Extraterrestrial life argumentative essay

Humans have always been wildly fascinated about the possibility that extraterrestrial life could, does currently, or has existed elsewhere in the universe. This is a subject that has been questioned by humankind for at least 2000 years. Lucretius, a Roman poet from the first century B. C.

, had suggested that “ just as life originated by spontaneous chemical interactions on Earth, ‘ we must acknowledge that such combinations of other atoms happen elsewhere in the universe to make worlds such as this one…. there are other worlds in other parts of the universe, with races of different men and different animals (Hobson quoting Lucretius, 2006). ” It is thought by many anthropologists that the discovery of life elsewhere in the universe would completely change our world’s sense of self. We would no longer be alone; our understanding of existence would change exponentially. The Copernican view, suggests that Earthlike conditions elsewhere should lead to intelligent life elsewhere.

This is based on the premise that the principles of nature are the same everywhere in the universe. Scientists have estimated that there are about 400 billion stars in the Milky Way galaxy.

Observations have shown that about 50% of the stars in our sun’s area, are not a single body of burning gases, but multiple bodies of burning gases. The ideal conditions for planet formation do not occur in the clusters of stars, which appear to be a single star. Planet formation is most likely to occur in single body stars.

Of the single stars, there are many of them that are not good for planet formation in that they burn too brightly, and are entirely too massive;

ultimately, they burn up their fuel fast, not allowing enough time for planets to form. Stars that are much smaller often burn very dimly.

For life to occur, a planet would have to orbit very close to the star, to ensure that the climate is warm enough for life to be sustainable. When planets orbit a star, the star wobbles slightly. This is because of the gravitational pull that the planet exerts on the star. Astronomers can detect this wobbling.

They very carefully measuring and tracking the position of the star. It can also be detected by measuring the frequencies of the waves of light that the star gives off. In a 1953 experiment by Stanley Miller and Harold Urey, it was shown that many amino acids and nucleic acids are easily created.

The pair used water vapor, hydrogen, methane, and ammonia in a sealed jar, and then put it in contact with liquid water.

To stimulate volcanic activity, they heated the mix. For lightening, they sent sparks through the mixture. With in a few days, the liquid water had turned brown. Upon analysis, it was shown that a variety of amino acids and nucleic acids had formed.

These are also the building blocks of life. DNA chains are formed when many amino and nucleic acids link to together into strings, which are then developed into a double helix.

Since this experiment, it has been learned that the early atmosphere was probably comprised of carbon dioxide, nitrogen, and water, rather than the four used in the experiment. When these three ingredients were used with the same and similar conditions, many more amino and nucleic acids

formed. As long as these three ingredients are gaseously combined, chemical reactions occur that create the building blocks of life. Although life developed immediately after conditions permitted it, life stayed in a stagnant state of a simple-single-celled bacteria form for about 2 billion years.

At some point during the first billion years, some of the cells developed the ability to absorb water, incorporate the water’s hydrogen atoms into the cell’s structure and then to excrete the oxygen atom. This changed the global climate to an oxygen rich atmosphere. Biological convergent properties are traits that tend to evolve again and again. This can be better understood by looking at wings.

Birds and bats are two very different species, yet they have one similarity: wings. Wings are useful in that they offer a defense mechanism, the animal can use a not highly traveled path of the sky.

They can also see food from high above, a vantage point that many animals do not have. A question arises: is intelligence a biologically convergent feature? One could say yes. Take the dolphin, ape, or the crow, all of which are intelligent to their own degree as an animal.

The dolphin can respond to complex five-element sentences. The ape is much like a human. The crow can manipulate specialized tools in order to gather food. These three creatures to not have much in common except for an inferior, quaintly human-like, intelligence. None of these animals, except the ape are similar to a human, the bird being very far removed.

We have not yet made contact by any means that we know of. We have unintentionally sent out electromagnetic signals into space, using radios and televisions. By now, the signals of our technology have traveled for about 100 light-years (for one century); they may have already come in contact with some of the closest stars. Humans have sent other communications on space ships. We sent an artifact and empty spacecraft into an orbit towards Jupiter with a pictorial message on it.

It depicts the male and the female and also gives a pictorial map of where our planet is located.

This plaque and ship will take about 68 light-years to get to Aldebaran-a relatively close star; this amounts to about 2 million years for a one-way trip! The closest star is 4 light-years away. Alpha Centauri is still 100 million times farther than the distance to the moon. It would take a long time to visit other planets, or for other beings to visit us. One option for space travel is to use a ship that goes slower than light. This type of vehicle would take hundreds or possibly thousands of years to reach even the closest of destinations.

Potentially, a colony of human beings could make such a trip, along several generations. Such a ship would be like a small version of Earth, with its own ecosystem and mountains, rivers, and cities. Spacecraft could use nuclear fission to accelerate a rocket for several years, or until it could go fast enough to exit the solar system, from there the trip to Alpha Centauri would take 10, 000 years to complete. UFO’s (unidentified flying objects) have gained much attention from the media.

There have been movies made, rumors, newspaper articles, and such made about this phenomena.

The problem with the ideas that these are either contemporary aliens, who have just arrived, or they have visited our planet previously; is that they are unscientific. Although it is scientifically possible for there to be visitors, it is not scientific in the way that the ideas are supported. There have been many reports taken; they were explained to be man made objects reacting with the light in various ways, orbiting satellites, luminescent insects, and others. For the most part, it is usually a case of you see what you want to see.

The author offers a more in depth argument for why UFO sightings would really be implausible. He says this to be so because any civilization that could travel from what ever planet that they are from to Earth and back, and then possibly repeating the trip, would have the technology to ensure that we do not see them. They would not make such slip-ups as leaving material behind. According to Schwarzschild, and Bertram (2006), until recently, the search for extraterrestrial intelligence has been performed almost exclusively by radio astronomers filtering through 1-cm radiation from space in search of anything that could possibly be a message from a somewhere in our universe.

About fifty years ago, the 21-cm line was the only known emission line. During this time, microwave lines were used, which now is an obsolete technology, because laser technology had not yet been developed. Radio astronomers have since found many shorter-wavelength microwave lines

that would be more superior for covering such infinite distances; they suffer less interstellar dispersal than longer-wavelength microwave lines.

We have also developed new technology that makes it probable to use petawatt (1015 W) lasers to emit offensively bright optical pulses, lasting for one nanosecond. These pulses outshine the Sun by a factor of 10, 000.

The optical search for extraterrestrial intelligence, known as OSETI, has been granted its first dedicated telescope. The telescope was completed in April of 2006, and has been in operation since June of 2006. The Planetary Society's Optical SETI Telescope, at the Oak Ridge Observatory in Massachusetts is directed by Harvard University physicist, Paul Horowitz.

Its 1. 8-m primary mirror is, despite its modest size, the largest of any US optical telescope east of the Mississippi (Schwarzschild ; Bertram, 2006). According to Schwarzschild and Bertram (2006), before Horowitz and his OSETI collaborators had been granted their own telescope, dedicated for OSETI observations, they had used the observatory's 1.

5-m Wyeth Telescope for the last six years. In that time they searched about 5000 sun-like stars within 1000 light-years of our planet.

Horowitz had remarked that his team and he had exceeded the numbers within hours of beginning the project. A big reason for this drastic improvement is that the new telescope has a much larger field of view. The team expects to observe the entire celestial sphere within the first year or two. The telescope monitors a selected star for about a minute.

Earth’s rotation takes it across the field of view, and then the telescope moves on to monitor the next sun-like star. This project was inexpensive, considering many research endeavors cost millions of dollars.

This project costs only a mere $400, 000, paid for mostly by the Planetary Society. The most important part to the success of this telescope is the efficient photon bucket. It has the ability to absorb light that most telescopes cannot. Chapter 12 of Physics: Concepts and Connections discusses that there is a high likelihood that there is life elsewhere in the universe.

The chapter reviews some of the details of Earth’s evolution and notes that the ideal conditions for the start of life can and most likely do exist in other parts of the universe.

When carbon dioxide, nitrogen, and water are present on a planet, the planet is a comfortable distance away from its single bodied star, and has gone through atmospheric changes; the building blocks of life are the result. As to whether or not there is other intelligent life somewhere in the universe, it is a possibility. One must take into account that humans developed after 96% of the Earth’s present life had passed.

Humans are new species to Earth, we took a very long time to evolve; starting as a single-celled organism. Intelligent life will probably take as long or longer to develop elsewhere.

It will be many years before humans can send manned-missions to visit other parts of our own galaxy. This main problem that we have is that we cannot reach the speed of light to make the trip in a manageable amount of time.

Thousands of years to reach the nearest stars is far too long a journey for humans to endure, it would take generations, upon generations, upon generations, not to mention the trip home. Extraterrestrial life throughout our galaxy and the universe has or will happen. The Copernican view suggests that the laws of nature of the cosmos are the same as the laws of nature on Earth.

There is much more research to be done if we want to be able to travel the cosmos, to find a new planet for our world to expand to, learn about other races, or to gain anything from present colonies. These technologies are not far off. Soon we should be able to travel fast enough to reach our destinations, but not a fast as the desired speed of light.

For so long the search for extraterrestrial life has been mocked, but no longer. It must be given some amount of scientific respect, due to the fact that finding life is so probable. If contact has not happened yet, there is a healthy probability that contact will happen in the future.