

Communicating with ETI

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Invitation to ETI

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Abstract

The desire for communication with extraterrestrial intelligence seems to be normal, natural, and widespread. Several individuals and groups have tried to communicate with extraterrestrial intelligence in recent decades. A successful effort could have a profound impact on humanity's future. The authors discuss three major implications: we should all try to radiate a more positive attitude toward efforts to communicate with ETI, the SETI Permanent Study Group needs a fundamental re-examination of its protocols and strategies, and if this does not occur we should create a new Human-ETI Communication Council.

Introduction

Communication is a basic human activity. Humans of all ages have a strong desire to communicate with others. Listening, talking, reading, and writing are normal, natural human activities.

Most human communication is with other humans. But people also experience some form of two-way communication with their cats and dogs and horses. Many people wish they could experience communication with a benign alien intelligence that developed somewhere else in the universe. Many reports of UFO sightings and abductions

include communication with the alien beings, often through mental telepathy. Although such reports may well result from wishful thinking and other quirks of the human mind, their frequency does suggest a widespread human interest in aliens. Finally we should note that many people pray; that is, they communicate (one-way) with God, Yahweh, Allah, the creator and ruler of the universe, or some other supernatural being or force. Some report a response (two-way communication).

It is clear, then, that the desire for dialogue or other communication with a superior or alien intelligence is a common, normal, natural human desire.

Recent examples

As human understanding of the universe progresses over the years, our speculation about ETI and the methods we employ for establishing contact also evolve. Before 1960 most efforts to communicate to ETI were visual (rather than radio or digital, for instance). They were based on the assumption that ETI was looking at Earth. Proposals included setting bonfires on many hilltops, putting oil in the Suez canal or on the desert and setting it on fire, and forming huge geometric shapes to attract the aliens that might be watching us from somewhere above.

In the past 45 years, the array of attempts to communicate with ETI has gone far beyond those that depend on alien eyeballs peering at Earth through their optical telescopes.

One method is to attach a plaque to a spacecraft that ETI might find someday. An aluminum plate was fixed to the antenna support struts of Pioneer 10 and Pioneer 11. The plate carries an information-rich message, devised by Carl Sagan and Frank Drake, in the event that either of the spacecraft is detected and recovered in the remote future by advanced extraterrestrials. The message is intended to communicate the location of the human race, the appearance of an adult body in our species, and the approximate era when the probe was launched.

In a similar attempt to communicate information about humans with any extraterrestrial intelligence, copies of a record were attached to the side of Voyager 1 and Voyager 2. This record contains 117 pictures, greetings in 54 human languages, and almost 90 minutes of some of the world's greatest music.

Another method is radio.

In 1974, the most powerful broadcast ever deliberately beamed into space was made from Puerto Rico. The broadcast formed part of the ceremonies held to mark a major upgrade to the Arecibo Radio Telescope. The transmission consisted of a simple, pictorial and numerical message, aimed at any cosmic companions in the globular star cluster M13.

In 1999, the first "Cosmic Call" was transmitted from a radio telescope in the Ukraine, sponsored by a Houston-based aerospace company, Encounter 2001 (now known as Team Encounter). The "Cosmic Call" was transmitted four times to four different stars from the Evpatoria Deep Space Center (EDSC). Team Encounter transmitted its second Cosmic Call in July 2003, also from the EDSC. The Cosmic Calls feature both scientific and personal messages. The personal messages – primarily in text form - were gathered from thousands of people around the world: the overwhelming majority of these messages were earnest and moving words from the heart. Team Encounter

also plans to launch hair samples (containing DNA), photos, and messages of its members on an interstellar solar sail mission.

In 2001, Moscow teens composed a touching and beautiful message and broadcast a concert via radio. This interstellar message is known as the “Teenage Message to the Stars,” and it was transmitted from the Evpatoria Deep Space Center in Ukraine.

The World Wide Web has made other approaches possible in the last few years. As his answer to the question of how to establish meaningful contact with alien intelligence, Allen Tough initiated a project called “Invitation to ETI” in 1996. It is based on the assumption that a smart probe from some advanced civilization may already be here, observing us undetected. One of the things that alien lurkers would be able to detect and monitor is the World Wide Web. Invitation to ETI is a web-based invitation from 86 SETI scientists, futurists, artists, graduate students, and others interested in achieving contact with ETI. The purpose of this web invitation is to provide a vehicle of communication to any alien lurkers that might be watching us silently, and to invite them to engage in a worldwide dialogue.

Another effort to utilize the omnipresent function of the World Wide Web was created by David Brin, a scientist and fiction writer. He posted “An Open Letter to Alien Lurkers” on the Web. In

his hard-hitting letter, Dr. Brin explored eleven potential reasons why alien lurkers might not openly say hello to humans on earth.

With a membership of nearly 100,000 from 140 countries, The Planetary Society is the largest space interest group in the world. For a while, the organization collected messages to ETI via its website, but never revealed the purpose of this exercise. A few of these letters were crude, hostile, or belittling.

If we turn to the UFO field, we find even more ways of trying to communicate with aliens. Steven Greer, for example, leads CSETI groups that use meditation to attract UFO’s from hilltops at night. In his book called “In Advance of Landing”, photographer and artist Douglas Curran presents stories and pictures of people who made fervent preparations to welcome the aliens.

The Raelian movement boasts over 40,000 members in 80 countries. According to the Raelian religion, “On the 13th of December 1973, French journalist Claude Vorilhon (now called Rael) was contacted by a visitor from an other planet, and asked to establish an embassy to welcome these people back to Earth. The extraterrestrial was about four feet in height, had long black hair, almond shaped eyes, olive skin and exuded harmony and humor.” The Raelians are moving ahead with plans to build an embassy to welcome the extraterrestrials back to earth.

In the past few years, Douglas Vakoch at the Center for SETI Research has created a worldwide academic network devoted to interstellar message composition. An outstanding social scientist, he has earned a place for interstellar message composition on the world's research agenda. When the Day of Contact arrives, with its inevitable excitement and confusion, it could be very useful to have a draft reply ready and the technical details already settled.

Implications

Before moving on to explore some significant implications, let's pause a moment to summarize.

The desire to communicate with an alien civilization (extraterrestrial intelligence) is normal and natural.

A variety of efforts have been proposed and implemented over the years.

When humankind does finally achieve communication with another culture, the new perspective and new knowledge that we gain will be valuable, deep, exciting, pervasive, and high-impact.

These simple statements can produce major implications. In this paper we suggest three of these: the need for a better attitude, the need for a more effective strategy, and the possible benefits of a new international forum. We discuss each of these in turn.

A better attitude

The SETI community is not very friendly and encouraging toward most efforts to communicate with extraterrestrial intelligence. We should move toward a more encouraging stance. We should take action to encourage a wide range of new communication efforts, research projects, and policy discussions in this area.

If diverse cultures and civilizations have evolved in our universe, communication among them may be one of the most important phenomena in that universe. Perhaps the various cultures and civilizations in the universe have some values in common—literally “universal” values. If so, surely *deep, authentic, wide-ranging communication with other civilizations* is one of these core values.

Such communication should surely be a major focus of the SETI field. Yet the field shows little interest in this goal. Instead, it focuses most of its efforts toward merely *detecting* an alien beacon.

We should foster further studies of the desire and efforts to communicate with extraterrestrial intelligence. It is a fascinating research area that could yield valuable insights. Although this phenomenon seems to tap into a deep, meaningful, powerful part of the human mind or soul, it has been neglected by social scientists.

A better strategy

In October each year, a longstanding international committee meets to set policy for the SETI field. It functions within the International Academy of Astronautics. Called simply “the SETI Committee” for many years, it is now called the SETI Permanent Study Group. As an active member of this committee, one of the authors of this paper (AT) has become enthusiastic about its overall value but critical of some particular decisions and perspectives. If you want more information about this committee, many useful documents are now available at its website at www.iaaseti.org thanks to the efforts of webmaster Paul Shuch.

This key international committee should re-examine its policies that discourage and restrict human-ETI communication. In particular it should explore whether the widespread chilling effect of its two protocols (“Declarations of Principles”) is rooted in the Cold War and is now counter-productive.

Indeed, the basic underlying assumptions should be re-examined. When these protocols were developed, it was assumed that (1) only SETI scientists would be communicating with ETI, (2) the SETI field must never make a detection announcement that turns out to be unfounded, (3) no unauthorized responses can be allowed to a genuine signal, and even in other circumstances perhaps no one should be allowed to

send any sort of message to ETI by any means, and (4) international legal and diplomatic channels are the most appropriate way to achieve #2 and #3. Are these assumptions valid today?

Those assumptions were mildly challenged at the 1995 Oslo meeting by Bobbie Vaile and Allen Tough (they favored a grassroots campaign to encourage students and citizens around the world to draft messages to ETI). In the nine years since then, they have been re-examined only rarely—perhaps never.

Because of assumption #4, the current strategy of the SETI Permanent Study Group tries to get its policies approved by a powerful and prestigious United Nations committee. But this committee, faced with many urgent and difficult space issues, has very little interest in SETI. The International Council for Science (ICSU) and other organizations might be more congenial.

Perhaps it is time to put the two out-of-date Declarations of Principles (protocols) on the shelf for a while and start afresh. Trying to create a set of guidelines or principles to guide the entire range of human-ETI communication efforts might be an interesting and helpful exercise. The two out-of-date protocols focused largely on just one scenario—detecting an intelligent radio signal from a distance of several light-years. The authors of those protocols may have *hoped* that their protocols would cover ETI in the solar system, but they did not

in fact examine this scenario nor adapt their protocol to fit. Likely it would be more useful to develop a protocol to cover all forms of communications with ETI, whether close-up or distant, and whether initiated by humans or by ETI.

A better forum?

Will the SETI Permanent Study Group prove capable of such fundamental re-thinking? It has in its favour many good thinkers among its members, a new chair, and an established niche. But it may not be able to overcome the weight of its traditional views and procedures. If so, a new policy council should be created and vigorously supported.

We propose a worldwide free-standing Human-ETI Communication Council. It would provide policy and guidance (and censure if required) concerning communicating with ETI. In order to keep expenses down, its members could interact electronically rather than bringing the whole council together for a face-to-face meeting.

This independent Human-ETI Communication Council would consist of two members chosen by each of the following:

- the “Transmissions from Earth” subcommittee of the International Academy of Astronautics
- the SETI Permanent Study Group of the IAA
- the SETI League

- the “Interstellar Message Composition” network
- the SETI Institute
- the Planetary Society
- the Astrobiology Institute of NASA
- Cosmic Call
- Invitation to ETI
- National Institute for Discovery Science
- CSETI
- British UFO Research Association.

Although the members would presumably remain faithful to the broad views of their nominating organizations, no member would be bound by detailed instructions. This rule promotes freer discussion and faster decision-making. A new group such as this Human-ETI Communication Council might create fresh policy approaches and fresh strategies.