Philosophy for Humans in Space

By Bob Krone, PhD

An input to the National Academy of Sciences Study on the Goals and Direction of the United States Human Spaceflight Program, July 4, 2013.

Abstract
The Law of Space Abundance reads "*Space offers abundant resources for human needs*."[1] Philosophy is the oldest Science and Art. Philosophy is the pursuit of wisdom for decision-making.[2] Although I have defined philosophy for our Space Sciences purposes as "*The pursuit of wisdom for decision making*," much of the work of philosophers through history had the goal of understanding, learning, and teaching about the physical and social world, not decision-making. For Space Sciences, we do not just study philosophy to see how historians described it or to do comparative studies of alternative philosophies. We study philosophy to design the foundations and principles to guide decision-making to create programs that will move humankind toward visions of the future. Once Space Philosophy that obtains the approval of decision-makers is created, it becomes the intellectual vehicle for moving successfully from theory to practice. In our case, the practices will be future journeys for Space exploration, development, and human settlement.

Introduction

The hypothesis of this white paper is that consensus on Space Philosophy will be the catapult for Space missions and operations proceeding to validate the long-held conviction of professionals within the global space community that human spaceflight is a necessity. It will achieve a continual improvement of the quality of human life on Earth and improve the chances of humankind's eventual survival. If philosophy, science, and technology do not advance together, in harmony, the wisdom to create and apply the science and technology will be insufficient, conflicting, or even worse – catastrophic.

Philosophers Change Society

From Socrates, Plato, Aristotle (470-322 BC), and Confucius (551-479 BC) to Carl Sagan (1934-1996), thinkers have observed their social, political, and economic environments, found them wanting, and prescribed changes. Many were educators. Their ideas were adopted by others who helped document them for history and campaigned to produce changes consistent with the principles of the philosopher. Sometimes leadership adopted the philosophy and effected peaceful change. Too often the changes prescribed were threats to leadership, producing conflict, revolutions, and

[1] This law was created by the leadership of the Kepler Space Institute (KSI) in June of 2009. It reflects the conclusions of a century of scientific research on the Solar System and the Cosmos. It is not a law legislated by any government. It summarizes and defines the meta resources of Space awaiting capture for human needs both on Earth and as humans explore, develop, and settle in Space.

[2] Philosophy is defined differently in each science and by various authors. This is the definition the leadership of Kepler Space Institute created as relevant for its *Journal of Space Philosophy*, launched in the Fall of 2012. Go to www.keplerspaceuniversity.com and click on Journal.

wars. Philosophy dictionaries, encyclopedias, and websites document the thinking of philosophers in every century since 600 BC.

Philosophy is the study of knowledge, truth, existence, and reality. The word's origin is Greek, translated as *love of wisdom*. Philosophers search for the meaning, values, and purposes of life and the fundamentals on which they are validated. Values are principles and things preferred by individuals and groupings of individuals. Beliefs are what humans determine to be true and right for themselves and for others. Visions are the thought projections of people for their own futures and for the entities they create. Faith is the combination of beliefs and hopes considered valid for the future. In religions, faith is acceptance of doctrines and teachings. Humankind is the term embracing the human race, wherever found. *Civilization* for this essay is defined as human relations within a society, community, or Space settlement characterized by constructive civil behavior as opposed to destructive barbaric behavior.

Human Spaceflight Philosophy

There are critical differences between the Space Age and the rest of human history on Earth. No nation has ever had enemies in Space. The world's best international cooperative invention, the International Space Station, crosses our heavens every 90 minutes. There are three fundamental reasons why the Space Age began with Sputnik 1 on October 4, 1957 and has progressed for the past 56 years:

First, the urge for flight is part of our human nature. Perhaps it is in our genes, but from wherever it originates, it is undoubtedly our need to explore and our unquenchable curiosity about the universe that drives us to space. Carl Sagan said, "*We are star stuff*."[3]

Second, even if these urges were ignored, the continual improvement of the quality of life for the human race on Earth, and perhaps even our ultimate survival, may hinge on the success of human exploration and habitation of space.

And third, we are all aware that this is a critical time for the space movement and for all of us. Human societies around the world are in turmoil and the prospects for our future have diminishing probabilities without the paradigm shift of benefits that Space holds for Earth's citizens and entities. Earth's resources are limited. Its current seven-billion population will reach ten billion by the mid-21st Century. Poverty is increasing – even in the United States. We see clearly that our generation can use the opportunity presented by our outward expansion into the solar system to design a rewarding and exciting future for human collaboration and to capitalize on the lessons learned from the venture into space to redirect human history on Earth toward peace and cooperation. United States Space leadership has been a fact throughout the 20th Century. The success of many variables of U.S. wealth, stability, and international prestige hinge on decisions made now for the 21st Century. U.S. success is now firmly linked to Earth's global health. Space holds the solutions for the future health of humankind.

[3] Carl Sagan, *Cosmos* (New York: Random House, 1980). See also his *Cosmos* TV Series.

On April 21, 2008, Astrophysicist Stephen Hawking called for an era of Space conquest stating:

> Spreading out into Space will have an even greater effect than Christopher Columbus' discovery of the New World. It will completely change the future of the human race and maybe determine whether we have any future at all.

Kepler Space Institute (KSI) Philosophy

With the initiation of *The Journal of Space Philosophy* in the Fall of 2012, KSI leadership reached consensus on a Space Philosophy to offer the Space Community.[4] The short title for this Philosophy proposed by the Kepler Space Institute is:

REVERENCE FOR LIFE WITHIN ETHICAL CIVILIZATION

(1) Reverence for life is the foundational purpose that will sustain humankind in perpetuity; (2) ethical civilization will be the environment facilitating that end; (3) the Policy Sciences hold the solutions for creating ethical and successful civilizations. These are the three essential foundation blocks of KSI's *Philosophy for the Space Age*. Building these three basics will produce the highest probability of successful Space exploration, development, and human settlements plus the capture of Space resources for humankind's needs on Earth and in Space within the *Law of Space Abundance.* Failure to build any one of these building blocks will destine humankind to permitting similar or worse mistakes and catastrophes to the ones that have plagued Earth's societies throughout history. This is U.S. and global leadership's major challenge for the 21st Century.[5]

The essential characteristic of positive progress and survival for humankind will be the universal acceptance of ethical civilization as its vision. Ethics is the study of the moral principles that govern behavior. It defines civil and compassionate human interactions. The will to live and the affirmation of life account for humankind's expansion on Earth throughout history. That expansion has occurred on Earth in spite of catastrophic setbacks created by both nature and humans. In both philosophy and religion, *good* is characterized by actions reflecting reverence for life. *Evil* is characterized by destructive and barbaric actions that damage and/or kill people. Civilization advances best when members of a society experience harmonious material and spiritual progress for all aspects of their circumstances.

[4] Readers can access and download my article, "Philosophy for Space: Learning from the Past – Visions for the Future," free by accessing www.keplerspaceuniversity.com, clicking on Journal, clicking on Fall 2012 Issue, then clicking on Article 8.

[5] This formula for the Philosophy of The Space Age can be the launch pad for an infinite set of intellectual creations that define its execution in detail. For the purpose of this essay, I will focus on the philosophy of Albert Schweitzer (1875-1965) concerning reverence for life and the Policy Sciences of Yehezkel Dror (1928-present) concerning governance. Philosophy and Policy Sciences encompass huge literature sources available to Space Community scholars. The purpose of this essay is to stimulate interest and to launch research. This will be done with general concepts and basic design, not with detailed justification.

The evolution of prescriptions for the reverence of life and ethical civilization to be basic societal values has proceeded in spasmodic ways in different societies, with religious thinkers and exceptional leaders, beginning independently in Greece, the Middle East, China, and India between the 8th and 6th Centuries BC. It almost disappeared during the Dark Ages, 500 to 1500 AD. The Age of Discovery, 1400 to 1600 AD, and the European Renaissance, 14th to 17th Century, spawned thinkers, scholars, artists, and rulers who valued discovery and material or spiritual progress. Later recorded history documents random belief in reverence for life and ethical practices within society, but no worldviews on those subjects. The 19th and 20th Centuries barely survived the escalating destruction of war. Every human era has had a DNA composed of a mix of positive and negative, of good and evil, of health versus physical and mental sickness, of tyranny and leadership serving the people, of genocide and humanism. Detailed discussions of that history are outside the scope of this essay. The primary scholarly justification used herein was written in Equatorial Africa, from 1914-1917, by Dr. Albert Schweitzer. It was first published in 1923.[6]

Discovery, science, technology, and invention have been persistent drivers of progress for humankind throughout history. The motives and application of those discoveries and inventions reflect variations of good and evil. They represent a positive reversal from pessimism toward optimism in the 16th Century. Christianity made the important change from antiquity's view of morality being that which is profitable and pleasurable to the belief that to be ethical and moral requires action promoting the welfare of others.

Another evolution of human thought was that individual action could produce gains, while passive inaction stalled progress. Over time, that characteristic has grown to the point where discovery and invention occur not by decades or years, not by months or weeks, but now in the 21st century even within nanoseconds. Society is exponentially changing, making accurate predictions for the future less probable.

What has been too often missing in decision cultures is the inclusion of an ethical and moral foundation. Earth suffered through a 20th century of human catastrophes caused by other humans. The resources consumed could have been used to discover ways to prevent or ameliorate natural threats to humankind coming from our planet or from Space. Unfortunate choices were made that were void of *Reverence for Life within Ethical Civilization*.

A valuable lesson for 21st Century Space Age decision-makers is that failure to understand the benefits of this philosophy will stall or reverse humankind's progress. Albert Schweitzer ended his Chapter 11 of *Philosophy of Civilization* (1923) with the conclusion: "*Without ethical civilization our fate is sealed*."

Kepler Space Institute (KSI) concluded that the Philosophy for the Space Age should be *Reverence for Life within Ethical Civilization* and launched *The Journal of Space Philosophy* in the Fall of 2012.

[6] Albert Schweitzer, *The Philosophy of Civilization* (London: A. C. Black, 1923).

Recommendations. The Kepler Space Institute (KSI) recommends that the National Academy of Sciences (NAS) include the subject *Philosophy for Humans in Space* in its sponsored programs for NASA and for private U.S.-based Space organizations.

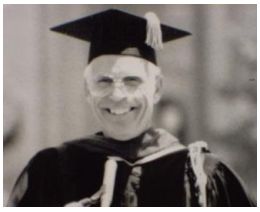
At the International Space Development Conference 2013, at San Diego, May 23-27, the Banquet Keynote Speaker was Dr. A. P. J. Abdul Kamal, Former President of the Republic of India.[7] His address was titled "Space Solar Power: Key to a Livable Planet Earth." Dr. Kamal is unique as a national Head of State with expertise in Space Sciences and Technology. He proposed to the Global Space Community *A World Space Vision 2050.*

A second recommendation of this paper is for the United States to take an aggressive cooperative leadership position to launch *A World Space Vision 2050.* Benefits to the United States and to humankind are not measurable now, but will prove to be immense.

****

About the Author:

Bob Krone, PhD, is the Co-Founder and Provost of Kepler Space Institute and the Editor-in-Chief of the *Journal of Space Philosophy*.



[7] Dr. Abdul Kalam's full keynote speech can be accessed at www.nss.org/news/releases/Kalam_Address ISDC2013.pdf