

IAA/IISL Scientific-Legal Roundtable on SETI AND SOCIETY

Cultural and Institutional Aspects

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ABSTRACT

The potential of discovery of an extraterrestrial intelligent life form suggests the consideration of multiple cultural and institutional aspects of the consequences of such a discovery. This paper surveys the implications for religious and socio-cultural attitudes and the existing and possibly needed institutional arrangements that a discovery of an extraterrestrial life form would involve.

Some world religions have addressed the implications of life in other locations in the universe. Most of these views are well published.¹ Broader issues of socio-cultural implications have had less attention, but they are being considered now increasingly. We review some recent literature on these implications and add commentary on the greater need for education and awareness-raising. A handful of institutions deal with these issues continually. Public awareness of their activity is relatively low, although increasing.

Concerning the institutional issues, a brief survey indicates that multiple appropriately constituted institutions exist which could deal with the world cultural impact of a discovery of extraterrestrial life, but it remains to determine the relative order of precedence these institutions would have in dealing with a discovery, how they would interact, and with what priority. This paper discusses some alternative paths for various possible institutional responses.

ON SETI AND RELIGION

Here is a topic of formidable dimensions. Although we know that SETI means the search for extraterrestrial intelligence in some form, it is not possible to say with much clarity what the word "religion" stands for. The concept of religion is so broadly construed and so inconsistently applied, that it is not clear what religion means. It is generally agreed that within the concept of religion there are groups of people who profess common beliefs or common convictions, and among such groups there are theists (monotheists, polytheists, pantheists, atheists and less precise agnostics). There

are empirical critics of those who believe in a God, or gods, who consider religion nothing more than a "superstitious structure of incoherent metaphysical notions;" or, some say, religion is a collective expression of human values. Karl Marx described religion as "The opiate of the people." To Sigmund Freud, religion was a universal obsessional neurosis. But then, to Sigmund Freud, SETI probably would be a selective, scientific obsessional neurosis. Still others contend that the entire concept of religion is simply an unrestrained extension of human super egos.

We are not here to debate the question "What is religion?" but we are interested in the implications for the cultural response manifest among religious people to the potential discovery of a different (superior or inferior) life form in the universe away from the Earth. To make this commentary feasible and to keep it within manageable dimensions, I limit my comments today to the potential impact of such a discovery on major theistic religions. The nontheists and atheists are not likely to be greatly altered or moved in their beliefs, or nonbeliefs, by a discovery in any case.

Following a discovery, theists will divide into one of two groups. The first group will accept such a discovery as another compelling proof of the existence of an eternal, omnipotent God with powers unfathomable by humans. The second group will begin to reexamine all that they believe and begin to consider that they may want to reevaluate their positions, if in fact their God did not create man as a central work in his universe, so that man might come to know and love and serve Him.

I believe such a discovery will change few peoples' minds about what they believe, if they believe anything. For those without religious beliefs, a discovery is not likely to work a religious conversion in their hearts. To those with confidence in their religious beliefs, the discovery will likely be another interesting scientific experience in knowledge getting, but it will probably not be a religious experience.

In sum, the detection or discovery of another life form in the universe as a result of SETI is not likely to cause

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profound changes in very many minds or hearts of humans with a clear sense of what they do believe about their spiritual being. It may cause some without beliefs to begin to seek a spiritual dimension in their lives. For most people, I believe, discovery will be a fascinating piece of intelligence with fundamentally little, if any, import for or affect upon their religious beliefs.

SETI AND SOCIO-CULTURAL ATTITUDES

In the late 1980's NASA funded and the SETI Institute in Mountain View, California organized a multidisciplinary workshop on the Societal Impact of a Potential ETI Discovery.² The workshop produced a report and the Executive Summary of that report is available over the Internet on the home page of the SETI Institute: <http://www.seti-inst.edu/caseti.html>. Numerous observations were recorded and a variety of recommendations were proposed for NASA and other organizations interested in and supporting ongoing SETI programs. It would not be useful here to rehash all that material, but it may be useful to assess the extent to which the vintage 1990 recommendations of that workshop have been implemented by anyone or have been overtaken by intervening events. Following a few paragraphs of philosophical assessment of our current status with regard to SETI, we will review a few workshop recommendations that have generated action, and examples of some recommendations that are probably now overtaken by events.

Scientific discovery is a catalyst for change. Change is essential to what humans in society conceive as and consider progress. It is an historically demonstrable fact that humanity, as a group, is slow to change and generally prefers to ignore rather than adopt change. Discovery of a new and different life form in the universe, particularly an intelligent life form, may cause humanity to change slowly in psychological ways.

The late Eugene Emme, NASA Historian, once wrote³ that human concern with the nature of the universe has attained conscious rather than romantic explanations as a result of the rise in use of the scientific method over the past 500 years. In that period, astrophysics has provided two great deflations of the human ego:

(1) the discovery that the Earth is not the center of the universe, and (2) the discovery that our sun is but an insignificant star in a dynamic and, as yet, unbounded universe. The next step in the accumulating deflation of human ego, suggested Emme, will be the detection and confirmation of existence of extraterrestrial life, and the realization that human life may be but one

among numerous [Emme said millions] of intelligent races populating the universe.

Such profound observations caused the Workshop on Societal Effects to make a number of suggestions. For example, concerning SETI and human behavior, it suggested study of the concept of strangers, aliens and ETI in different cultures to see how different peoples define, regard, and tend to respond to the concept of "aliens." The purpose would be to anticipate and seek to preempt possible negative responses to a discovery. I know of no formal study in this connection, but I suspect such work is being done somewhere. Next, identify groups with substantial potential to affect policy, and ensure that they are informed factually and educated on the process and potential of a SETI search. Thus, avoid erratic responses by eliminating much of the surprise or shock of a discovery. Selected institutions are working hard in this area, including the SETI Institute. School curriculum packages are being made available and itinerant lecturing is conducted at all opportunities, particularly to governmental and public policy study groups.

Meetings like the exobiology meeting earlier this year in Capri, and the forthcoming international conference on SETI scheduled in Melbourne, Australia in January, can make major contributions to public awareness and education. Also informed SETI researchers can seek outlets in popular media for more coverage and explanation of SETI. The recently released movie based on the Sagan novel, *CONTACT*, is an excellent example of what can be done to build public awareness. The closer one looks at the recommendations made, the more one discovers activities that actually implement many recommendations. As one who participated in that workshop, it is gratifying to me to see so many of the recommendations made being implemented today. The Executive Summary on the SETI Institute home page includes additional recommendations on:

- SETI and Human Behavior,
 - SETI and Policy, and
 - SETI and Education, News and Entertainment.
- There is also a discussion document on "*SETI: What Are the Possible Societal Effects.*"⁴

The work done was not temporally fragile. I think it stands well the test of time. I encourage any interested person to obtain a copy and study it. The workshop was somewhat unique in the degree to which it identified and spelled out answers to difficult questions of how to contend with the potential societal impacts of a SETI discovery.

SHORT AND LONG TERM CONSEQUENCES OF A SETI DISCOVERY

Immediate impacts of a discovery will be readily apparent to all. New music will appear, along with new books, articles, monographs, treatises, poetry, motion pictures, dramas, paintings, sculptures, and comic books. New television programs will appear, along with new cartoon series, traveling lecturers (some qualified and some questionable), new university curricula and even some new religious sects may appear.

There probably won't be changes noted in overall societal behavior for a time, but some fundamental changes will occur in time. Will the effects be as great as the impact of the Internet on human social contact? Will they be as great as the impact of the introduction of the telephone? Or the automobile? Or of the jet plane? In the short term, I doubt it.

The impact of discovery of extraterrestrial life may be more like the cultural impact of discovery of the Essenes' scrolls. The erudite will want to keep abreast of the very latest developments in interpretation of events, as well as development of reactions or possible responses. The average person, working at a machine tool, or in the fields, or driving a taxi, or teaching 5th and 6th grade mathematics, will probably not significantly alter either life habits or life style, with the possible exception of watching a little more evening news on television, when convenient. But, remember, the majority of people on this Earth still do not have or have access to evening television. So, life will go on. After a brief flurry of emotion, esoteric interpretations and assessments, things will resettle to routine.

Real changes will be generations in coming and they will very likely be psychological changes, like those suggested by Gene Emme. Humanity will gradually come to think differently about itself. A discovery could draw us all closer together and cause a more tolerant world of mutual respect to emerge. Modern conflict ridden, neo-hedonistic, gratification oriented societies, and religiously dominated reactionary societies, and politically motivated suppressive societies might finally understand that we all have to live together on this planet, and we are not doing a very good job of it right now. We might learn to love each other.

I believe the impact of an ETI discovery will be subtle and long playing, not massive and immediate. We would all begin to think more seriously about the observation of Konstantin Eduardovich Ziolkovsky.

that Earth is the cradle of man, and one cannot remain forever in the cradle. We will be forced to see ourselves as one life form and one society among many. Suddenly, Andrew Haley's concept of Metalaw may be dusted off and taken down from the back shelf. The fictional works of authors like Edgar Rice Burroughs, H. G. Wells, Arthur C. Clarke, Isaac Asimov and Ray Bradbury will be reread to seek clues or suggestions about what the future may hold. The real cultural impacts will be gradual, incremental, and largely unconsciously assimilated.

If humanity achieves a SETI discovery, confirmed, will the major religions of the world change? I think not. Will political parties in power or governments be dismissed? To what end? Will Proctor and Gamble or Nestle's or Grundig stop advertising? No. The likely impact in the commercial economies of the world is that we will see advertisements depicting artists concepts of new life forms discovering, being thrilled by, and adopting earthmen's products, because they are so superior! It will not always be explicitly indicated what the products are superior to! That's advertising.

Will the diurnal cycle change? No. Therefore most people will still get up in the morning, and go to bed in the evening, although some may spend more of their conscious day contemplating life beyond the Earth to a greater extent than they ever have before. Will economies change? Will the tides be perturbed? Will the price of bread go up or down? Not likely. Well, then, what *will* happen?

We will convene meetings to consider what to do. That brings me to consideration of the likely institutional responses to an ETI discovery.

SOME INSTITUTIONAL RESPONSES⁵

The International Council of Scientific Unions (ICSU), with heavy emphasis on exobiology, astronomy, astrophysics and planetary geology, will swing into action and a great many special meetings, symposia, conferences, workshops, and reports will be generated. With what utility, remains to be seen. A great deal of early, excited, emotional response will assuredly give way, in time, to the dampening effects of cold, hard facts of times, distances, linguistics, and of other realities involving things that we do and do not now know.

What will the *United Nations* do? Discovery will certainly be a matter on which heads of state all over the Earth will want to have an opportunity to speak, and to hear others' views. The probable eventual re-

sponse of the UN, after receiving a requisite number of requests to do so, will be to convene a special meeting of the General Assembly, listen to general statements of those who choose to speak, and then explore options for future alternative courses of action. The Assembly will call for special studies and preparation of reports to the Committee on the Peaceful Uses of Outer Space, and thus to itself, by ICSU (on relevant scientific matters), the International Telecommunication Union (on relevant space communication matters), the International Astronautical Federation (on relevant engineering matters), the World Council of Churches (to assess religious impacts), and any number of other nongovernmental organizations. These assessment studies could take years, but there would be no reason to hurry. *The UN Committee on the Peaceful Uses of Outer Space will probably choose to recommend creation of a Special Working Group on Extraterrestrial Contact.*

The *UN Security Council* would probably meet once, briefly, assess the need for any collective military or defensive action, and assess what defenses we might have against possible assault. The major problem will be that, until it happens, we won't know very much, if anything, about the methods or mechanisms of an assault, if there is ever to be one. We will have to deal with it after the fact. Having reached this conclusion, the Security Council should go home and relax.

The problem that will arise in all this institutional activity will be to determine who is in charge. How are we going to organize to determine appropriate actions by humanity, if any? What, if any, response should we make? We probably do not want Saddam Hussein calling the shots. I personally lack confidence in just about any national leader one could name. Strength in reaching appropriate conclusions in this matter will probably lie in employing the collective knowledge and wisdom of humanity, paltry though it may be.

The best mechanism through which to arrive at appropriate solutions, it seems to me, is the United Nations General Assembly. If there was ever a justification for bringing the world leadership together under one roof to discuss a problem, this will be it. It will not be essential to reach immediate decisions. We will have plenty of time to discuss alternatives, to think them through, and to lay out a plan of action. If the UN General Assembly convenes early and addresses a course of information gathering, periodic assessment, and action planning, I doubt that its leadership role could be effectively challenged by any other forum. Undoubtedly there will be national leaders who will deny the UN any authority to determine their respons-

es. My advise on dealing with such behavior, based on having helped raise five impetuous children, is ignore them. They will see the sense in global consideration and globally coordinated action in due course. Once it becomes clear that nations are pooling their intellectual and scientific resources in a common effort, even the most stalwart go-it-aloners will come around. Those with the supposed lead in intellectual and scientific capability will probably try to lead the way. They can't do that if they are standing outside, while the General Assembly is debating and making decisions.

SOME CONCLUDING OBSERVATIONS

Over the past half century, many mechanisms have prepared us for a SETI discovery. Think about the excellent science fiction writings, increasingly believable movies, advances in scientific research, improvement in public understanding of astronomy, actual visits to other planets in the solar system, the deep space imaging of the Hubble space telescope, all contributing to a general heightening of awareness and understanding concerning our world and its place in the universe; at least so much of it as we now know. The activities in each of these areas continues and in some it accelerates. The world is probably as ready now for a SETI discovery as it will ever be. Consequently, I do not foresee public panic or confusion, rioting, great distress or massive disturbances as the consequence of a discovery.

There will be keen interest among the public and constant demand for more information. The single greatest problem will be in sorting out information sources. Which are the responsible, credible sources, and which are the exploiters and bogus sources? You may surely count on one thing. The press at large will not help to sort out the responsible sources. They will report the wackos and gurus with every bit as much faithfulness as they will report responsible sources. They will probably even give the wackos more space and time, because that sells more magazines, newspapers and garners more listeners and viewers than dealing with reality. There will be distortions, untruths, allegations against governments and the UN, but it should all be manageable, if the competent and informed speak out.

The mass communication media are multiple and effective. The responsible and informed must keep channels of communication open and use them wisely. The world press can have an enormous impact on public opinion, but they can't change the truth. Truth will triumph over falsehood in time.

FOOTNOTES

¹ Several excellent bibliographies and anthologies of the literature on SETI have been assembled. See, for examples, Goldsmith, D. and T. Owen, *The Search for Life in the Universe*, Addison-Wesley (Reading, Mass.), 1992; Morrison, P., J. Billingham and J. Wolfe (eds), *The Search for Extraterrestrial Intelligence: SETI*, NASA SP-419, Wash., D. C., 1977; Billingham, J. (ed), *Life in the Universe; Proceedings of a Conference at the Ames Research Center*, NASA Conference Publication 2156, Wash., D. C. 1981; National Research Council, *The Search for Life's Origins: Progress and Future Directions in Planetary Biology and Chemical Evolution*, National Academy Press, Wash., D. C., 1990; Poynter, M. and M. J. Klein, *Cosmic Quest*, Atheneum, 1984; Bova, B. and B. Preiss (eds), *First Contact: The Search for Extraterrestrial Intelligence*, The Penguin Group, New York, 1990.

² A survey of the results of this workshop is available in Doyle, S., "Social Implications of NASA's High Resolution Microwave Survey," a paper presented at the XLIVth Congress of the International Astronautical Federation, October 1993, Graz, Austria, Paper No. IAA.9.2-93-786, available from the author.

³ See Emme, E., *Thoughts on Mankind in Space*, at the editor's Foreword, unpublished, circa 1978. This is an unpublished manuscript provided to the author by the late Gene Emme for comment in 1978, when it was a work in progress.

⁴ Obtainable on the Internet at the SETI Institute home page: <http://www.seti-inst.edu/soc-fx.html>.

⁵ See also the 1996 study Doyle, S. E., "Post Detection Global Institutional Arrangements," a paper presented at the XLVIIth International Astronautical Federation Congress, October 1996, Beijing, China, Paper No. IAA-96-IAA.9.2.13.