

## Hawking fears aliens

In Stephen Hawking's new TV series he expresses fear of potential visitations to earth by aliens. He likens it to what happened to native North American Indians after Columbus' visit. He is not favorably impressed by the record of mankind's humanity towards his fellow men.

I will explain why Hawking's fears are misplaced. In my web site [www.fefox.com](http://www.fefox.com) I have an article entitled *Space Travel* in which I argue against interstellar space travel because it is so enormously infeasible. The energy requirements and the extraordinary distances mitigate against any possibility of living creatures making such journeys. *Our imaginations are richer than reality* and we contemplate possibilities, even visualize them, although they are not possible. In the case of inter-galactic travel, the process is possible, but the requirements for living creatures are *extremely* too demanding. As far as traveling forward or backward in time is concerned, in *Space Travel* it is shown that travel forward in time *only* is possible. Yet many movies and TV shows exhibit travel backward in time. Special Relativity theory prevents this.

Does this mean we will never know anything about aliens that may be inhabiting the Universe. With Hawking I agree that intelligent life elsewhere in the Universe is very likely. In [www.fefox.com](http://www.fefox.com) there is a section called *Mysterium Tremendum*. In it I develop a theory for the natural origin of life on the early Earth by chemical and physical processes. I show how life depends on the particular elements, e.g. H C N O P S { Na Mg Cl K Ca } Fe, and how each element contributes to the properties of geophysical (and astrophysical) natural processes that generate molecules. It is argued that *life as we know it is like life everywhere else in the Universe*. The elements are universal as are the laws of physics, chemistry, biology and mathematics. Life primarily based on H C N O P S Fe will be universal. Cells and tissues, muscles and nerves, and Ca and P for bones and tooth will be universal. Bilaterally symmetric life forms that evolve to use muscle, bone and nerve are inevitable outcomes of the natural processes. Vertebrates and brains are as inevitable.

Elsewhere in the Universe, around stars that resemble our Sun and that are the same age, there will be rocky planets and sometimes Earth-like rocky planets at the right distance from their Sun for liquid water and a dense atmosphere comparable to ours to exist. In those locales intelligent life will evolve. There are places where the evolution is not as far along as here and places where it has already gone further. Our fate is to know about this but not to meet it face to face. *The distances are too great for living creatures.* Especially tantalizing is speculation about more advanced forms of life than we are, already living in those remote places.

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2<sup>2</sup>, 3<sup>3</sup>, 2010