

Communication Attempts with Extraterrestrial Intelligence

Research on communication with extraterrestrial intelligence involves creating and decoding messages that may theoretically be understood by an extraterrestrial technological civilisation (CETI). The Arecibo message, mathematical languages, and computational techniques for detecting and interpreting 'natural' linguistic communication have all been used by humans to try and communicate. For instance, in its search for intelligent extraterrestrial life, the SETI programme uses both radio telescopes and optical telescopes.



There are multiple independent organisations and individuals engaged in **CETI** research; the generic application of abbreviations CETI and **SETI** (search for extraterrestrial intelligence) in this article should not be taken as referring to any particular organisation (such as the SETI Institute).

Mathematical and Scientific Languages

Carl Sagan

Carl Sagan explored how a message could be constructed to communicate with an alien civilisation in his science fiction novel *Contact*. He used prime numbers as a starting point, followed by universal math and science principles.

Lincos (Lingua cosmica)

Published in 1960 by Hans Freudenthal, *Lincos: Design of a Language for Cosmic Intercourse*, expands upon 'Astraglossa' to create a general-purpose language derived from basic mathematics and logic symbols.

Astraglossa

Published in 1963 by Lancelot Hogben, 'Astraglossa' is an essay describing a system for combining numbers and operators in a series of short and long pulses.

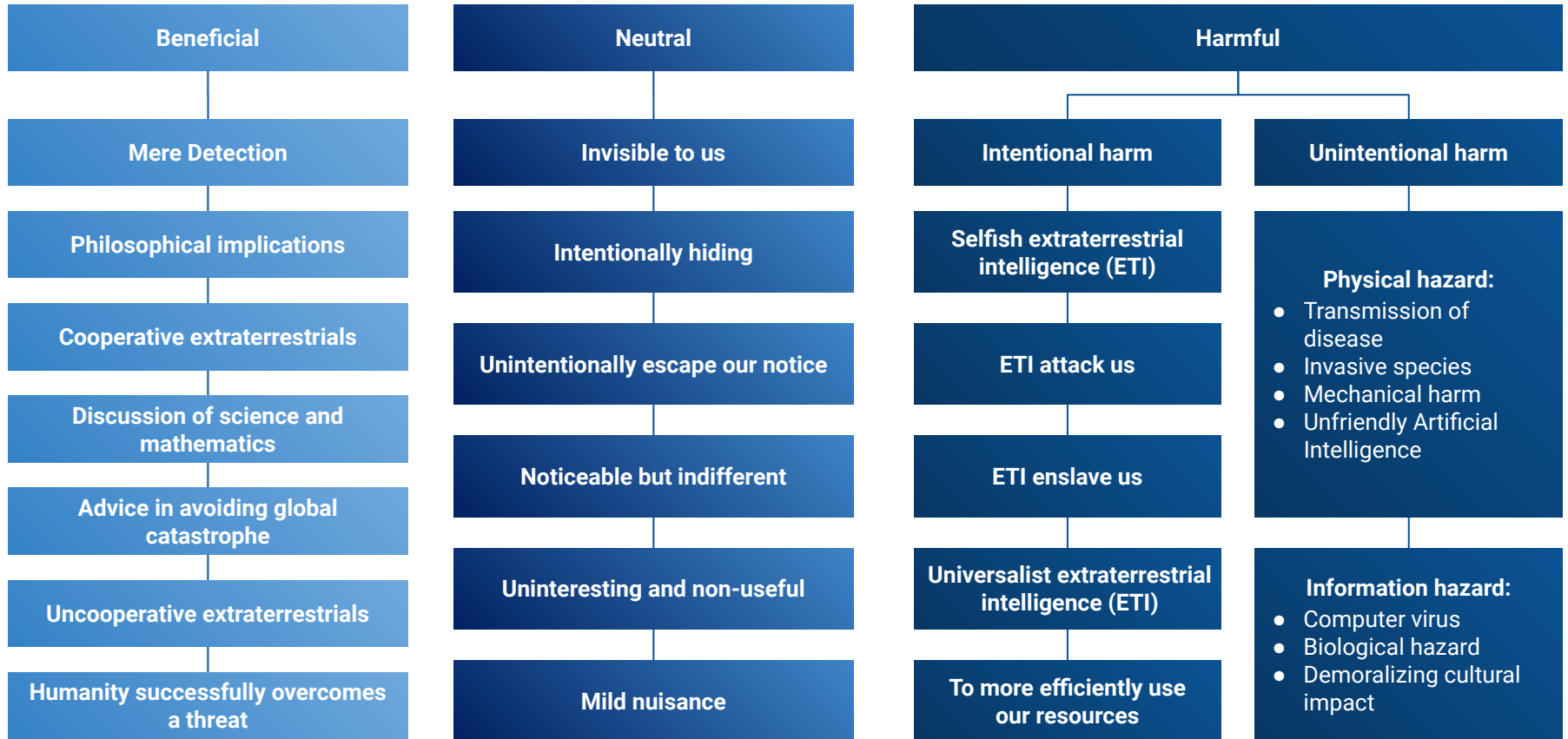
A Language of Science

Published in 1992 by Carl Devito and Richard Oehle, an article based on the fundamental facts of science describes a language similar in syntax to Astraglossa and Lincos, but builds its vocabulary around known physical properties.

Busch general-purpose binary language used in Lone Signal transmissions

In 2010, Michael W. Busch created a general-purpose binary language later used in the Lone Signal project to transmit crowdsourced messages to extraterrestrial intelligence (METI).

Possible First-Contact Scenarios



Risks Associated With Contacting the Extraterrestrial Civilisations

Making attempts to reach other civilisations itself may be dangerous

Extraterrestrial civilisations are remaining out of contact because they may know that sending out signals is catastrophically risky. Exposing yourself can be regarded as an invitation to be preyed upon and devoured.

The mankind lacks the joint action plan

Contacting extraterrestrials without prior broad agreement from some globally representative body should be considered as the endangerment of all mankind and absolutely proscribed with criminal consequences.

Risks

Contacts may look like Columbus meeting Native Americans

Certain extraterrestrial civilisations may have used up resources from their home planets. Such advanced aliens would perhaps become nomads, looking to conquer and colonise whatever planets they can reach.

Extraterrestrials may be better aware of possible risks

If none of the billion and billions of planets in space have developed civilisations that are advanced enough to communicate with or be detected by humans, then there must be something that prevents that from happening.