

**IAC-07-E6.5.14****METALAW AS A FOUNDATION FOR ACTIVE SETI**

Douglas A. Vakoch

Clinical Psychology Doctoral Program, California Institute of Integral Studies

1454 Mission Street, San Francisco, CA 94103, USA

and

SETI Institute, 515 N. Whisman Road, Mountain View, CA 94043, USA

email: [dvakoch@ciis.edu](mailto:dvakoch@ciis.edu), [vakoch@seti.org](mailto:vakoch@seti.org)

**ABSTRACT**

Current strategies in the Search for Extraterrestrial Intelligence (SETI) presuppose an asymmetry between human and extraterrestrial communicants in the degree of responsibility that should be expected to establish contact. For contact to occur, it is argued, an extraterrestrial civilization must be much longer lived than humankind currently is. Because active transmitting is more expensive than passive listening, it has been argued that we should expect that older, extraterrestrial civilizations should bear the onus of transmitting, relieving humankind of this more active role.

Principles of Metalaw proposed by Andrew G. Haley and developed by Ernst Fasan may suggest an alternative emphasis, which would also take into account the potential benefits for extraterrestrial intelligence of receiving transmissions from Earth. In describing the principles that may guide the relations between civilizations, Fasan has proposed "It is not a legal, but an ethical principle that one race should help the other by its own activities." But how could a relatively young civilization such as ours exercise such an ethical obligation, helping a more advanced civilization? The current paper suggests that the very precarious and vulnerable nature of being a young civilization may be a rare commodity in an interstellar exchange, providing invaluable information to share with more technologically advanced civilizations. This is consistent with Patricia Sterns' observation that an intentional communication could provide important information to another civilization even if they have previously detected intelligence on Earth via leakage radiation.

**INTRODUCTION**

Since the 1980s, under the auspices of the IAA and IISL, legal experts, scientists, and technologists have devoted significant attention to legal issues relevant to the Search for

Extraterrestrial Intelligence (SETI), which seeks evidence of technological civilizations around other stars. This discussion has drawn upon precedents from space law and other legal principles to provide guidance about the transmission of messages from Earth to

any extraterrestrial intelligence that might be detected in the course of SETI research.

More recently, there has been increased interest in the international SETI community on *active SETI*, in which intentional signals would be sent from Earth prior to the detection of intelligence on other worlds. Some have argued that essentially the same legal and policy considerations apply whether one is replying to a signal from an already detected civilization, or whether one is transmitting without prior knowledge that an extraterrestrial civilization exists. In contrast, this author suggests that decisions about whether to transmit from Earth *de novo*, prior to detecting extraterrestrial intelligence, may require a different deliberative process than traditional, passive SETI.

One of the challenges of adopting legal precedents as a foundation for exchanges with extraterrestrial intelligence is that law is most informative when there is already a well-established relationship between the actors whose relationship is in question. That is, before we know what the appropriate legal relationship between two entities should be, we typically know that both entities actually exist, and we have an existing of some sort relationship between those two entities.

If we detect extraterrestrial intelligence in passive searches for signals from other planets, then we would indeed know that the other intelligence exists. If their signal is in response to unintentional leakage of electromagnetic radiation from Earth, or other evidence of developing civilization on Earth, such

as atmospheric changes in the nineteenth century due to industrialization, then the extraterrestrial civilization would also know about our existence. Thus, there are at least some cases of traditional passive search scenarios in which legal precedents would seem to provide at least initial guidance for defining our relationship. A more perplexing case holds for active SETI, in which we would transmit a message to beings whose existence we posit, but without direct evidence.

### **DIPLOMACY AND SCIENCE**

Consistent with the ideal of scientific objectivity, most interstellar messages to date have implicitly assumed a third person perspective, in which events and actions are recounted as if they were being described without bias. Nevertheless, those who have constructed interstellar messages have often acknowledged the limitations of their own perspectives, and the inevitability of interjecting their own values into interstellar messages, at a minimum insofar as they are choosing the content to be included.

This emphasis on an objective, third person perspective is consistent with the traditional goal within the SETI community of modeling interstellar communication upon diplomatic and legal discourse. The SETI community is guided in its actions by a protocol that dictates that any decisions about transmitting messages in reply to other civilizations should be made on behalf of all of humankind.

The astronomer Jean Heidmann provided a prototypical example of how one might portray the breadth of human

concerns, but minimizing bias toward a specific perspective. In his plan, we might simply send one or more encyclopedias. Even encyclopedias, however, represent editorial perspectives including decisions about which topics are worth including and how much attention each deserves, even if these biases are not explicitly stated. Even if it were possible to create a message that was neutral, however, the question remains whether this is an appropriate ideal.

### **CONSENSUS OR DIVERSE PERSPECTIVES?**

Using an approach inspired by the ideals of international cooperation and consensus, typically associated with passive SETI protocols and inspired by diplomatic models, we might focus on messages having a content about which we can come to broad-based consensus. Drawing on the author's alternative Dialogic Model, we might alternatively seek to represent the *diversity* of human perspectives in interstellar messages, emphasizing the value of individual expressions rather than relying solely on content upon which all agree. From this perspective, one might argue that if a message is restricted to only the content about which there is universal consensus, the resulting message would provide a very impoverished – and perhaps brief—representation of human concerns.

It is by no means certain, however, that an extraterrestrial interlocutor will automatically assume that a message from Earth will be sent on behalf of all of humankind. Indeed, the claim that any particular message is representative of Earth as a whole, while also

describing the conflicts and lack of coordination of many aspects of our civilization, would make a claim of broad representativeness questionable, and rightly so.

Indeed, physicist Freeman Dyson has argued that the multiplicity of messages that might follow detection of extraterrestrial intelligence, while not in accord with existing SETI protocols, is nevertheless the likely response given the challenges of regulating transmissions from Earth. However, Dyson sees this cacophony of responses as representing humankind, insofar as it represents our lack of agreement on many fundamental issues.

### **AVOIDING DECEPTION**

As some commentators on interstellar messages have noted, interstellar messages that present humans as fundamentally altruistic, without noting our less benevolent aspects, would be fundamentally deceptive. If in addition the content of messages raises questions about the consistency of our claims, then in addition our credibility might be called into question. Lawyers Alex Haley, Ernst Fasan, and Patricia Sterns have noted that among the various Metalegal guidelines for appropriate interstellar communication, a fundamental principle is truthfulness.

### **THE INTERGENERATIONAL NATURE OF INTERSTELLAR COMMUNICATION**

If we conceive of interstellar messages as not self-contained, complete messages, but rather as a series of ongoing transmissions that will be made across generations, then an *epistolary*

model very quite useful. Using an epistolary model, each message is akin to one letter in an ongoing series of letters. In the case of transmissions that occur over several generations, the author changes over the course of time, and there may well be periods in which our cosmic interlocutors would receive very few additional letters, as interest in active SETI waned or funding for such projects was scarce. One important feature of our civilization that we could communicate in a transgenerational epistolary model is the extent to which we are capable of a project of ongoing transmissions. Intermittent bursts of messages over the course of millennia would convey a very different sort of civilization than one that continually transmits.

### **WHOSE HISTORY?**

The intergenerational nature of interstellar communication makes it particularly important to be clear about who is speaking. Literary theorist Jonathan Culler also reminds us that when we are looking at the point of view from which stories are told, we need to separate two aspects of point of view. First, who is speaking, and secondly, whose perspective is being presented. In an interstellar message that would portray the history of humankind, we might recount history through the words and ideas of those who have written in the past, but it's possible that the particular presentation of these ideas represents the view of the one who juxtaposes various views on the past into a far larger history of humankind.

As the author has noted in earlier papers, one compelling theme for an interstellar message is a specifically evolutionary

history of humankind, told within the broader framework of cosmic, biological, and cultural evolution. During the past century, evolution has played the role of a central myth of our self-understanding, making it particularly appropriate to represent both where we came from and what our recent and current condition.

The temptation in interstellar messages is to describe the state-of-the-art of our current knowledge. There have been occasional exceptions. In the Voyager interstellar record, a bit of the history of science was included in the form of an image from Isaac Newton's *System of the World*, but even here, the image selected was chosen because its continuity with current conceptualizations of celestial mechanics. Alternatively, one might recount the history of science by a successive set of accounts of science as expressed in their own terms.

### **CONCLUSION**

The emphasis on the benefits of interstellar communication for humans, rather than for extraterrestrial intelligence, is reflected in the Draft Declaration of Principles Concerning Sending Communications with Extraterrestrial Intelligence, developed within the IAA SETI Committee. This document notes that if a message is sent to an extraterrestrial civilization, "The content of such a message should reflect a careful concern for the broad interests and wellbeing of Humanity...." No mention is made of the potential benefits of such communication for intelligence on other worlds. Although many have suggested that humankind might benefit from joining a "Galactic Club" of other civilizations, few have suggested that

humankind should be expected to pay dues to join, or that we should consider the needs and interests of other members of the club.

*De novo* transmissions from Earth, prior to detection of an extraterrestrial civilization, may also have a salutary impact on future generations of humans. If other civilizations are waiting to reveal their presence until receiving an invitation from humankind, an active SETI program may be a prerequisite to establishing communication with extraterrestrial intelligence. Thus, search strategies based on Metalegal principles that take seriously human obligations to other civilizations may also increase the chances that future generations of humans will make contact with life beyond Earth.