied, filled the Earth and subdued it. He has ruled over the fish of the sea and the birds of the air and over every living creature that moves on the ground. Still, due to his incredible rate of reproduction, he has not contented himself with what nature laid at his feet. He must drill, crush, dig and fell. He must exploit. He must ravage, divert, burn and eradicate to secure new food supplies.

Forests, lakes and hills are digested in his insatiable maw, and his excreta slowly engulfs the world.

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Overpopulated areas of Asia, Latin America and Africa fall easy prey to vengeful Nature. Avalanches, floods and landslides caused by extreme weather conditions also plague millions in Europe, even if human losses are less devastating there.

One catalyst for political changes in Central Europe 20 years ago was

that people became terrified of environmental hazards. Under Communism, the aggressive intrusion into nature had ideological backing. "All power to the working people!" Power, also over Nature. Brutal river diversions, water and air pollution could be kept secret for decades, but the cloud from Chernobyl was carried too far by the wind.

Communism has long gone, but ecological catastrophes, which are apparently inevitable consequences of an over-industrialized world, are here to stay. Political changes may have led to more transparency in the ecological arena, yet investors sometimes relocate polluting factories and technologies banned in the West to the capital-hungry and, therefore, less fussy emerging economies of the world. The West's industrial scraps and chemicals are often buried and left to decay in these countries' soil, coastal waters or, perhaps even worse, recycled by laborers working for a miserable pittance under inhuman conditions.

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There are endless discussions among professionals as to whether the globe's climate is really changing (change in the sense of deviation from the average of preceding millions of years) and if it is, then what role modern industry and farming have been playing in the process. The EU and some of the world's most influential leaders believe climate change is already happening and represents one of the greatest threats facing the planet. EPA, the US Environmental Protection Agency estimates that greenhouse-gas emissions caused by human activities increased by 26 pct from 1990 to 2005 globally. Emissions of carbon dioxide, which account for nearly three-quarters of the total, increased by 31 pct over this period. Like in the United States, the majority of the world's emissions are often associated with unscrupulous and excessive energy use.

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Our insatiable craving for energy takes its horrific toll day after day. According to some estimates, the final bill for cleaning up BP's recent oil spill in the Gulf of Mexico – the amount of which was quickly raised from an initial 5,000 to a possible 50,000 barrels a day – could be USD 7 billion (plus the heavy fines the US government intends to impose on the oil company). No money is enough, though, to restore the damage the accident has caused to marine ecosystems.

Yale Environment 360, a publication of the Yale School of Forestry & Environmental Studies, believes the explosion at the Deepwater Horizon well – a classic 'low probability, high-impact event' – was an accident waiting to happen. Lax legal control, technical failures, human errors – and some complacency from BP and its subcontractors have led to the disaster, the impact of which, will persist for years.

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Has Nature erred in its selection? We have become presumptuous and overconfident. We believe we are the fittest, but we are only the greediest and the most voracious. Bursting with pride, we think we should subdue Nature, when in fact we should keep tight reins over ourselves instead.

Homo sapiens. What was initially a success story may well lead to a somber finale. And another chance for the eukaryotes. ■



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