

PART I *A Caravan of Dreams*



The Music of the Spheres

CHAPTER ONE

*At the same time collecting and recollecting Memory
For that Shipwrecked moment
When we need it all and then some
To keep the voyage going going
And never gone.*

JOHNNY DOLPHIN

ONE DAY I LOOKED OUT of my Manhattan skyscraper office at Number One Whitehall Street toward the Statue of Liberty and realized I couldn't open my window. Some liberty. Multiple levels of meaning packed into that realization shivered my timbers. I stood bolt upright and thought:

I don't have the power to open any window right now in my own skyscraper of a body. I can't catch onto anything that's not branded and packaged. If the scholarship's not Harvard, the theater Off-Broadway, the girl Vassar, Sarah Lawrence, Hamish Bohemian or Black Rebel, my buddy not Corporate Entrepreneur or Underground Poet, my own thinking post-Aristotelian and post-Marxist Deconstructionist, if the science doesn't have a chair at Oxford or an invention-crammed garage or the book's not classic or avant-garde, I won't touch it. Those are all gorgeous windows in my shining skyscraper giving me million-dollar views of the world's splendid traffic, but I can't open them to smell the fresh air or hike barefoot along an open road or, worst of all, walk away from a pompous power holder. Get me outta here!

At that exact moment I saw a Yugoslav freighter sailing between Brooklyn and Staten Island, heading out across the Atlantic for Tangiers in North Africa. Although I lived in a great pad in Little Italy south of Houston Street (before it became Soho), hung with a lively cultural crowd at the White Horse Tavern and the Kiwi Bar where you never knew who you'd meet, love, or fight with, and took wild well-paid expeditions to Iran and the Rocky Mountains and



John on board the Hrvatska.

IMAGE ON LEFT: *Passengers on board the Yugoslav freighter, Hrvatska, headed for Tangiers in 1963.*



Age fifteen, Venice Beach, 1944. "I worked at Helms Bakery for sixty cents an hour, six days a week."

Plateau West, I knew what I had to do next—get on the next Yugoslav freighter headed East, to Tangiers. I had people to see and places to go where I had not the slightest idea what would happen next.

It was not the first time wanderlust had seized hold of my life. When I turned fifteen, I wandered the West Coast from the Mexican border cities to the Yakima and Wenatchee valleys of the Northwest, working in cotton, oranges, potatoes, apples, and timber. Some may have called me a lowly migrant worker, an "Okie" refugee from the "dust bowl" caused by that huge over-plowing, but this outdoors existence filled me with revelations. A tireless glory of deserts, irrigated valleys, grasslands, forests, cliffs, timberlines, and salmon rivers showed me the richness and productivity of life and the boundless ingenuity of humans.

My intellectual wanderlust outdid the physical. On reading at age fourteen Alexis Carrel's *Man, the Unknown*, I exploded with never-ending energy. Carrel maintained that if a person resolutely started to master one of the great divisions of knowledge every two years from the age of fourteen until forty, at that point one could begin to really live. I followed his advice until I turned thirty-four, going through box after box of knowledge with religious discipline, with great vigor and success. Going from box to box was a rational malarkey with a double bind—boxing myself in and boxing myself out. I had learned very early in Granddad's hog wallows how to live—relax in the summer sun and green-scummed pond with a grand old boar, and ease into whatever scene comes up, with plenty of moxie. However, with increasing skill in manipulating the upper lobes of my brain and increasing neglect of the ancient limbic and oblongata wisdoms of direct emotion and sense wisdom, I heard myself laugh less and less often.

By the time I decisively left, boarding the freighter on the Brooklyn Dock for Tangiers in October 1963, I had attended five universities, graduated from two, read innumerable books, been consistently rated

super student, awarded scholarships and honors. I held instructive jobs – picking fruit in apple and apricot orchards, lumberjacking, working as a skilled machinist, in assembly line mass production, union organizing in Chicago, as a machinist in the Army Corps of Engineers, running a farm, setting up corporations, discovering a huge deposit of coal, and whizzing around on helicopters and in Hertz doing ambitious technological-political projects. I enjoyed tumultuous relationships with bright-eyed women, made pals with adventurous men, published a few poems, got rated as a success story by my friends. I was moving steadily forward in my three selected fields – the “boxes” or “monads” of enterprise, theater, and biospheric geology. I had gone bonkers with multi-phrenic intensity.

I hoped to learn to prolong and deepen my first two tastes of unity in diversity. In the summers of 1962 and 1963, two shamanic experiences changed me forever. A friend of mine, with whom I met some real Indian leaders in the Southwest, had become an initiate in peyote mysteries and rites. I joined him in his next exploration. As a B-52 winged overhead, I “saw” that the pilot, disciplined like myself, would just drop his atomic bombs whenever and wherever ordered. I “saw” transience, death, and realities of being that made me love and surrender to the worlds of life. I decided to leave the magnificent shambles of our new Babylon.

So I turned back to *me*, and to the biosphere – the real love of my life. I sailed on the Yugoslavian freighter *Hrvatska* for Tangiers, which had become a center for the avant-garde’s refreshing encounter with Berber magic and music in its fabled “Interzone.” I wanted out of all the boxes, out of all the fenced fields; I wanted to start roaming great nature, the cosmos.

I headed for Morocco to start the first leg of my journey to integrate my being with me, myself and I, all once again in the right order, as my grandfather—who embodied the quintessence of frontier wisdom



Terry Taylor and John at the Socco Chico Café, Tangiers, taking in the scene.

—and my great cowboy cousin, Buck, would have put it. I eventually wrote a novel, *Thirty-Nine Blows on a Gone Trumpet* (taking about twenty years for revisions), about a character named Madison, who escapes his American fate by going to Tangiers, then a second novel about Madison's further adventures called *Journey around an Extraordinary Planet*.

Further experiences with individuals whom I can best describe as wizards of intuition who hung out in Socco Chico (that magic little plaza in Tangiers), made it clearer to me that once anyone thought of reality as existing in separate boxes, a stealthy hypertext of fishy stories stole all one's attention. This mobile palimpsest—created with such snakelike cunning, cleverly squirreled away in such separated holes, howled about by such crafty coyotes, bellowed about by such big bulls, cackled about by such proud hens, bleated about by such sad sheep, and butted around by such belligerent goats—made me jump quicker and quicker from box to box in a vain attempt to corral reality. But I had never jumped out of box-land until I met the Native

American mysteries, followed by meeting the Berbers. Think outside the box from within another box or from between boxes? Not the chance of a snowflake in hell.

I had begun to catch on about how to relate *me* to the biosphere in 1953 when I took a course in Historical Geology taught by Professor Ben Parker at the Colorado School of Mines. Scorning all rhetorical devices, he stated flatly that around the great spherical core of the Planet Earth there existed a sphere of rock, a sphere of air, a sphere of water, and a sphere of life – a biosphere. He further asserted that all these spheres’ interrelated history produced constant and vast changes. I felt the famed Pythagorean “music of the spheres” thrill through me, and for the first time felt that I might amount to something, that I had found the clue to a creative life. This biosphere idea dealt effectively with sense impressions and emotional assessments, fit with what I intuitively grasped while walking by myself up Clear Creek Canyon near Golden, Colorado. All of life – undissected, radiantly alive, extending over the whole earth in its waters, soils, and airs – formed a single, whole evolution, connected throughout time, space, matter, energy and quanta with the evolution of the entire cosmos. All my culture’s money-laden, double-bind boxes momentarily dissolved in the belly-throbbing laughter of this sublime, diversely manifesting, evolving intelligence.

Hearing Professor Parker enunciate the co-evolution of biosphere, atmosphere, hydrosphere, and lithosphere (life, air, water, and rocks) immediately cleared up a hundred apparently disconnected problems. Problems of location throughout space and time of coal deposits, iron mines, precious metals, and other outstanding features of the landscape, called biomes – such as forests, grasslands, deserts, marshes, and coral reefs – fell into place. Instead of being artificially separated in boxes by political boundaries, textbooks, and corporations, these ever-changing entities formed a single four-dimensional map with

moving continents, mountain ranges, and oceans, always changing position relative to the sun and galaxy in the process of organizing trillions of tons of intricately looped molecular flows that continually transformed a planetary-scale volume of space.

Me had been right all along, but only now could I speak about it, communicate and learn with other people. I began to write new poetry to purify the semantics of what *me* knew, did new science that gave *me* a kick, wandered anywhere and always found myself at home because anywhere was part of the biosphere. Home is where the heart is!

But the first thing I had done with the knowledge that the biosphere existed as a gigantic, ancient, and ever-changing entity was to unite that objective knowledge with moment-by-moment being-perceptions made by *me*. I started hanging out with rock formations deposited by long-gone biospheres as well as with the plants and animals doing their geologic duties today. I became something of a whiz at using traces of past biospheric periods to search out ore deposits and discovered a whole new way to explore for minerals, which culminated in my 1962–63 coal explorations for David Lilienthal's Development and Resources Corporation.



David Lilienthal in the early 1960s, my mentor on regional development; I worked on projects for him in Iran, the Ivory Coast and Haiti.

David, the former first chairman of the Atomic Energy Commission (and before that the Tennessee Valley Authority), became my greatest teacher in starting up and managing complex projects. In his memoirs, David called me “a crackerjack engineer.” Eventually, I found four hundred million tons of unclaimed high-grade coal. David only wanted two hundred million tons to secure his standing in the energy industry when he made his major speech questioning the rise of atomic power. When I asked, he kindly permitted me to lease the other two hundred million tons, and with two Japanese investors, I became a paper billionaire (royalties would be ten dollars a ton).

Soon I grew to understand the implications of this unbridled fossil fuel exploitation. The place, Kaiparowitz Plateau, where I had found the coal, was fragile, high, cold desert ecology sacred to Hopi and Navajo cultures. Selling Carboniferous Era deposits would lead to endless trainloads stoking huge furnaces, generating ephemeral money, trailer towns, electricity for frivolous uses, and sulfur and carbon dioxides pumping smog into the pure air of the Four Corners high plateau (the meeting point where four states, Utah, Colorado, Arizona and New Mexico, come together). I dreamt of becoming rich, powerful, and artistic, then at fifty or so, doing again what came naturally. When I realized I had it all backwards – selling my youth and honor for a chancy old age – I gave up my extensive leases and terminated my company, Mountain and Manhattan. I needed to journey around and experience this extraordinary planet to the fullest. I didn't want to shuffle jejune formulas of greedsters who thought they knew what made the world go 'round. I needed to educate myself: *Educe*, lead myself out – rather than *Se-duce*, lead myself astray.

Earth *is* an extraordinary planet. A biosphere made its trillion-tonned, fifty-million specied, four-billion-year-old home here. It deposited a quadrillion tons of synthesized molecules to improve that home, and it adds ten million more tons of new geological deposits each year, thus greatly altering Earth's crust by creating rock-destroying roots and hooves, soils, mucks, sedimentary formations like coal and limestones, and liquid oils and natural gases, finally by evolving humans who evolved shore-changing and mountain-leveling technologies. Ordinarily, planets don't have biospheres. This biosphere, unique in our solar system and for much farther beyond, allowed and assisted us to evolve and to create what I now call the *ethnosphere*, the sphere of cultures that manifests differing aspects of human potential. The biosphere not only grew and evolved, but humanity evolved and developed these varying interacting cultures.

All these cultures—past, present and those to come—have given us humans awesome abilities to adapt to rapid changes. These mysterious powers ensure humanity can deal with any physical test that hits us, short of a cosmic catastrophe. For example, a cosmic catastrophe could come along due to the ethnosphere's own success: the degradation of Earth's biosphere by several of the panoply of cultures that overemphasize, even worship, the technosphere and which will not so far give up their potential to make a great atomic war or to industriously devastate the life systems.

Just as Ben Parker awakened me to the biosphere in 1953, so Melville Herskovits, at Northwestern University, had awakened me in 1946 to the ethnosphere. In his anthropology class, Herskovits baldly stated the "Boas and Benedict proposition" — that a vast arc of human potentiality existed, that each culture represented at most only a few degrees of that arc. I decided to make every effort to observe and experience in my own particular way every degree in the total arc of that sphere. Eventually, I saw that this arc, begun over forty thousand years ago, had completed its journey around the planet and twined tendrils around each human body-mind. My paper on the ethnosphere which I wrote in 2002,¹ presents my thinking on this great offspring of the Earth's biosphere.

After six years of marvelous adventures that started immediately upon boarding the *Hrvatska* for Tangiers in 1963, I found myself ready, able, and willing to live at the pitch of comprehensive action. I was no longer satisfied to poodle along, rapturously tramping about in lunatic mystic unity with deserts, jungles, and far-out cultural achievements. I wished to move my center of being from neurosoma to neurobrain. I now wished to compose a reality script based on direct perceptions emerging from centering on the actual flows in my synapses and give them the chance to receive inputs from all forms of reality. I trusted that flowing with these flows would, with the now subconsciously embedded structure of my previous knowledge about



John in a moment of contemplation, Vietnam, 1965.

role-playing and staying healthy, allow me a deeper synergy of my three lines of action: theater, enterprise, and ecotechnics. I hoped to align my life's activities with biospheric evolution.

First, I determined to help develop a complete science and engineering discipline (which I called *ecotechnics*, the ecology of technics and technics of ecology) on a biospheric-geospheric-solarspheric scale. To accomplish this, I needed to work out a conceptual model of the biosphere and then actually make a large-scale experimental model which could include humans. Second, I wished to help create the techniques and base for a theater, exploring the possibilities inherent in humanity indicated by looking at all cultural manifestations of biosphere – past, present, and future. Third, I wanted to make beautiful and sustainable project-enterprises around this lovely planet that harmonized ecology with economics. I hoped that a self-organizing way of life attuned to the biospheric rhythms would emerge for me, my friends, other humans, plants, and animals by judiciously interweaving biospheric, technical, and cultural processes in practical projects I called “synergias.”

I saw the possibility of a creative alternative to destructive development, namely, *comprehensive co-evolutionary anticipatory design*, I endlessly practiced making trial integrations of the four great vectors of rocks, air, water, and life—and of their children, the soils and mucks—into a unified perception that could bring forth a model experiment whose results would ground a real way of life. My exercises expanded to include so much time, space, material, and biospheric complexity that I began to “see,” to “feel,” and then to constate my own eating, elimination, and physical movement as an active part of everything acting within the biosphere. Perceptions that integrated the vectors of earth, life, cultures, and technics could enhance any project. This vision of a science of the sciences gave new breadth and depth to my loves and friendships, to my poetry and stories, to my contemplations of human destiny.

I developed ways of using the hypothesis-free idiographic method of naturalist observation to complement my detailed hypothesis-driven studies relating to biospheric phenomena, demanded geologically by the mining and metallurgical departments of Colorado School of Mines and by my professional life. Konrad Lorenz, the founder of ethology, told me that only this experience-based method could generate a large enough empirical base to keep wishful fantasy out of gestalt intuitions. In addition, without continuing naturalist or discovery observations that increase the base of data, hypotheses working and re-working their givens dwindle into “the soup of the soup of the soup of the duck (whatever system they are studying).”

Also, without the feeling of personal connection with the cosmos, the work and consequences of hypothetical scientific effort disappear into a lumpen intellectual professionalism. Concealing and/or ignoring “unpleasant” data become rife. Curves get “smoothed out,” vital data misplaced in miscellanies of detail. Applause replaces appraisal,

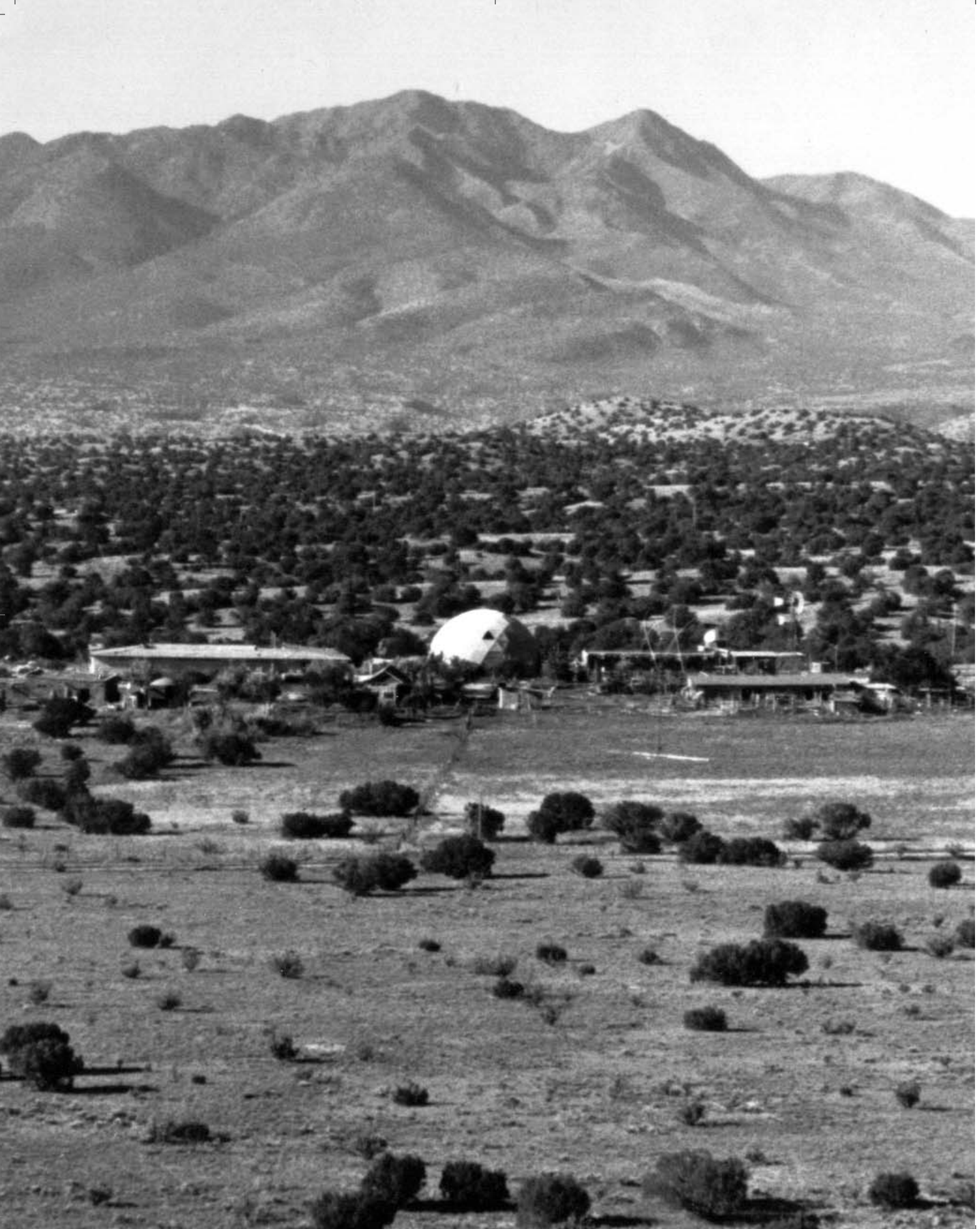
criticism replaces critique in the scientific journals. Back scratching replaces head scratching.

Rangy Ed (Edward O.) Wilson added the knowhow in his enlightening book *Biophilia* that these idiographic operations could best be carried out in a state of consciousness he called the “naturalist trance,” in which one can “see” key connections producing the observed phenomena. In Vienna, Lorenz, sitting by my side in front of his aquarium, showed me exactly how to fine-tune these operations when he said:

“Find your own way to attain the naturalist trance, stay in it until you see something new, then record that observation. Classify and meditate on the data until patterns emerge.”

Acute Jane Goodall told me that she had also learned this observational skill from Lorenz, which she applied so brilliantly to her ground breaking studies of chimpanzees.

I wanted to observe the biosphere the way Lorenz observed geese, Wilson observed ants, and Goodall observed chimpanzees. More, I wanted to imprint the biosphere the way the goslings imprinted Lorenz, as my mother. Biosphere 2 began to exist in my mind – inchoate, inescapable, and ineluctable – beckoning me towards destiny with mysterious but never-failing allure.



Synergia Ranch, Santa Fe

CHAPTER TWO

The biosphere is a geological force and a cosmic phenomenon.

VLADIMIR VERNADSKY

*Synergy is the property of a total system that cannot be predicted
by addition of the properties of its parts.*

R. BUCKMINSTER FULLER

FROM THAT MOMENT IN 1953 when Ben Parker's calm, nasal voice of truth stunned me into the trance of wonder, I wandered for sixteen years throughout many of the biosphere's varied bioregions—ten years at some of the living tips of technological prowess, followed by six years of on-the-edge expeditions to search out artistic and psycho-physiological intuitions and practices kept alive by Earth's ancient cultures. Those travels deeply rooted and fertilized the notion of biosphere in me; they also got me a partner in biospherics.

Marie Harding and I met in India when our two journeys around the biosphere first crossed in 1964. We made our first small expedition to the Qutub Minar and Asoka's wrought iron pillar in old Delhi under the guidance of the redoubtable sage, Anil Thakkar. Marie was staying with a fellow classmate, Wendy Green, daughter of the number two man in the American Embassy, Marshal Green, a diplomat famous for his understanding of Asian cultures. Wendy had been a fun-loving Sarah Lawrence date of mine in the old Manhattan days.

A few months later (after traveling in Nepal, Tibet, Burma and Thailand), I ran across Marie in Saigon at a library, where she was relaxing on a short break from her work at a one-doctor, three-nurse hospital located in the jungle three hundred miles to the north along the Ho

IMAGE ON LEFT:
*The Ortiz Mountains and
Synergia Ranch, 1975.*