

Eric Vence

A2 Written Assignment

**THE SEARCH FOR EXTRATERRESTRIAL  
INTELLIGENCE**

## THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE

If there is anything that human beings have always wondered about, it is the vast and mysterious place that we call the universe. There is a question that comes to everybody's mind, from the old Greek philosophers to modern space scientists : "Are we alone in the universe?". Search for Extraterrestrial Intelligence (SETI) is an experimental program directed by NASA (National Aeronautics and Space Administration). Its goal is to find out if there is another form of life in the universe. But is the SETI program really necessary? Is it efficient? Because we have been unable to find a single piece of evidence of alien intelligence, a battle has arisen between the people in favor of the SETI program and the people against it. Although it could be a total failure, many feel SETI should continue to operate.

The universe has 50 billion galaxies and a galaxy has hundreds of billions of stars. Potentially, there are billions of locations outside our solar system that may support life. Considering such statistics, it is hard to imagine that there are no habitable planets in the entire universe. Moreover, there might be a lot of inhabited planets about which we know nothing. The SETI program could permit us to discover evidence of other planets where life is at least as technologically advanced as our own.

The SETI principle is simple: use radio waves to discover if there is alien life in the universe. Radio waves have the ability to be heard from far away. At present, modern technology permits us to hear electromagnetic waves from very few galaxies, close to our solar system. It is hoped that we will soon be able to have more sensitive equipment and therefore more effective experiments. Unfortunately, SETI doesn't send signals into space. It only listens.

There are several controversial problems directly concerning the SETI experiment. First, if the SETI program doesn't prove the existence of alien life, one might think that it is a waste of money. Although SETI seems to be an incredibly costly experiment, statistics show that only one tenth of a percent of the whole NASA budget is used. This is a very small amount of money compared to all the other experiments developed by the organization. For example, the SETI experiment is nothing compared to the BION program (an animal experiment in space), which costs about 30 million dollars per flight).

It is true, however, that there are some problems concerning the SETI program. First, there is a question of chance that we cannot deny. The current technology only focuses on a tiny part of the sky, so the problem becomes where to point the radio telescope. The second problem is to know where to tune the radio dial as there are billion of channels to search...

SETI may be a failure, as an alien life form may not be discovered. A lack of proof concerning life on other planets is highly expected by those scientists who think that SETI should not continue to operate. But even if it continues without any satisfying result, we will still have gained knowledge. For example, algorithms used in SETI are now being applied to mammography imaging techniques to improve their resolution, and therefore save lives. Furthermore, there are numerous ideas developed in the book SETI written by scientists working at NASA that show specific examples of scientific or technological advances that could arise as a direct result of the SETI program.

And what if SETI is not a failure? What if we discover that we are not alone in the universe? It would be unfortunate to miss the opportunity to meet an alien intelligence. NASA considers the possible existence of alien life highly probable. Furthermore, scientists speculate that the extraterrestrial intelligence should be a lot more technologically advanced, taking into account the youth of the planet Earth. Another convincing point is that there are clues in space suggesting at least a low-level life form. For example, comets and meteorites carry organic molecules and amino acids. Moreover, rocks from Mars, examined by NASA suggest that a microbiological life might have developed on the planet billions of years ago.

The SETI program could be useful to know if aliens are calling. Maybe they are not calling to us, but they are certainly communicating among themselves. They are very likely to use some kind of electromagnetic waves that are universally available. If they are calling, we know how to listen to them: modern radio telescopes are capable of sensing radiation coming from other planets anywhere in our galaxy. With a rapid evolution of the technology, we will soon be capable of expanding the boundaries of this research. NASA, which now listens to radio waves with five small radio telescopes, is going to develop more than five thousand radio telescopes to scan the sky.

Even though the SETI program might be inconclusive for its main goal of detecting alien life, it has provided improvements in science and technology that are helpful to the human race. SETI offers the opportunity to increase human knowledge. Not only is there nothing to lose, but there is the fantastic possibility to respond to the question of the existence of alien intelligence, that could change our lives.

## ANALYSIS/EXPLANATION

My objective, which was to write this article as a “real journalist” (that is unbiased, informative and giving a global and clear approach of the topic), was not easy as it was hard to extract only the essential facts of several documents. Another detail to keep in mind was to avoid quotes and references to newspaper articles, as a journalist should not give a rival publicity. A very formal language had to be used, so contractions such as “they’re” instead of “they are” were almost banned.

The difficulty was to collect enough general information to write this article. I found technical documents by searching on the World Wide Web. By entering “SETI” in search engines, I found great web sites such as: [www.bigscience.com/setiathome.html](http://www.bigscience.com/setiathome.html), [www.setileague.org/](http://www.setileague.org/), [www.metrolink.com/seti/SETI.html](http://www.metrolink.com/seti/SETI.html), etc. There, while looking up interesting web pages I also found an article about SETI written by Paul Hoverstein for the newspaper USA Today dated February 13, 1996, and extracts from the book SETI written by the group of scientists working on it. But in contrast to SETI, my article could not contain scientific jargon as it targeted all ages and many levels of understanding, so I had to use a general vocabulary and skip many details.

I chose to talk about the SETI program because it is directly related to the option future change. To meet with aliens would be an extraordinary discovery which would increase human knowledge and maybe improve technology. Finally, I thought that it would be interesting to talk about an investigation that might one day close the gap of human knowledge of the universe.