

IV. Anthropology of “First Contact”

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Abstract

This study considers human contact with extraterrestrial intelligence, the so-called “first contact” in science fiction, from the perspective of anthropology and communication theory. Science fiction has performed various thought experiments regarding whether and how mutual understanding is realized in such human–alien interaction circumstances. First contact can be classified into two categories: the scaffold for understanding based on rationality and objective truth, or on embodiment and internal understanding. Finally, we discuss the existence of another layer that we call the “stance of understanding,” namely, the belief that “they must be trying to communicate.”

Keywords: First Contact, Science Fiction, SETI, Cultural Relativism, Stance of Understanding

1. “First contact” and the Philosophy of Communication

First contact refers to the first encounter between different groups or individuals. Generally, it is a concept in cultural anthropology, which implies the contact between two different cultural groups. In science fiction (SF), it is a major theme exploring meetings between humans and extraterrestrial intelligence (ETI). In 1945, Murray Leinster wrote the novel *First Contact*, which described an encounter between two spaceships, one human and one alien, in the Crab Nebula. This novel established the “first contact theme” in SF.

This study explores mutual understanding between human beings and others, using descriptions of first contact that appear in SF as thought experiments. It is not an

outrageous idea to cite ideas from SF in the human sciences that treat communications or social interactions. For example, the philosopher Ludwig Wittgenstein's *Philosophical Investigations*¹¹ contained a metaphor of a Martian.

“I see a picture; it represents an old man walking up a steep path leaning on a stick — How? Might it not have looked just the same if he had been sliding downhill in that position? Perhaps a Martian would describe the picture so. I don't need to explain why we don't describe it so.”

Anthropologist Gregory Bateson also used the example of a Martian in *Mind and Nature*¹². In a class that he taught at the California School of Fine Arts, he brought paper bags. From one of them, he took out a freshly cooked crab and presented the following challenge to the class:

“I want you to produce arguments which will convince me that this object is the remains of a living thing. You may imagine, if you will, that you are Martians and that on Mars you are familiar with living things, being indeed yourselves alive. But, of course, you have never seen crabs or lobsters.”

Thus, Bateson introduced the students to questions concerning life, entropy, and regularity. Takeshi Ohba¹³, a leading Japanese ethicist, cited SF writer Yasutaka Tsutsui's short story *Worst Contact*¹⁴ (a parody of “first contact”), to discuss the basis of communication. In this story, an Earthian lives in close contact with an alien named Kelala from the Mag-mag star for one week, to test how well each comprehends the other. Every time the Earthian thinks that he understands Kelala, he is betrayed, and he ultimately becomes neurotic. In these examples, the Martian, or alien, represents others with whom one can never associate. This is probably because these fictional aliens lack certain abilities possessed by humans. But, which ability do they lack? This is the question I address in this study.

Masaki Yamada, a famous Japanese SF writer, stated that “the possibility of science

¹¹ Wittgenstein, L. *Philosophical Investigations*. Blackwell Publishing 1953, p.54.

¹² Bateson, G. *Mind and Nature: A Necessary Unity*, Wildwood House 1979, p.6.

¹³ Ohba, T. *Who Are the Others?: Ethics of Self-Organizing System*. Keiso-shobo, 1989, p.46. (in Japanese).

¹⁴ Tsutsui, Y. *Worst Contact, Space Hygienic Exhibition*, Shincho-sha, 1982. (in Japanese)

fiction consists in the imagination of the matters which *cannot* be imagined”¹⁵. Hence, philosophers have used the example of an alien in discussing communication. In high-energy physics, some characteristics of material that do not exist in ordinary conditions can be seen in the ultimate state. Similarly, cumbersome “everydayness” in communication can be unveiled only when we consider an extreme example, such as first contact with an alien.

2. Is ETI Understandable?

Here, we focus on the problem of mutual understanding. Is an alien or ETI understandable? In fact, the answer is beyond us because no one has yet met an alien. Nevertheless, it is worth considering this problem as a basis of communication.

One possibility is that understanding will be accomplished using rationality, such as represented by mathematics. For example, the “Arecibo message” was sent to the M13 star cluster in 1974, from the Arecibo Observatory in Puerto Rico. This message consisted of 1,676 (=23 × 73, a product of two prime numbers) bits. On drawing, a 23 × 73 rectangle (Fig. 1) appeared. The authors of this message thought that if the aliens who received it were intelligent, they could perform prime factorization. This trial message was based on the idea that mathematical truth holds throughout the universe.

A similar idea is that mutual understanding can be attained based on physical laws. A message plate (Fig. 2) was placed in the Pioneer 10 spacecraft in 1972, which was the first human-built object to leave the Solar System. The upper-left figure of the plate shows a schematic representation of the hyperfine transition of hydrogen, which represents a wavelength of 21 cm, as the unit of length.

“Similarity of body” might also be a basis for understanding ETI. According to this idea, even without using mathematics or physics, if an alien’s body is similar to a human body (i.e., the alien appears “humanoid”), understanding becomes possible. However, why should body similarity result in

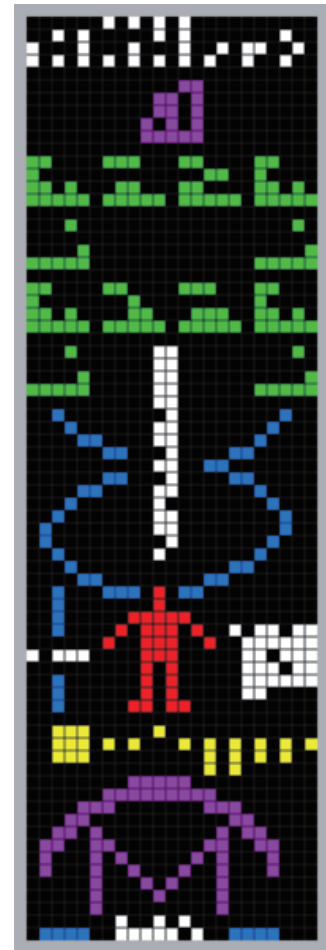


Fig. 1. The Arecibo message.

¹⁵ Yamada, M. *Hunting the God*, S-F Magazine May 1974, 1974. (in Japanese)

understanding? This is actually a difficult problem to solve. The idea that a common basis for communication exists, such as mathematical truth, physics, or the body, corresponds to “anti-relativism” in cultural anthropology.

Alternatively, in some SF, the alien is incomprehensible. One example is the novel *Solaris*¹⁶ by Stanislaw Lem. Solaris is the name of a planet, and its oceanic surface has some kind of intelligence. However, every attempt by human researchers to communicate with it ends in failure. Tsutsui’s *Worst Contact*, mentioned above, is another good work, albeit slapstick, that depicts unintelligibility. This perspective corresponds to “relativism” in cultural anthropology.

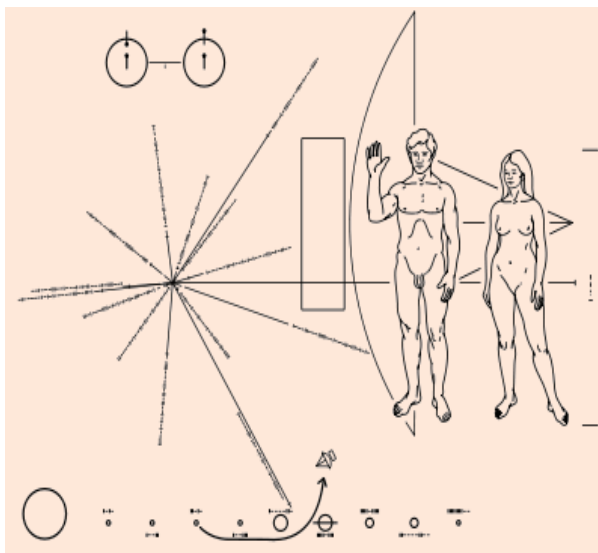


Fig. 2. The Pioneer message.

If the Search for Extra-Terrestrial Intelligence (SETI) succeeds, cultural anthropologists will be called on to discuss the understandability of intelligence. They should prepare themselves for this by considering the problem of relativism.

3. Stance of Understanding

SF portrays many kinds of aliens. Some are friendly, such as Steven Spielberg’s character E.T., whereas others are hostile: Fred Saberhagen’s *Berserker* book series¹⁷ provides a typical example of hostile aliens. However, even hostile aliens can have a common basis for understanding, that is, “we are hostile toward each other.” Therefore, hostility is said to be “one kind of understanding.” I call this the “Tom and Jerry paradox” because the cartoon characters Tom and Jerry are always fighting in a friendly manner. Yet, a common basis, which we can call a “stance of understanding,” still remains between them. We can use philosopher Donald Davidson’s “principle of charity”¹⁸ to try to understand others, that is, “We make maximum sense of the words and thoughts of

¹⁶ Lem, S. *Solaris*, 1961, MON, Warker.

¹⁷ Saberhagen, F. *Berserker*, 1967, Ballantine.

¹⁸ Davidson, D. A Nice Derangement of Epitaphs. LePore, E. (ed.) *Truth and Interpretation: Perspectives on the Philosophy of Donald Davidson*. Blackwell, Oxford. 1986, pp.433-446.

others when we interpret in a way that optimises agreement” to try to understand others. The aliens described in *Solaris* or *Worst Contact* discard this stance from the onset.

Thus, we find two layers of mutual understanding (Table 1). On the lower layer, an effort to understand the other party exists, even if the relationship is friendly, such as that seen in *E.T.*, or hostile, such as that in the *Berserker* series or in *Tom and Jerry*. On the upper layer, the existence of an “intentional stance of understanding” itself becomes a subject of discussion, such as in *Solaris* or *Worst Contact*. To use a philosophical term, it can be called the “transcendental layer,” because the basis of communication itself is questioned here.

Then, our problem is whether such an “intentional stance of understanding” that mankind probably has, emerges naturally in ETI or not. Let us examine this question by considering the nature of life. One principle attribute of the living body is “self-replication.” Therefore, any living body must be “similar to others” in this sense. Given such a condition, in which one is surrounded by many “similar others,” the intentional stance of understanding might emerge naturally. If this supposition is applicable to aliens, they might also have such a stance, and first contact with them could be achieved successfully.

Table 1. Two layers of mutual understanding

Intentional stance of understanding exists		Intentional stance of understanding does not exist
Friendly	Hostile	n.a.
<i>E.T.</i>	<i>Berserker</i> , <i>Tom and Jerry</i>	<i>Solaris</i> , <i>Worst Contact</i>