

A Grand Vision of Man's Role In Colonizing the Universe

by Oyang Teng, LaRouche Youth Movement

Krafft Ehricke's *Extraterrestrial Imperative*

by Marsha Freeman

Burlington, Ontario: Apogee Books, 2009

Paperback, 302 pp., \$27.95

There are two reasons to read Marsha Freeman's book, *Krafft Ehricke's Extraterrestrial Imperative*. The first is that it adds a crucial dimension to the historiography of 20th Century space-flight, through a loving portrait of one its most important and interesting founders, Krafft Ehricke. More important, it evokes in the reader a childlike optimism about the possibilities for the future of humanity, with the inescapable truth—at the same time obvious and fantastic—that mankind belongs among the stars.

This latter feat is accomplished largely through the writings of Ehricke himself, a sampling of which comprises the bulk of the book, following Freeman's enlightening biographical sketch of Ehricke and his place among the pioneers of human space exploration. The selection of his writings ranges from a fictional account of a trip to Mars, written in 1948, to an excerpt from his titular manuscript *The Extraterrestrial Imperative: From Closed to Open World*, a book-length work that was never published because of what Ehricke described as the "then rising emotional anti-technology and anti-space moods" of the early 1970's.

In one article Ehricke outlines the possibilities for space tourism, with such features as a Space Zoo for animals reared in low-gravity conditions; in another, he provides a detailed technical and economic analysis of the industrialization of the Moon. In one of his most penetrating essays, his 1957 "The An-

thropology of Astronautics"—written at the dawn of the Space Age—Ehricke establishes three "fundamental laws of astronautics":

1. Nobody and nothing under the natural laws of this universe impose any limitations on man except man himself.

2. Not only the Earth, but the entire Solar System, and as much of the universe as he can reach under the laws of nature, are man's rightful field of activity.

3. By expanding throughout the uni-



Photos courtesy of Krafft Ehricke

Krafft Ehricke (1917-1984)

verse, man fulfills his destiny as an element of life, endowed with the power of reason and the wisdom of the moral law within himself.

An Early Love of the Extraterrestrial

As a young boy in Germany, Ehricke was enthralled by Fritz Lang's famous 1929 silent movie *The Woman in the Moon*, and subsequently spent the rest of his life developing, and then elaborating, his three laws as the drivers for the next phase of conscious, human evolution. He poetically envisioned the coming transition from our current "Two-Dimensional" civilization, in which the human population is limited to the surface of the



Earth, to a "Three-Dimensional," and, eventually, "Four-Dimensional" civilization, capable of moving across interstellar stretches of space-time.

Ehricke brings to bear his extensive technical credentials in describing the actual means of accomplishing this, credentials which he initially earned during Germany's wartime rocket research at Peenemünde, and later, with both the U.S. Army rocket team under Wernher von Braun, and the civilian aerospace firms involved in America's space program.

Ehricke was an apostle for all aspects of space research and exploration. To the practical benefits of such activity for life on Earth, he devoted many pages of detailed proposals for industrial mining on the Moon and other planets, the use of orbiting microwave transmitters to relay electrical power across the globe, and even the employment of giant solar reflectors to increase crop yields and provide safer night-time lighting in poorer areas of the world.

He argued that, more than a pragmatic approach to the human use of space, these activities ought to be viewed as relatively modest steps on the pathway to fulfilling mankind's Extraterrestrial Imperative—that is, the moral, spiritual, and physical-economic requirement for the human species' expansion into the Cosmos.

Ehricke writes in "The Anthropology of Astronautics":

"The concept of space travel carries



“Selenopolis,” the major city on the Moon, as envisioned in a painting by Ehricke. At left is the Hall of Astronauts museum. Note the indoor monorail for getting around in the city. Ehricke’s concept of the Moon was as Earth’s “Seventh Continent.”

with it enormous impact, because it challenges man on practically all fronts of his physical and spiritual existence. The idea of traveling to other celestial bodies reflects to the highest degree the independence and agility of the human mind. It lends ultimate dignity to man’s technical and scientific endeavors. Above all, it touches on the philosophy of his very existence. As a result, the concept of space travel disregards national borders, refuses to recognize differences of historical or ethnological origin, and penetrates the fiber of one sociological or political creed as fast as that of the next.”

Biospheric Evolution

For Ehricke, the Extraterrestrial Imperative is a natural extension of the evolutionary process of the biosphere itself, characterized by a continual supersession of existing physical limits, such as the movement of life from the oceans to mammalian life on land, and now mankind’s technological capability to leave Earth’s biosphere altogether. Far from being an “unnatural” development, Ehricke writes in “The Heritage of Apollo,” that technology has been “life’s principal weapon since its inception. Photosynthesis was life’s first large-scale industrial process to achieve control over an adequate energy source, to enlarge its raw material base and to control the produc-

tion of its essential needs. It was the first time life reached out for an extraterrestrial resource.”

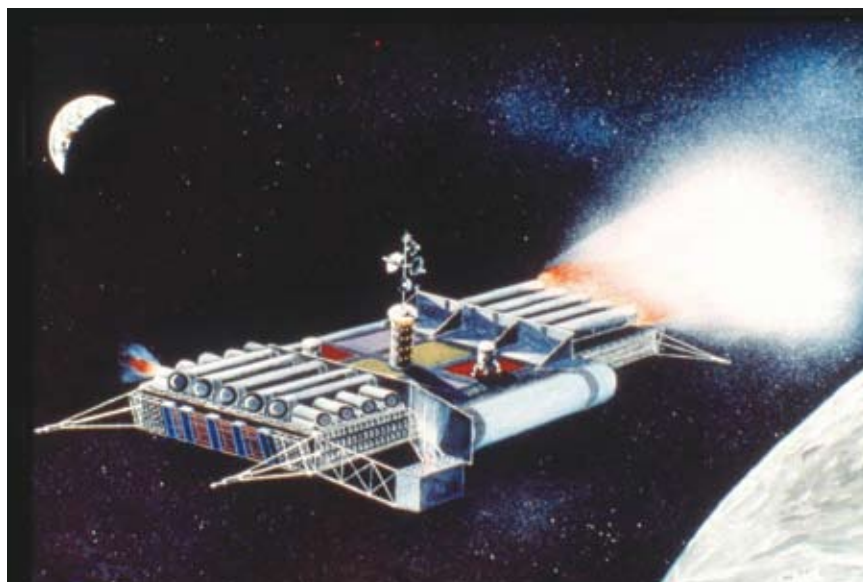
This kind of striking insight demonstrates Ehricke’s intellectual kinship with the great biogeochemist Vladimir Vernadsky, who characterized the qualitative superiority of man’s creative activity as the advent of the Noösphere over the

Biosphere, itself a cosmic phenomenon. A similar kinship with Lyndon LaRouche, with whom Ehricke collaborated in the 1980s around their shared perspective for a “great projects” policy of colonizing space, was based on taking a simple epistemological principle—that man’s Reason has no limits to growth—and applying imagination and expertise to working out the practical expression of that principle in its full scope.

This depth of thought comes across through the broad range of Ehricke’s writings and spoken words included in the book, which show him to be a consummate organizer, inviting the reader or listener to share in the celebration of mankind’s most exciting endeavor. As both a profound philosophical truth, as much as a practical assessment of the reality of human nature, Ehricke’s message is clear: The whole Universe is our rightful domain.

As Freeman adeptly elaborates the background with her own intimate historical knowledge of the period, Ehricke’s brand of militant optimism took on new significance amidst the cultural degeneration beginning in the late 1960s, in which existentialism and environmentalism led, among other things, to the extinction of the once great ambitions of our national space program.

Ehricke’s Classical education in the humanist tradition of the science of Kepler and Leibniz, to which he was consciously



A nuclear-powered lunar freighter, which uses materials on the Moon for fuel, is one of the vehicles Ehricke designed as part of the transportation infrastructure that would open the Solar System for mankind.

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by Marsha Freeman

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From this new book the reader will gain an insight into one of the most creative minds in the history of space exploration.

Krafft Ehricke's contribution to space exploration encompasses details of new, innovative ideas, but also how to think about the importance and value of space exploration for society.

The reader will gain an understanding of the early history of the space pioneers, what they have helped accomplish, and how Ehricke's vision of where we should be going can shape the future.

At this time, when there are questions about the path of the space program for the next decades, Krafft Ehricke has laid out the philosophical framework for why space exploration must be pursued, through his concept of the "Extraterrestrial Imperative," and the fight that he waged, over many years, for a long-range vision for the program.

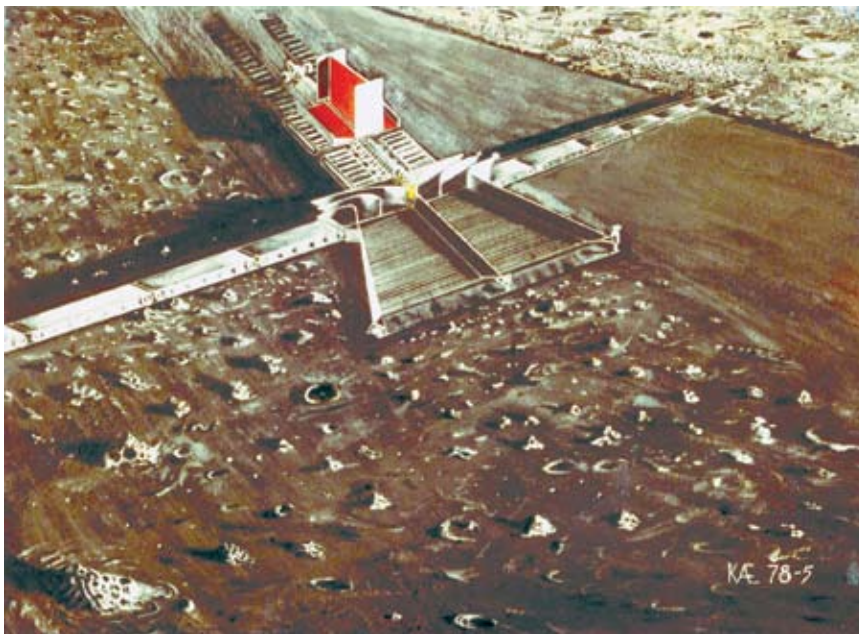
Readers will find it a very imaginative work, and a very up-lifting story.

Krafft Ehricke's *Extraterrestrial Imperative* is the summation of his work on encouraging the exploration and development of space. The book contains all of his reasons why we need to get off the planet and explore space.



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A huge sweeper vehicle designed by Ehricke to clear away boulders to create a landing strip to accommodate his Slide Lander spacecraft.

committed, gave him an instinctual aversion to the pseudo-science of the ecological "Limits to Growth" pessimism that became pervasive in Western Europe and the United States. Here it becomes most clear that Ehricke's signal contribution, as he himself saw it, was toward the philosophical underpinnings of a new social-scientific paradigm, embodied in the *Extraterrestrial Imperative*, of which he was a tireless advocate until his death in 1984.

Industrializing the Solar System

It is important to point out, that Ehricke did not simply advocate grabbing real estate on other planets as a scheme to relieve overpopulation and overpollution on Earth. Rather, he argued that it would be more effective to initially focus on shifting large-scale industrial processes to other planets, in order to better maintain the Earth as a garden spot, capable of supporting a growing population at an increasing standard of living. With the "industrialization" of the Solar System, we would be in a position to create entirely self-sufficient colonies, or "planetallas," not attached to any planetary body, eventually moving out beyond our own neighborhood, beyond the Solar System itself.

The horizons of today's national space program are pitifully shrunken compared to Ehricke's grand vision, with the Space

Shuttle scheduled to cease operations for good next year without a replacement vehicle for at least several years after that. As such, Ehricke's writings should be required reading for national policy makers, NASA managers, and aspiring scientists, but also for anyone who takes joy in the understanding that imagination is necessary for human knowledge. Marsha Freeman's book is an excellent place to start.



A composite of the outer planets, taken by the Voyager 2 spacecraft, which was launched with a Centaur upper stage. Ehricke's work on liquid hydrogen in rocketry propulsion led to the world's first upper stage rocket, still used today. Ehricke called it the Centaur, after the mythic Greek figure.