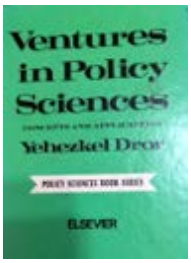
9. Becoming a Space Policy Scientist

By Bob Krone



The Space sciences began in the 16th century when ancient mythologies, dating back to the 5th century BC and attributing the movement of the Sun, Moon, and stars to the actions of the gods began to be replaced by astronomer Nicholas Copernicus (1473-1543), who produced the first serious model of the solar system placing the Sun at the center of the then known universe. Since then, the world of Space scientists has grown to encompass all the scientific disciplines that involve space exploration, development, and human settlement, plus the study of natural phenomena and physical bodies occurring beyond Earth in outer space. The world in 2018 now has scientists in all ten NASA Space Centers in the United States, and throughout the world there are scientists studying, researching, and teaching on Space.

This article is devoted to providing answers to the question: “How does one become a Space Policy scientist?” In Yehezkel Dror’s article #8, in this special issue of the *Journal of Space Philosophy*, he presents his “Becoming a Singularity Policy Scientist” with the following purpose:

> **I. Purpose**
> This paper tries to help readers, including students, to make and remake themselves into Singularity policy scientists. I start with three necessary foundations: (a) the Singularity hypothesis, (b) steering human evolution, and (c) humanity-craft composing. To serve the partly didactic aims of this paper, at the end of each foundation, essential readings are presented.
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> Once the three foundations are laid, we can proceed to eight pondering and behavior recommendations: (1) become multidisciplinary; (2) experience different cultures; (3) integrate research, theory building, and praxis; (4) acquire crisis coping skills; (5) experience revolutions; (6) advance in stages; (7) be somewhat Don Quixote tempered by Sancho Panza; (8) stoic enthusiasm is a must.

Dr. Dror asked me to follow with this essay and to speculate on “How will the role of a Space Policy Scientist be different from an Earth Singularity Policy Scientist?”

We start with the fact that today, there is no person in Earth's global Space network holding the title or having the characteristics of a "Singularity Space Policy Scientist." Yehezkel Dror is probably the only one qualified to have that title, because he has created it and provided his definition of Singularity for this publication.

So, based on Yehezkel Dror's career creation of the Policy Sciences, summarized in this issue, and his prescription for becoming a Singularity Policy Scientist, I offer readers my hypothesis for what the additional characteristics, skills, and tools for future Space Policy Scientists should be. I do so using short bullet statements, for which readers and scholars can consider the total set an original heuristic model.

Space Policy Scientist Criteria:

- Understand and accept the Singularity Vision and hypothesis for Human Settlements and Societies in Space. Have the Dror *"Bent of Mind."*

  Note: It may be unreasonable to expect this of all Space policy scientists, however called – particularly in the early Space Epoch period. However, to the degree that visions differ, or are subsystems, to the Yehezkel Dror Singularity, seeds for future problems and failures will be planted.

- Identify with the facets of Yehezkel Dror's "Becoming a Policy Scientist" essay.
- Have doctoral-level academic achievements plus professional career experience in a Space science or technology.
- Be a lifelong learner with a penchant for breakthrough thinking.
- Be free of ideological, political, or religious dogma.
- Have the mental conviction that you are dedicating your life to improving humanity, wherever societies exist and evolve and especially in space.
- Space Policy Scientists will prepare on Earth, and then become part of the next major leap for humans, which is now starting to emerge in extra-Earth environments humans have only begun to experience in the last seventy years.

Readers are invited to send recommended new items for this list.

Illustrative Space Sciences Doctoral Program:
Following are core subjects for programs to be offered at the doctoral level by academic departments to prepare candidates for becoming Space Policy Scientists, in addition to those stipulated by Dror is his chapter:

- Space Philosophy and Theory
- Space Singularity
- Evolution within a cosmic perspective
- Singularity implications for space exploration and settlement
- Space exploration
- Policy Sciences applications to space issues
- Leadership and governance in relation to space endeavor

- The politics of space exploration
- Technology and engineering related to space exploration and settlement
- Exobiology
- Human and social factors and processes significant for space exploration and settlement
- Settlement construction and configuration beyond earth
- Space systems and design requirements
- Space infrastructure
- Space and recursive distinctioning
- Energy and civilizations interface with human activities in space
- Space commercialization and entrepreneurships
- Astrosciences
- Humanity-centered education focused on space as a future habitat
- (doctoral dissertation supervision)

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