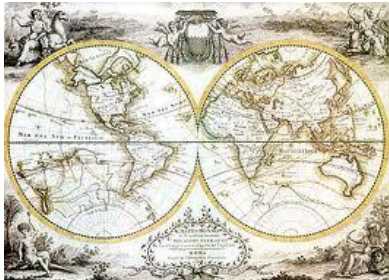


Philosophy for Space: Learning from the Past – Visions for the Future

By Dr. Bob Krone, Provost, Kepler Space Institute [1]



Age of Discovery World Map Kepler Space Institute



The Solar System

What should be the philosophical foundation for the future of humans in Space? What beliefs and values will drive human Space settlements? What is the future for humankind if it remains on Cradle Earth? This essay provides 2012 answers to those questions. But, as the inventor of the essay form, Bordeaux Mayor Michel Montaigne (1533-1592), said, *“It’s a short statement needing a far wider space to exhaust.”*

Knowledge Roots

Philosophy is the study of knowledge, truth, existence, and reality. The word’s origin is Greek, translating as *“love of wisdom.”* Philosophers search for the meaning and purpose of life and the fundamentals on which those are validated. Values are the 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.

The short title for this Philosophy proposed by the Kepler Space Institute is ***REVERENCE FOR LIFE WITHIN ETHICAL CIVILIZATION.***[2]

Why 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 *The Philosophy for the Space Age*. Building these three basics will produce the highest probability for

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 mistakes and catastrophes similar to or worse than those that have plagued Earth's societies throughout history. This is global leadership's major challenge for the 21st Century.[3]

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.

The evolution of prescriptions for 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 Century and 6th Century BC. It almost disappeared during the Dark Ages, 500 to 1500 AD. The Age of Discovery, 1400 to 1600 AD, and the European Renaissance, the 14th to the 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 world-views of those subjects. The 19th and 20th Centuries barely survived the escalating destruction of war. Detailed discussions of that history are outside the scope of this essay. The primary scholarly justification used herein was written in Equatorial Africa, 1914-1917, by Dr. Albert Schweitzer. It was first published in 1923.[2]

Discovery, science, technology, and invention have been persistent drivers of progress for humankind throughout history. The motives and applications 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 nano-seconds. Society is exponentially changing, making accurate predictions for the future less probable.

The tragedies of history have occurred when ethical and moral thinking and reverence for life have been replaced by motives of power, control, manipulation, greed, and genocide. The 21st Century has begun without the eradication of human actions that can cause catastrophic events. Science and technology have brought humankind to the place where human extinction has an increasing probability. When the ethical foundation is lacking, civilization collapses.

But is there a natural life-affirmation, support, or endorsement in nature that has installed in humankind the will to live, to survive, to expand, to learn, or to progress? History gives us strong evidence of a “Yes” answer to that question. Does humankind’s belief in progress both cause and continue because of its achievements in discovery and invention? Is the satisfaction we feel from that action an important part of philosophy of life? Evidence supports more “Yes” answers.

What has been too often missing in decision cultures is the inclusion of an ethics 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.***

Learning from the Age of Discovery

What lessons should we have learned from Portugal’s Golden Age of Discovery, 1394 to 1560? Henry the Navigator, son of King John I, decided to break the Moorish hold on the African and Asian trade routes. That commenced 170 years of Portuguese explorers sailing the world. Ferdinand Magellan, Christopher Columbus, Vasco da Gama, Bartholomieu Dias, Pedro Álvares Cabral, and Gaspar and Miguel Corte Real brought riches, prestige, and power to Portugal by acquiring monopolies on much of the Eastern spice trade. Their ships returned home to Portugal silver, gold, spices, power, and influence.



On 31 May 2012, Mr. Bernardino Palma, Portuguese Age of Discovery Historian, spoke of the motives and results of these 170 years of world transformations, at Cabo de Roca (Cape Roca), on the Atlantic west coast of Portugal, where Portuguese and Spanish sailors were guided home by the lighthouse still standing today. The motives of Portuguese rulers were a mix of commerce, exploration, discovery, and colonialism. The

wealth thus created funded those sailings plus Portugal's developments. His video statement can be found at http://www.youtube.com/watch?v=azC6DX2Jr_g.

Mr. Palma also stated: "This Journal will be a stone's throwing in the water, creating ripples, making people think." The 30-second video illustration of that metaphor can be found at <http://www.youtube.com/watch?v=liRBb8yuYeg>.

Portuguese power and influence did not decline until the 18th Century. That decline occurred due to the competitive desire of other rulers to share in the world's wealth. Other factors in the decline were the rebellions of citizens in the countries colonized.

A hypothesis of this essay is that Portuguese, Spanish, British, and French colonial history would have been very different – and better – if the ***Reverence of Life within Ethical Civilization*** philosophy and policy had been adopted. A valuable lesson for 21st Century Space Age decision-makers is that failure to understand the benefits of that 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.*"

Policy Sciences Provides Solutions

Are we being naively optimistic? How can ***Reverence for Life within Ethical Civilization*** be achieved in a world of diverse beliefs, values, conflicts, and visions? Doesn't the fact that it has never been universally adopted mean it is impossible? Kepler Space Institute's answer is "***No. That is not an inevitable conclusion. Our World is radically changed. Space holds many solutions.***" Ninety years after Albert Schweitzer's 1914 to 1917 writings in Africa were published everything is different. Today ideas need not take decades to reach the public. They happen today with the speed of light. Science and technology have begun the Space Age with humans experiencing Space for the last fifty years and now planning life in Earth orbit, on the Moon and on Mars. Humankind's view of Planet Earth has been transformed.[4] The Policy Sciences have captured intelligence for completely new governance systems. Jonas Salk described the way in 1973 with his book *The Survival of the Wisest*. [5]

Professor Yehezkel Dror, in the preface to his book *The Capacity to Govern: Report to the Club of Rome* (1994, 2001), states "*Radical redesign of governance is, therefore, required; otherwise, increasing social costs, even existence-threatening failures are unavoidable.*" I invited Professor Dror to write a chapter in *Beyond Earth: The Future of Humans in Space*. His Chapter 5, "*Governance for a Human Future in Space*" was his first extrapolation of his life's research and extensive writings into Space. He begins that chapter with the sentence "*New forms of governance are essential for engaging in moving humanity beyond Earth.*" [6] Dror describes humanity moving into a radically novel new epoch where living in Space is only one of its features. He sees that epoch as having a tremendous potential for better or worse.

Dror records that "which of those paths humankind follows will depend on the following required governance characteristics: 1) *Global*; 2) *Inspirational*; 3) *Long term*

perspectives and persistence; 4) Large scale mega-project resources and management; 5) Will and enforcement tools; 6) Raison d'Humanity values". Readers of this essay are urged to study the works of Yehezkel Dror in detail. The position of Kepler Space Institute is that his works are essential components of the Philosophy for the Space Age. This is not simply an academic choice from a huge literature source. We believe that Yehezkel Dror is correct when he finished his Chapter 5 with his conviction that:

On all of these levels much attention needs to be given to governance, because without restructuring governance, the movement of humanity into Space will remain a dream or, even worse, may take the form of nightmares becoming a dismal reality.

It is a recognized fact that humanity is entering a radically new epoch in which, for the first time in history, it has the power to destroy itself by deliberate or unintended action. To prevent grievous harm resulting from this power and to use it for the better, radical improvements in critical future-shaping actors, processes, and institutions are essential, especially in the moral and cognitive qualities of rulers; and that fact is why we have included the phrase "*within Ethical Civilization*" in the Philosophy for the Space Age.

Why Will Space Be Different?

On October 3, 1961, President Dwight Eisenhower spoke to Faculty, Staff, and students of the Naval War College at Newport, Rhode Island. It was a confidential speech just after John F. Kennedy had become President on January 20, 1961. I was one of those students and obtained permission from the Naval War College and Ambassador John S. D. Eisenhower to publish his speech in the U.S. Naval Institute Proceedings of June 1971.[7] President Kennedy had announced on 25 May 1961, to the Congress, that the United States would send a man to the Moon and return him to Earth in this decade. A student asked Ike: "*General, would you give us your opinion on the political and military significance of the race to the Moon?*" Ike thought for a moment, then said: "*Are the doors locked so no one can get out? ...I really believe that we don't have that many enemies on the Moon.*"

No nation has ever had any enemies in Space. The vacuum of any history of human conflict in Space is one important difference between the Space Age and all previous history on Earth. 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 55 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.

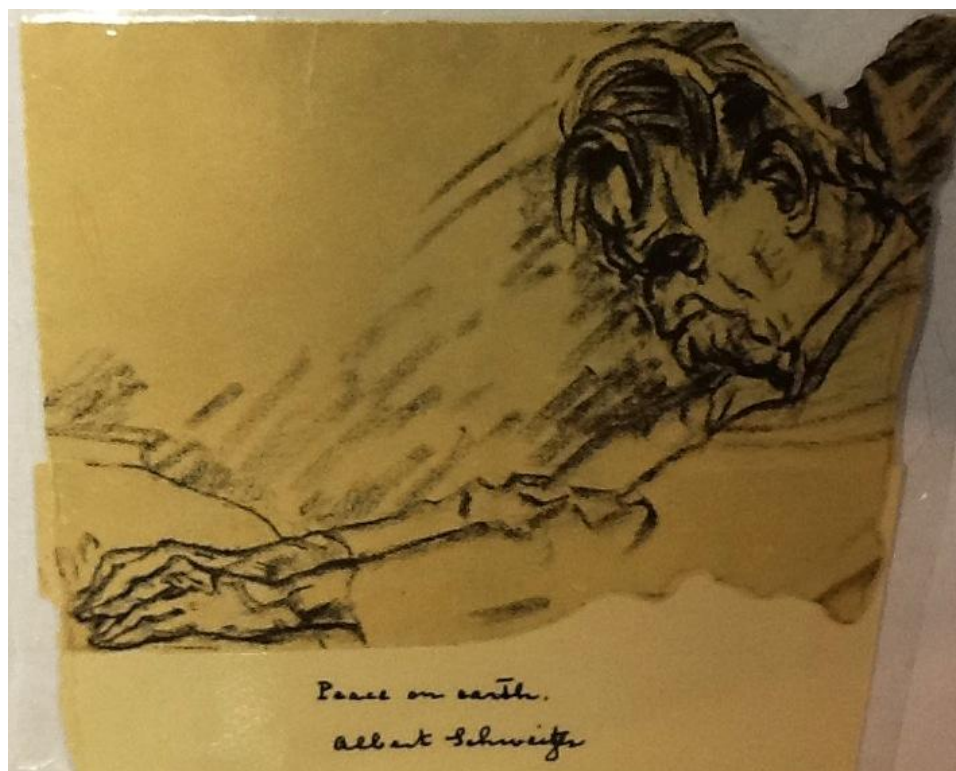
Second, even if these urges were ignored, the continual improvement of the quality of life for the human race on Earth, and perhaps even our ultimate survival, may hinge on the success of human exploration and habitation of space.

Third, we are all aware that this is a critical time for the space movement and for all of us. Human society around the world is in turmoil and the prospects for our future are frightening. But we remain optimistic that we will overcome these challenges and 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.

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 concludes that the Philosophy for the Space Age should be *"Reverence for Life within Ethical Civilization"* and now launches *The Journal of Space Philosophy*.

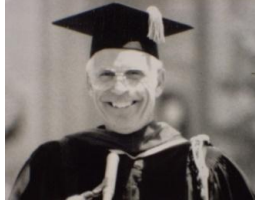


Postscript: This essay was drafted on my flights from Washington DC to Lisbon, Portugal May 28 to June 7, 2012. That travel took place immediately after the Kepler

Space Institute's participation in the International Space Development Conference (ISDC-2012) in Washington, May 25-27. The conference, sponsored by the National Space Society (www.nss.org), occurred as important advances in commercial space systems were occurring. The NSS is the most influential Space organization. The conference brought together over 900 global space development leaders and Space community professionals – 300 of them were students. The Conference was a progress milestone in the evolution of discovery and invention from The Age of Discovery (15th, 16th, and 17th Centuries) to the Space Age. The KSI Course, "*Philosophy for the Space Age*" will be a continuing higher education opportunity for Space Community scholars to advance the research that will facilitate the future of humans in Space being conducted within "*Reverence for Life within Ethical Civilization.*"

My thanks to KSI President, Dr. Robert L. Frantz; Dean of the School of Psychology, Dr. Sherry Bell; Dean of Media and Communications, Walter Putnam; Director of Research, Dr. Terry Tang; Chief Scientist, Edward Kiker; Member of the Board, Joe Sobodowski; Space Law Professor, Dr. David Schrunk; Kids-to-Space Author and Teacher, Lonnie Schorer; Professor of Information Sciences, Dr. Joel Isaacson; Professor of Physics, Eshel Ben-Jacob; Founder, Aerospace Technology Working Group (ATWG), Dr. Kenneth J. Cox; The Space Show, Dr. David Livingston; Policy Science Scholar, Professor Yehezkel Dror; Janet's Planet, Janet Ivey; National Science Foundation, Dr. Paul J. Werbos; NSS-CEO Mark Hopkins; Evolutionary Theorist, John Stewart; Space Scientist Dr. Neville Marzwell; Kepler Member, Dan Shaw; Professor of Space Faith, Dr. (Pastor) Lawrence Downing; Overview Effect Professor, Frank White; Space Energy Professor, Dr. Feng Hsu; Economics of Space Professor, Dr. Kseniya Khovanova; Colonel, USAF(ret), Leo Thorsness; AstroLaw, George Robinson; Beyond Earth Author, Langdon Morris; Beyond Earth Author, Dr. Martin Schwab; Beyond Earth Author, Charles E. Smith; NASA Integrative Studies, Lynn Harper; Founder Ignite Foundation, Becky Cross; Kepler Charter Member, Al Dolan; Kepler Charter Member and this Journal's Associate Editor, Dr. Gordon Arthur; Apogee Space Press, Richard & Robert Godwin; Dr. Yitzhaq Hayut-Man; Author, Collin Skocik; Professor Lowry Burgess; Scientist Author, Howard Bloom; Professor of Space Settlements, Dr. John Wilkes; Manager Shuttle Mission Training, Thomas E. Dielgelman; Space Systems Development Manager, Richard E. Eckelkamp; Director of Spaceport Associates, Derek Webber; Lunar Commercial Development, Dr. Thomas L. Matula; Arcos Cielos Research Center, Dr. Elliott Maynard; Systems Engineering and Manager, Bruce Pittman; Virtual Orbiting Space Station (VOSS) Director, Kim Peart and Dr. Jennifer Bolton; Portuguese Age of Discovery Researcher, Mr. Bernardino Palma; and KSI Director of Technology, Alex Ssegujja for their reviews of the manuscript leading to this essay.

Bob Krone, PhD
Provost, Kepler Space University
October 15, 2012



Notes

[1] Dr. Bob Krone is Co-Founder and Provost of Kepler Space Institute, which is the Space Community's most recent higher education and research innovation, founded in 2009, and which is the stepping stone for the Kepler Space University. Bob Krone's resume and publications can be found at www.bobkrone.com. See, particularly, Bob Krone (ed.), *Beyond Earth: The Future of Humans in Space* (Burlington, ON: Apogee Space Press, 2006). This essay is not copyrighted. It can be freely reproduced with professional referencing.

[2] The author acknowledges profound respect for the life's work of two classic scholars: 1) Dr. Albert Schweitzer (1875-1965), the centenary whose publication of *The Philosophy of Civilization* will occur in February, 2023; and 2); Professor Yehezkel Dror (1928-present), the co-founder and primary scholar of *The Policy Sciences*.

[3] 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 focus on the Philosophy of Albert Schweitzer (1875-1965) on reverence for life and the Policy Sciences of Yehezkel Dror (1928-present) for guidance on 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. That will be done with general concepts and basic design, not with detailed justification.

[4] The best description of the worldview change due to the Space Age is by Frank White in his 1987 book, *The Overview Effect: Space Exploration and Human Evolution* (Boston, MA: Houghton-Mifflin, 1987).

[5] Jonas Salk, *Survival of the Wisest* (New York: Harper and Row, 1973). Dr. Salk, who gave us the solution for Polio, gives us the macro social solution for humankind. He states that human evolution is transforming from the Survival of the Fittest to the Survival of the Wisest in a manner similar to curves A and B of a bell-shaped curve. Human intellect and imagination will play the vital role for survival and evolution. Wisdom, as a new kind of strength, is a paramount necessity. Jonas saw individual and societal learning as the way to overcome barriers restricting the transformation to Survival of the Wisest. With this essay, Kepler Space Institute adds a new path to facilitate the evolution he prescribed in 1973.

[6] Yehezkel Dror, "Governance for a Human Future in Space," Chapter 5 in Krone, *Beyond Earth*, pp. 41-45. Bob Krone and Yehezkel Dror have been professional colleagues since 1969.

[7] “*Eisenhower at the Naval War College*,” with a Foreword by Colonel Robert M. Krone, U.S. Air Force, *U.S. Naval Institute Proceedings* (June 1971): 18-24. See www.bobkrone.com/node97 for Ike’s address and answers to several questions. Many of his points are relevant to economic, political, social, and military issues today, including his explanation of his Military-Industrial Complex comment earlier that year.

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