

Preface, The Home Planet

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When people in the future look back on these early days of space exploration, they will create many images of what it must have been like to be among the first people who lived and traveled beyond Earth's atmosphere. There will be those who glamorize the experience to the point of painful embarrassment for those few who experienced it. Others will see the endeavor in terms of geopolitical struggle, or the scientific quest for understanding our cosmic environs and our place in it. Still others will emphasize the inexorable pressure of technology to extend the capabilities of humankind, to understand the planet on which we live, and the commercial benefits to be reaped by those who "get there first."

In fact, for those of us who lived this unique experience, the incredible excitement of being selected as an astronaut or cosmonaut was soon displaced by the daily repetition of very hard work. Thousands of hours were spent in simulations, training sessions, mock-ups, stowage reviews, checklist reviews, mission rules meetings, and so forth. Thousands of people were involved in the process of getting a spacecraft into space, each with his or her large or small part, virtually none with a *truly* comprehensive view of the entire process. Even we who flew the missions didn't know, couldn't know, everything about the launch vehicles or spacecraft. At times the complexity and staggering detail of the endeavor was so overwhelming that it was impossible to imagine it would all culminate in actually blasting your soft pink body off the planet atop a towering pillar of flame.

Yet that day came for each of us who writes in this book. None of us will forget that morning (or afternoon) of launch. How ordinary it seemed; like any other in so many ways. And yet how different! You go around in two pieces, one piece of you doing all the ordinary things that need to be done, and the other, watching with a sense of unreality, disconnected.

Until getting into the spacecraft. Then it becomes real. All the preparation, all the simulations, all the reviews are now behind. The day has finally come. It's countdown time. You hear and feel the vibration and the power of those engines. And then you start slowly up, not with a rush, but majestically, almost defiantly. The ingenuity and determination of technology in breaking another barrier - gravity - are manifest, with you as the ultimate witness.

But you don't have time to think about it. You are too busy. Whether you have a short stay or long, whether orbiting the Earth or heading moonward, you have little or no time for idle chatter, sightseeing, or even thoughts. Good housekeeping in a spacecraft is not merely desirable, it is mandatory. Weightlessness demands that everything be put in its proper place, usually in a container or locker. Hours are spent in packing and unpacking, for anything not put away is guaranteed to float disruptively into the path of whatever critical task is next at hand. Fans whirl, pumps hum, air hisses, the radio buzzes with the special language of numbers and tailored acronyms.

Yet we are human. We are not machines. We

catch a glimpse of a huge swirl of clouds out the window over the middle of the Pacific Ocean, or the boot of Italy jutting down into the Mediterranean, or the brilliant blue coral reefs of the Caribbean strutting their beauty before the stars. And in the moments that each of us took away from our scheduled sleep time, or while waiting for some experiment to complete a sequence, we experienced those uniquely human qualities: awe, curiosity, wonder, joy, amazement. It is these shared human experiences, the physical and the emotional, that link those of us who have flown in space about this planet. Long after the mission is over it is the reflection on the personal interaction with the experience that stays alive.

For me, having spent ten days in weightlessness, orbiting our beautiful home planet, fascinated by the 17,000 miles of spectacle passing below each hour, the overwhelming experience was that of a new relationship. The experience was not intellectual. The knowledge I had when I returned to Earth's surface was virtually the same knowledge I had taken with me when I went into space. Yes, I conducted scientific experiments that added new knowledge to our understanding of the Earth and the near-space in which it spins. But those specific extensions of technical details I did not come to know about until the data I helped to collect was analyzed and reported. What took no analysis, however, no microscopic examination, no laborious processing, was the overwhelming beauty. . . the stark contrast between bright colorful home and stark black infinity. . . the unavoidable and awesome personal relationship, suddenly realized, with all life on this amazing planet. . . Earth, our home.

For me, this experience was a dramatically enlarged version of looking out over the hills and valleys spreading into the distance after having climbed a high mountain peak. It is not simply the view. It is smelling the perfume of hot crushed pine needles along the way, catching glimpses of the Douglas squirrel scolding the intruder from his private fir tree, gazing in awe from the warm sleeping bag in the middle of the night at the countless stars arrayed just overhead. All these quiet personal connections are there filling the heart when finally you look out over the receding trees from the top of the mountain. It is, in fact, a visual embrace with all that life with which you are connected. So too with the space experience. For me, it was an embracing of the planet and all the life on it . . . and, like the squirrels and the pines, it hugged me back.

As I thought about it afterward, as I relived the experience time and again, I came to understand that this was not some sentimental recollection of past glory. Rather, I began to understand that it is the personal manifestation of a relationship which, in the absence of direct experience, we can know only intellectually. We all understand that the life systems of this planet are interrelated, that our human future depends on the wellbeing of the rain forest and the salt marsh. We know that human activity in the production of goods and services can damage and destroy the environment on which we and our children depend. We know all these things intellectually. Yet we feel related to all people when we see pictures of mothers and children, tears of sorrow and joy, laughter, music, and dance. And we fear together the misuse of the power we have now at our collective fingertips through our amazing

technology. What the experience of seeing this amazing planet from space does is to take it beyond the intellectual and into the personal.

I suspect that each of us who has had this experience of circling the planet again and again would express it differently. We are all different people. We come from different cultures. And even within the same culture we have vastly different experiences and origins. It is therefore not unexpected that we would express our feelings and impressions of our home planet in unique ways. And yet it is the golden thread that runs through all these expressions of individual experience that is the magic of life. We spend a great deal of time identifying and emphasizing the differences between things in our professional roles, including ourselves. And yet it is our common human experience, our shared fear, hope, joy, and love, that link us as human beings beyond all differences.

It is this shared personal impression of our home planet that has brought many of us together as the Association of Space Explorers. We hope you too will experience this new connection between us humans and our home planet as you read this book. It is the golden thread that connects us all and which I hope you will ponder long after the beauty of the specific images fades in your memory. It is what I ponder now, and what I will marvel over the rest of my life.