

# Maturing Humankind Through the Sciences of Law, Policy, and Space<sup>1</sup>

By Bob Krone, President, Kepler Space Institute

## Abstract

Humanity's future hinges on the success of efforts to insure a supportive environment, needed resources, and continuous improvement of health and welfare for all its citizens. The Law of Space Abundance was formulated by leadership of Kepler Space Institute in 2009. The Law states: "Space offers an abundance of resources for humankind's needs." This law was not legislated by humans. It accurately describes what exists in the universe. The capturing of those resources has begun. The design and planning for ever increasing multiple resources to meet humanity's needs is also under way. Historically unprecedented efforts to do so will involve entirely new systems for Space exploration, development, and governance systems for human settlements in Lunar Orbits, on the Moon, Mars, and elsewhere in the Solar System. This paper addresses the needs for leadership, law, and governance for the control and management of that massive future effort.

This is not a traditional research paper. The main purpose of the paper is to recommend to leaders of the Science of Laws the addition to their research base of the Policy Sciences and the Space Sciences. That triple knowledge base will provide a mix of the soft and hard sciences, understanding of the political feasibility domain, which will be essential for implementing the Science of Laws and causing significant improvements, and the complex mix of theory and practice needed for society to advance from that valuable vision to real-world achievement of that vision. There is also an invitation from Kepler Space Institute for future partnering with the Science of Laws Institute.

**Keywords:** Humanity's needs and future, science of laws, law making, Policy Sciences, Space sciences, vision, Law of Space Abundance, leadership, science and technology, benefits and risks.

## The Science of Laws Challenge:

Dr. David G. Schrunk, President, Science of Laws Institute, has captured that challenge, which includes Space, in his following paragraph:

To avoid the poor performance and dysfunction that currently typifies the bodies of laws of Earth's governments, a new science, the Science of Laws, is proposed as the basis for creating and maintaining the bodies of laws for Space governments. For the people who become permanent citizens of new worlds in Space, the Science of Laws will produce a consistent and just

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<sup>1</sup> A paper prepared for the Science of Laws Institute 4th Annual Conference, San Diego, California, December 2, 2017. The Kepler Space Institute thanks Dr. John Wood, editor of the *Science of Laws Journal*, and the Science of Laws Institute, for approving a follow-up publication of this article in this issue of the *Journal of Space Philosophy*.

rule of law that optimally serves their best interest and reflects their highest aspirations.<sup>2</sup>

The Science of Laws Institute research has identified the following flaws and omissions as law has evolved on Earth:<sup>3</sup>

- Societal problems are not required to be defined and solutions to those problems are randomly addressed or inadequately addressed in law.
- War, crime, poverty, discrimination and human rights abuses, economic crises, violence, terrorism, and environmental pollution continue as major problems. The ever-increasing body of laws fails to prioritize or solve those problems adequately. Random amelioration may occur for a while. But failure to include sunset terms consistently insures that the ever-increasing volume of laws makes full implementation administratively impossible.
- Laws seldom define tools to measure or evaluate outcomes of implementation.
- There are no skills required for law design by those drafting the laws.
- Computer modeling or simulation is not a requirement, and accounting of costs of implementation rarely occurs.
- Probabilities of risks, negative results, or side effects are not required.
- Laws that tolerate the inclusion of “pork barrel” and political agenda provisions.
- Laws that are too often based upon opinions (ideology) rather than reliable knowledge, and that do not require the citation of references, are often passed.

These defects of the traditional method of lawmaking render it incapable of solving complex societal problems. It employs speechmaking, debate, and compromise, and it observes parliamentary protocols for the creation of laws. The traditional method of lawmaking continues to fail to resolve societal needs. More ominously, the continued growth in the size and chaos of the bodies of laws causes governments to enforce laws selectively in a drift towards arbitrary rule, in violation of the rule of law.

Avoiding repeats of the historic weaknesses and failures of Earth’s governance as humans explore, develop, and settle in Space is an associated huge challenge.

What can rectify this history of lawmaking failures? The most critical first answer is leadership.

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<sup>2</sup> *The Science of Laws: Essential Foundation of Space Governance*, David G. Schrunck, e-mail to Bob Krone, October 14, 2017.

<sup>3</sup> For the following list the author has done some minor editing to David Schrunck, “The Science of Laws: Introduction and History,” *Science of Laws Journal* 1, no. 1 (2015): 2-4.

### **Leadership Is Needed for Lawmaking Improvement:**

A consistent failure throughout human history on Earth has been the employment of destruction, violence, genocide, death, and war. Laws have reduced, but not eliminated, those failures. The subject is public policymaking. So, we must include policymaking knowledge in our analysis. The subject is also linked to the evolution of social culture. Laws are made daily around the world. The culture does not automatically change when laws are passed. Cultural changes sometimes stem from people who need them, but leadership is the predominant catalyst that moves societal changes.

So, we need to look to the Policy Sciences for knowledge about policymaking and about the leadership that makes policy. Our best reference is the co-founder and leading Policy Sciences scholar, Professor Yehezkel Dror, of Hebrew University, Jerusalem, Israel. Ten of his fifteen books, published beginning in the 1960s, are now on Amazon.com. For this article, I reference his two latest works, *Avant-Garde Politician* (2014) and *For Rulers: Priming Political Leaders for Saving Humanity from Itself* (2017), plus his published articles in the *Journal of Space Philosophy*.<sup>4</sup>

I have been driven and inspired to write this missive by three appraisals maturing in my mind on the basis of lifelong multidisciplinary study of senior politicians, combined with intense personal involvement in efforts to mentor them and improve their choice processes, in a variety of countries: (1) There is increasing cause to worry about the future of humanity and its subparts; (2) the importance of senior politicians in influencing the future, for better or worse, is intensifying and becoming fateful; but (3) the qualities of even the all-too-few relatively good historical and contemporary senior politicians are becoming more and more inadequate for coping with the emerging and largely unprecedented challenges facing humanity. These three considerations add up to the conclusion that a new genre of senior politicians is urgently required; and to a personal feeling of moral duty and professional obligation to make whatever contribution I can, however minor, to their gestation.<sup>5</sup>

Dror's three appraisals, above, are valid. Readers wanting the details of Dror's decades of brilliant study, analysis, and prescriptions over the past sixty years can find them in his publications. I concur and accept them as givens for this Science of Laws article. Improved leadership is one third of the formula for achieving future improvement in lawmaking. Moral leadership is the essential need. The three essential variables for breakthrough improvements for humanity are, therefore, shown in Figure 1:

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<sup>4</sup> See Yehezkel Dror, "Preventing Hell on Earth," *Journal of Space Philosophy* 4, no. 2 (Fall 2014): 16-27.

<sup>5</sup> Yehezkel Dror, *For Rulers: Priming Political Leaders for Saving Humanity from Itself* (Washington, DC: Westphalia Press, 2017), "Overture." Bob Krone note to readers: Yehezkel Dror has been my academic mentor and professional colleague since 1968.

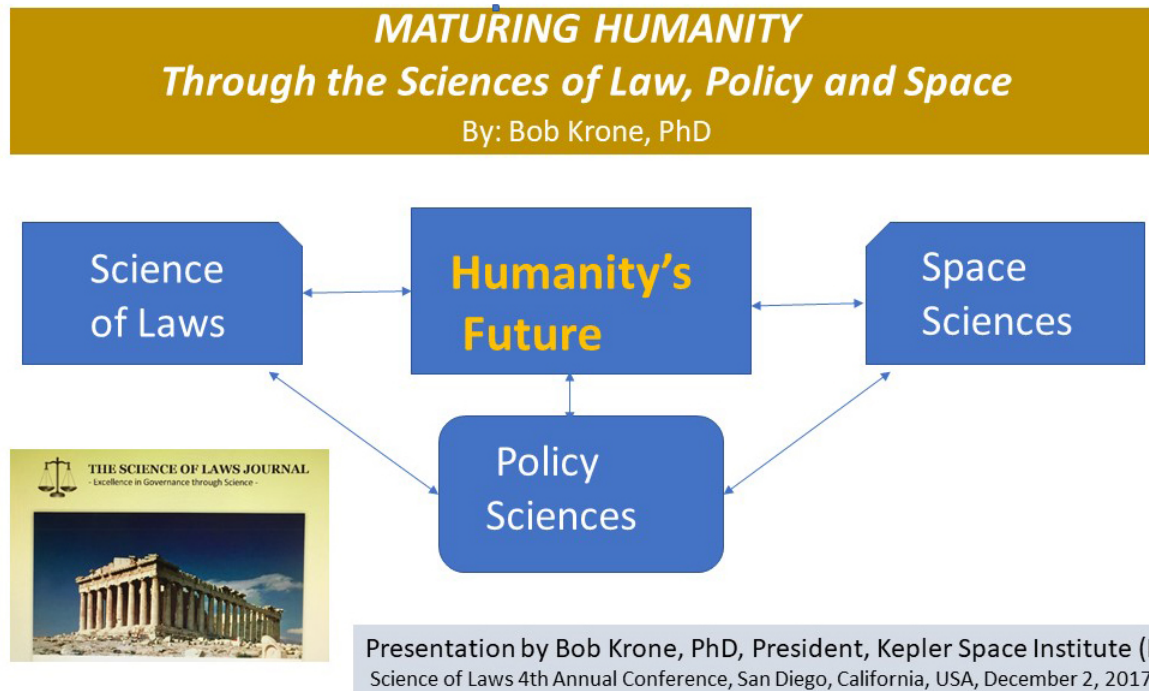


Figure 1: Humanity's Future

### Science of Laws Solutions

The science of laws consists of two coequal branches: (1) the creative science of laws and (2) the investigative science of laws. The purpose of the creative (i.e., engineering) branch of the science of laws is to solve societal problems that degrade or threaten the well-being of the people (in terms of human rights, living standards, or quality of life) within the jurisdiction of a government. To accomplish this task, it employs knowledge, tools, and design expertise, such as modeling and simulation, to create and optimize laws of government. It also derives, records, organizes, and promulgates reliable knowledge of design methodologies and best practices that are applicable to the creation of laws of government. The creative science of laws will correct the defects of the traditional method, establish quality design (QD) standards, quality improvement (QI) standards, and ethical standards for the creation and optimization of laws. Quality assurance (QA) will evaluate the process and improve it over time.<sup>6</sup> The process is shown in Figure 2.

<sup>6</sup> Source: *Science of Laws Journal* 1, no. 1 (2015).

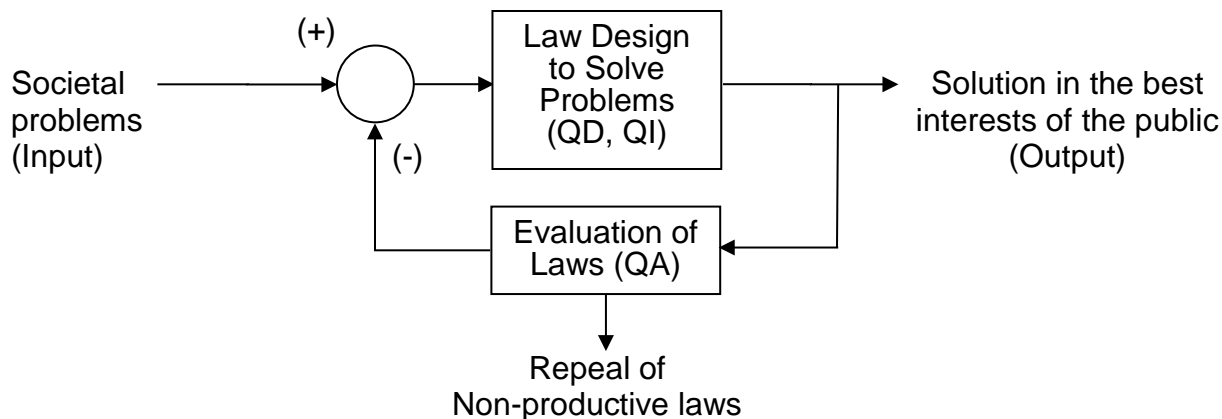


Figure 2: Scientific Lawmaking for Space Governance. Science-derived quality programs for laws (QD, QA, and QI) will transform the lawmaking process into a problem-solving feedback control system that is self-correcting in the direction of optimum outcomes for the citizens of space governments.

Readers will find details and descriptions of this process in the articles in the *Science of Laws Journals*, 2015, 2016, and 2017.

### **Policy Sciences Solutions:**

Leaders skilled with governmental and public policymaking skills will be essential for the sciences trilogy herein prescribed: (1) Science of Laws, (2) Policy Sciences, and (3) Space Sciences. Throughout human history, leadership has been the primary variable responsible for outcomes of good or evil, for the creation or extinctions of societies, for progress or decline, for harmony or conflict, for the outcomes of war, for the advances of science and technology, and for the influence of religious theology resulting in happiness or tragedy. It will be the same for the future of humankind.

Yehezkel Dror, in his two latest books, *Avant-Garde Politician: Leaders for a New Epoch* (2014) and *For Rulers: Priming Political Leaders for Saving Humanity from Itself* (2017), uses a long-term evolutionary time horizon and prescribes a radical new model for leadership to put priority on shaping the future of humanity. His six decades of study, writings (in several languages), and teaching on public policymaking systems around the world put him in an exclusive Policy Sciences expertise category.

This article only summarizes Dror's description and prescriptions for leadership. Readers should delve into his writings on Amazon.com for his in-depth introductions, analyses, evaluations, theories, conclusions, and prescriptions.

**Yehezkel Dror's leadership values, understandings, characteristics, talents, and skills:<sup>7</sup>**

1. Operate from the understanding that Earth's global problems are increasing, that history has no evidence of solution capabilities for those problem, and that some kind of radically innovative global regime will eventually be necessary. If that movement fails, the quality of life for Earth's humanity will decrease and conflicts will result in human catastrophes, ethnic genocide, and an increased probability of human-produced human extinction.
2. Have a leadership calling-related inner philosophy that is freely chosen and that dominates the whole of life.<sup>8</sup>
3. Have a realistic comprehension of humans and humanity.
4. Understand that your legacy for the future will be your positive impact on historic processes.
5. Have both ethical basics and utilitarian skills, giving priority to bona fide efforts for the needs of humanity and measures needed to advance them.
6. Study to understand the potential future dangers of technology to humanity as well as its blessings.<sup>9</sup>
7. Study past and present leaders' successes and failures to cope with serious problems.
8. Analyze and forecast the implications of continuing and increasing change in society, including global, and beyond Earth, long-term political issues.
9. Be an agent to help to prevent science from providing an immature humanity with instruments to destroy itself.
10. Have a capability for research and evaluation of desirable scenarios for the future and for disastrous scenarios, as well as knowledge of the political feasibility domains for decision clusters addressing those scenarios.
11. Understand that the preparation and training for people choosing avant-garde leadership as a career will need lifelong formal and real-world learning to a degree that has not previously existed.

In his latest book, *For Rulers*, Yehezkel Dror states:

a much improved genre of political leaders is urgently needed. Without it survival and thriving requirements cannot be met and the long-term existence of the human species is seriously endangered.<sup>10</sup>

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<sup>7</sup> Source: Bob Krone, "Leadership will be Key: Applying Yehezkel Dror's *Avant-Garde Politician: Leaders for a New Epoch*," *Journal of Space Philosophy* 3, no. 2 (Fall 2014): 15-16. Minor edits made for this article.

<sup>8</sup> This aspect of Yehezkel Dror's model for avant-garde leadership, innermost philosophy, is the subject of Chapter 19 in his 2014 book.

<sup>9</sup> See Yehezkel Dror, "Preventing Hell on Earth," *Journal of Space Philosophy* 4, no. 2 (Fall 2015): 16-27.

<sup>10</sup> Dror, *For Rulers*, 2.

Dror created the title Homo Sapiens Governor (in short HSG, plural HSGs) for those who will become leaders for the mission of saving humanity from itself. The 103 pages of the book are dedicated to a definition of leadership and prescriptions for leaders' behavior.

### **How Space Will Provide Solutions:**

Given the above, what positive impacts could the Space Sciences contribute? Attempts to improve lawmaking within governments have been under way for centuries. The results are not adequately meeting the challenges that face global decision clusters. How could Space offer new original solutions?

Drawing on Space Sciences and the research, exploration, and successful missions over the past half century leads us to entrepreneurial and paradigm shift thinking for proposing needed remedies. These remedies will not be new to the Founders of the Science of Laws Institute – review the quote of President David Schunk beginning this article. But they will be new to most public policy lawmakers in the United States and throughout the world.

This section of the article begins with the assumption that the improvement and survival of homo sapiens will depend heavily on a successful Space Epoch. In 2017, that assumption is not universally accepted. It can be found today, however, in the visions and missions of major Space organizations around the world, including our Kepler Space Institute.

As knowledge accumulates under the *Law of Space Abundance*<sup>11</sup> – which states: “Space offers abundant resources for humankind’s needs,” as Earth’s non-renewable resources decrease, as Earth’s population increases, and as extra-terrestrial threats to Earth are better understood, disagreements with that assumption will disappear. A critically important research question today is:

### **Will the potential benefits of the forthcoming Space Epoch be unknown by leaders until beyond the time when those benefits can be captured to solve Earth’s and humanity’s needs?**

The Space environment has many aspects, other than resources, that will be dependent variables, helping to achieve the vision outlined in this article:

1. There is no history of war, conflict, or pathological behavior in Space despite the fact that the Star Wars film series was top entertainment. Space is essentially a vacuum waiting for innovative governance, laws, and unprecedented positive human experiences.
2. Humans living in Space will be isolated from natural or human-created pollution or disasters on Earth.
3. Population growth will not be a problem in Space.

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<sup>11</sup> The Law of Space Abundance was formulated by Kepler Space Institute leadership in 2009 after studying the extensive research into the resources in our Solar System and beyond. Those resources can be mined for Earth’s needs, as well as for constructing human settlements in Space. The Sun’s energy is only the most obvious and dramatic resource.

4. Human intelligence, wisdom, and judgment will be the only constraints to achieving this vision for humankind.

### **Concluding Thoughts**

The formation of planet Earth happened 4.5 billion years ago after the Big Bang 13.5 billion years ago. Organisms and the beginning of biology happened 3.5 billion years ago. Living ancestors of humans appeared six million years ago. Humans spread from Africa to Eurasia 2.5 million years ago. Neanderthals evolved in Europe and the Middle East five hundred thousand years ago. Homo Sapiens appeared in East Africa two hundred thousand years ago. History began seventy thousand years ago. Homo Sapiens settled in America sixteen thousand years ago and became the only surviving human species thirteen thousand years ago. The first kingdoms, script, and polytheistic religions began five thousand years ago. Europeans began to conquer America and the oceans five hundred years ago. The Industrial Revolution began two hundred years ago, along with the extinction of many species of plants and animals. Humans transcended the boundaries of planet Earth sixty years ago.<sup>12</sup> In 2017, humans still have not learned to live and grow together in peace and harmony. There exists much social pathology. Humankind has need of much maturing, and it requires much learning to prevent its extermination.

The Science of Laws Institute was incorporated in California in 1995, and it began holding annual conferences and publishing the *Science of Laws Journal* in 2015. Its mission is to establish the science of laws on the conviction that the laws of government may be counted among the most important works of humankind.

This paper is a contribution to the developing Science of Laws knowledge base with the recommendation that the Policy Sciences and Space Sciences join the Science of Laws to form a trilogy working towards a common vision for a future humankind containing the values, principles, legal system, foundations, concepts, and policies necessary for improvement and survival – in perpetuity.

I have a personal invitation to the leadership of the Science of Laws Institute to partner with the Kepler Space Institute to sponsor graduate research toward the “Promethean Mission” in Yehezkel Dror’s *For Rulers: Priming Political Leaders for Saving Humanity from Itself*. Dror states that mission as:

The emerging leap in human power, supplied by science and technology, [that] can enable unimaginable pluralistic thriving and perhaps steps toward the stars. But it also poses serious and even fatal risks to human species. Never before has humankind faced such fateful choices on how to use its power.<sup>13</sup>

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<sup>12</sup> This timeline comes from Yuval Noah Harari in *Sapiens: A Brief History of Humankind* (New York: Harper Collins, 2015).

<sup>13</sup> Dror, *For Rulers*, 3.



Legal systems would be the focus for the Science of Laws Institute. The abundance of resources in Space for humankind's needs would be the Kepler Space Institute's focus.

Our joint efforts toward that common vision could contribute to creating a legacy for positive impacts on historic processes. We should always keep in mind Arthur C. Clarke's quote: "One cannot have superior science and inferior morals."<sup>14</sup> That quote is directly linked to this paper's emphasis on required moral leadership.



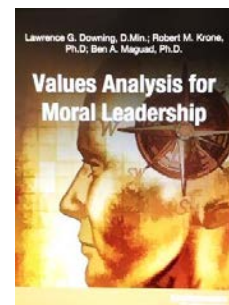
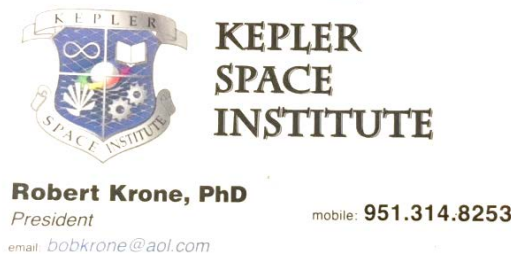
**Bob Krone, PhD, President, Kepler Space Institute  
December 2, 2017**

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**About the Author:** Dr. Bob Krone, currently 87 years old, is in his fourth professional career. Those four careers were the United States Air Force (1952-1975) where he flew jets, was a Squadron Commander and International Staff Officer; the University of Southern California in Los Angeles (1975-1993); a mixed career with La Sierra University and the University of South Australia (1993-2007); and education and research within the Global Space Community (1980-present). Dr. Krone has been the principal supervisor for forty-three successful doctoral candidates (PhD and DBA) and professor for hundreds of master's degree candidates. His PhD, 1972, was in Political Science and Policy Sciences at UCLA. He has authored or co-authored twelve books and ninety professional journal articles, including twenty-seven articles in the published issues of the *Journal of Space Philosophy* ([www.keplerspaceinstitute.com/JSP](http://www.keplerspaceinstitute.com/JSP)).

Bob's complete Curriculum Vitae can also be found on the Kepler Space Institute website and he personally reviews his own 87 years in his article, "A Personal Philosophy: Know Thyself" in the Spring 2015 Issue of the *Journal of Space Philosophy*, 5, no. 1.



<sup>14</sup> Bob Krone, "Arthur C. Clarke's Philosophy for the 21st Century," *Journal of Space Philosophy* 3, no. 1 (Spring 2014): 97-102.

**Editor's Notes:** This is an interesting development of David Schrunk's work, and it promises some stimulating collaboration in the future. We look forward to the results of this partnership. **Gordon Arthur.**