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PESEK LECTURE

SETI and Society — Decision Trees

John Billingham

SETI Institute, Mountain View, California, USA

Modern SETI began in 1960 with Frank Drake's Project Ozma. Since then there have been some eighty-five SETI searches. Ten are in existence today. While the total effort involved is minuscule in terms of world resources, it is quite possible that the enterprise will grow over the decades to come, and begin to engage society at a more visible level. Should an unequivocal ETI signal be detected over the next few decades, society will suddenly be involved in a major way. For both reasons it is important to think through the interactions between SETI and society, especially for the case of the discovery scenario. This paper examines the present and future of these interactions in terms of decision trees for society. Major branch points are: detection or no detection; continuing with passive SETI (listening), or conducting active SETI (transmitting), or both, or neither; active SETI in response only to a detection or *de novo*; the nature of a response as a function of the information content of a detected signal; the nature of a transmission sent *de novo*; the opening up of a dialog on receiving a response to a *de novo* transmission; and not least all these possibilities now multiplied for the case of the detection of a number of other civilizations.

The reaction of society to the detection of an extraterrestrial civilization will be a function of multiple variables, as has been described in the study of the "Cultural Aspects of SETI" conducted by the SETI Institute. The decision pathways which society elects to follow will be a function of these and additional variables, and will involve extensive debate. In the International Academy of Astronautics Position Paper on "A Decision Process for Examining the Possibility of Sending Communications to Extraterrestrial Civilizations", it is proposed that the questions surrounding putative transmissions from Earth be transmitted to the Committee on the Peaceful Uses of Outer Space of the United Nations for their consideration.

This paper on decision trees reviews some of the additional societal variables which will come into play in these future debates, and especially the positions likely to be taken by the proponents of transmission and those who are opposed. It is pointed out that decisions must be made, and decision pathways must be chosen. Further, this could happen sooner, rather than later. Consequently, some earnest debate should begin now, in a calm and reflective atmosphere, and some significant resources should be applied to thorough studies of the complex issues involved. Currently, such resources are notable for being vanishingly small. It is surely a

paradox of human behavior that decisions of such profound importance for the future of our society are receiving virtually no attention. Some suggestions are made for improving this situation.