OPEN THE FRONTIER!

Lesson 2 - Why space? Life Reasons

from the Space Frontier Foundation

In this installment of the Space Frontier Curriculum we continue to discuss a few reasons we must open the frontier of space. To some of you these may be obvious. Patience. We are the choir. Human history on this planet is one of filling virtually every empty nook and cranny we can find. We always push out into the wilderness. As our technology has improved, more and more of the Earth has succumbed to our expansion. This has not been good news for the rest of the living things with whom we share this tiny bubble. There are no more frontiers to be settled on this planet which will do it no harm. It is a fact of our species - we take materials and resources from the environment where we live, we displace or kill local life forms and produce waste products. This is true no matter where we go within the restriction of the Earth's atmosphere.

Some say that the oceans are the next frontier, but that ignores the fact that they are already under extreme pressure from our activities on land, and the last thing they need is to be directly attacked. The oceans are the last stable ecosystems left on the planet, master living systems we dare not tamper with by thrusting the cold metal hands of teeming industries into their hearts.

Our only choice is to go where there are no living systems to harm. Those same machines with which we have so savaged this planet can now be turned outward, to carve new homes for life where there is no life. Imagine. Someday there might be butterflies on Mars, trees on the Moon and eagles flying in the skies of miniature Earth's floating between the worlds.

It is as if we have been offered the chance to balance ledgers of divine justice, as now the same rocket technologies which once threatened all life on this sphere can carry its children to others now dead, and make them green with life.

If nothing else, we owe it to our mother Earth to preserve her diversity in the face of a hostile universe. For as hard as it is to imagine, and as much as we want it to be otherwise, there may be no other place like Earth out there. We may be it. Sure, sure, billions of worlds mean billions of possibilities for life. The odds really are high that we are not alone, but that's why they are only odds. We might just be life's one shot. And even if we aren't alone, the life on this planet is still unique. So why gamble. Each species which dies as result of our need for more space or resources or jobs is gone. Period.

Life is precious. The Space Frontier is wide, and what we've seen of it locally is fairly empty. Our choice for the future of life seems clear - stay locked into limits and continue to kill it or break out into space and spread Earth's seeds to worlds now dead. *OPEN THE FRONTIER* **SFF**

"Our choice for the future of life seems clear:
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... or break out into space
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Think About it! by Jeff Krukin

The University of Houston's College of Engineering sponsors "The Engines of our Ingenuity" each day of the business week during National Public Radio news. Each day's topic, presented by John H. Lienhard, is a wonderful view of "...the machines that make our civilization run, and the people whose ingenuity created them." A recent broadcast, entitled "Two Visions of Aviation," contrasts the views of Orville Wright and Amelia Earhart.

In 1919, Orville Wright wrote that civil flying was less for moving passengers and more for play.

In 1931, commercial aviation is well established. Amelia Earhart is Vice President of Ludington Airlines, with a half-million passenger miles flown between New York and Washington. Her concerns are quite different from Wright's: keeping flights on schedule, managing ticket sales (remember, no computers!), and maintaining low prices.

Why the different perspectives? According to John Lienhard, Wright read his crystal ball as an inventor with dreams. Earhart, however, was a user of the invention. Her dream was to extend the use of the airplane.

I found this quite interesting and began thinking about it in terms of NASA's inability to open the space frontier. Forget for the moment that the Soviet Union was first in space. As a non-capitalist nation, there would be no profit motive to drive us up and out. From a strictly U.S. perspective, NASA "invented" space and everything we did there for many years. Is NASA's myopic attitude caused by the same perspective held by Wilbur Wright? I believe so. NASA was the inventor, and it's crystal ball has been filled with images of space stations, Lunar bases and Mars missions ... all funded by the government. If Wilbur, with his businessman's viewpoint, could not envision widespread commercial aviation, should we expect NASA, which is devoid of the profit motive, to envision widespread commercial "spaciation?" (If you like that word, please use it. I have always wanted to coin a word or phrase!)

Amelia Earhart had to worry about schedules, reservations, competition, cost of operations and ticket prices. She knew what could be accomplished with the airplane because she used it, and the only way to remain in business was to find new ways to use it and make it easier and cheaper for her customers to use.

Today, as we ponder our future in space, we must work hard to nurture the Amelia Earharts of the world and educate the myopic inventors who cannot see beyond the initial use of their inventions.

Think about it.! **JK**

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"It should not be NASA's job
to *be* the door to Space,
but
to *open* the door to Space."

Rick Tumlinson, President, Space Frontier Foundation