

TOUCHSTONE

William Walling

This book is a work of fiction. Any resemblance to actual events or persons, living or dead, is entirely coincidental.

“Touchstone,” by William Walling. ISBN 978-1-60264-282-9.

Published 2008 by Virtualbookworm.com Publishing Inc., P.O. Box 9949, College Station, TX 77842, US. ©2008, William Walling. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, recording or otherwise, without the prior written permission of William Walling.

Manufactured in the United States of America.

*What thou would'st learn I shall make clear to thee,
Not weaving subtleties, but simple sooth
Unfolding as the mouth should speak to friends.
I am Prometheus, giver of fire to mortals.*

Aeschylus
PROMETHEUS BOUND

FOREWORD

CALENDAR YEAR 2009 DAWNED with a newly elected chief executive presiding over a nation mired in severe economic difficulties. Despite that, subliminal and overt differences between this and the previous administration soon became apparent, inspiring a rebirth of American optimism. Relative transparency replaced government policies hitherto shrouded in secrecy. The forthright dissemination of bad news as well as good superseded hypocritical half-truths and dissembling propaganda. Appointee competence took precedence over loyalty to an individual, and pseudo-scientific dogma gave way to a thoughtful interpretation of real-world events and circumstances. Foresight and diplomacy usurped the role of imperial, “wag the dog” militarism.

No longer muzzled, government environmentalists were encouraged to define in lay terms the ultimate consequences of ongoing climate change, and thus emphasize the vital importance of reducing the human-generated carbon footprint to retard the warming trend, while keeping the wheels of civilization turning.

Instituting “green” measures soonest, however, conflicted with the worldview of those charged with guiding major business enterprises, those sated with affluent “taken-for-granted” lifestyles, and a minority who believed primary efforts should be directed toward adapting to “inevitable, irreversible” climate change instead of searching for “finger-in-the-dike” methods of forestalling it. A compromise urging both approaches in proportion lit reluctant, difficult to ignite fires under the governments of America and most other industrialized nations.

Time passed and de facto climate change symptoms multiplied. Glaciers receded farther, ice sheets in the polar regions and Greenland continued to melt away, sea levels inched upward. As the atmosphere and hydrosphere gradually warmed and became more dynamic, oceanic circulation patterns changed and global weather conditions worsened. Specific regions of the globe suffered widespread megadroughts, while others were subjected to storms more frequent and severe, many accompanied by devastating cyclonic rotation.

A sense of impending panic induced pundits to voice dire predictions of a cataclysm in the making, their jeremiads reinforced by television executives who aired scare festival after festival tailored to reap superb viewer ratings. Academics and professional talking heads insisted that taming the climatological golem stalking the world was hypercritical rather than merely essential, adding that it would be an egregious error not to also prepare for the radical lifestyle changes even a less intense environmental assault might bring.

Time passed. The lurking energy crisis began rearing head and shoulders in immediacy above the longer-range threat of global warming. Cumulative near-future energy requirements would soon outstrip what could be derived from all available sources, particularly from dwindling reserves of economically recoverable fossil fuels, with “economically” the operative term.

Lest soon-to-be-energy-starved civilization wither before the full brunt of climate change could be felt, caveats based upon irrefutable evidence stated unequivocally that the dual problems humanity faced could be neither overcome nor ameliorated unless imperative courses of action were immediately adopted. Either draconian measures necessary to mandate an abrupt halt in global population growth would have to be invoked and enforced, with every available resource poured into fossil fuel recovery—economically and otherwise—or potential candidates previously dismissed as insufficient, unreliable or impractical would have to be readdressed in order to bolster the established sources of renewable energy.

Or, declared a sophisticated minority, experimentation leading to the capture of a chimera long-sought within the halls

of academia and sundry research laboratories would simply *have* to be proactively pursued with a goal of discovering the elusive key to the holiest of scientific holy grails, a realization of practical, controlled nuclear fusion systems some thought destined to one day become humanity's ultimate energy panacea.

Chasing after the nuclear fusion will-o-the-wisp was of course stridently contested. What, demanded the scoffers and nay-sayers, was wrong with pouring every effort into increased solar and hydro-electric power generation, mass-produced fission reactors, geothermal and wind-machine power generation, or for that matter the energy derived from oceanic tidal and wave action, or, or, or . . . ?

Dribbles in a bottomless bucket denied the experts, who insisted that palliatives administered to ease pain did nothing to cure an affliction, nor would a hodge-podge of proven, partially proven and unproven energy sources partially satisfy the steadily ballooning demand.

Late in the century's third decade, despite the widespread use of advanced automotive carburetion systems, electric, hybrid and hydrogen-powered vehicles, super-efficient Synthocell solar panels, the replacement of incandescent bulbs with fluorescents and clusters of light-emitting diodes, or the advent of numerous other energy-efficient devices and processes, stark reality began settling in and became a verifiable certainty. Paradoxically, although demand would soon outstrip supply, swiftly depleting reserves of oil, coal and natural gas still had to account for most of the rationed energy consumed in all corners of the globe.

At this late date even power-gobbling Americans had awakened to real-world acceptance of public transportation systems, such as they were, and even offered lip service to strictly enforced energy rationing. But never—not ever, Heaven forbid!—would privileged Americans give in to the dire specter of periodically heatless, lightless homes and offices.

Born under a pall of critical urgency, the United Nations Energy Consortium wisely if nervously opted to sponsor with vigor and dedication a spectrum of nuclear fusion research and development programs. Sadly, the aforementioned vigor and dedication consisted largely of technical papers and the endless

talk-talk for which the U.N. was famous. Proactive sponsorship and direction of on-going fusion research gradually shifted into the hands of those energy-hungry member nations able to afford the stiff tab, an assessment based upon a percentage of gross domestic product. After a century and more spent following blind alleys which either dead-ended in failure or marginal semi-success, a prominent historian likened the massive collaborative effort to a grossly upscale version of the wartime Manhattan Project that gave birth in secret to nuclear weapons fueled with a fissile isotope of uranium, or the artificially bred element plutonium.

In late 2027 a significant breakthrough perked a major degree of interest when the innovative MEMO Program at the ITER facility at Cadarache in France's Côte d'Azur achieved deuterium-tritium plasma ignition and miraculously sustained it for twenty-three minutes and sixteen seconds. Loud, deafening cheers were sent up to the skies.

Prematurely, as it developed, when ITER announced that even if perfected to a point where energy output grossly exceeded energy input severe drawbacks went hand-in-hand with the process, and the cheers diminished to murmurs.

While simplest to achieve with regard to what physicists term the Lawson criterion—sufficient, sustained thermal excitation and consistent magnetic confinement of the plasma—collateral disadvantages went hand in hand with the process, principally the emission of googols of difficult-to-handle, high-energy neutrons which not only posed a health hazard to those in attendance but caused unwanted secondary reactions, including making radioactive the containment shell. A secondary problem had to do with Bremsstrahlung, the German term for performance-degrading radiative losses incurred during the countless collisions of electrons and ions within the plasma.

Precious years slipped from the calendar. Solving the fusion quandary slipped further toward the abyss as the neutron emission problem, coupled with secondary and tertiary complications, refused to go away. The Energy Consortium's scientific brain trust re-sharpened its pencils, subjected the problem to intensely focused scrutiny, issued additional reams of

technical papers, engaged in yet more talk-talk, and finally committed to a fallback combination of fusible isotopes requiring a higher ignition temperature. The proposed aneutronic solution called for an ionized plasma consisting of the hydrogen isotope deuterium, ^2H in scientific notation, plus a true rarity, ^3He , a non-radioactive, extremely scarce isotope of helium, the second lightest element in nature.

Induced to fuse together as the electromagnetic strong force binding in place the respective, positively charged—and therefore mutually repellent—nuclei was overcome, these plasma constituents produced stable helium, ^4He , while simultaneously releasing energy equivalent to approximately 3.6 million electron volts and an odd nucleus consisting of one proton and zero neutrons called “protium,” thus affording an additional energy release of 14.7 million electron volts, for an approximate total of 18.3 MeV, an output exceeding the energy release provided by the D+T fusion process and offering genuine bonuses: very modest neutron emission and diminished Bremsstrahlung losses.

What had been apparent from the start, however, was a monumental dilemma associated with the $^2\text{H}+^3\text{He}$ fusion process: helium-three’s all but nonexistent rarity, a circumstance eliminating any faint hope of obtaining the necessary volumes.

The Consortium gyrated within its toils, sorted and shuffled fallback plasma combinations, figuratively threw up its hands and initiated a second desperate attempt to make viable the more conventional $^2\text{H}+^3\text{H}$ nuclear fusion process. Deuterium was relatively plentiful, while tritium, ^3H , could be laboriously produced in fission reactors by bombarding a specific lithium isotope in the manner used to produce fuel for thermonuclear weapons, not to mention the fact that $^2\text{H}+^3\text{H}$ fusion occurred at a lower degree of thermal excitation. This approach was reluctantly abandoned a second time; in addition to major neutron emission and Bremsstrahlung problems, tritium was itself mildly radioactive and demanded safe handling procedures.

Despite its extreme rarity, helium-three, a natural product of tritium beta decay, remained an attractive focus of experimentation in that it featured a “helion,” or nucleus, consisting of two protons and but a single neutron, with the

lonely neutron hungering to accept a second neutron and transform itself into stable ${}^4\text{He}$ —ordinary helium.

Touted as an achievable, reasonable aneutronic solution, experiments using ${}^2\text{H}+{}^3\text{He}$ plasma again received the lion's share of attention and earned modest successes. The coin's obverse, however, continued to point up an insurmountable, inordinately discouraging obstacle. Minute quantities of ${}^3\text{He}$ formed at a less than glacial rate by means of tritium beta decay, and could also be produced in minute quantities within fission reactors. Yet in a practical sense the helium-three isotope was so frightfully scarce as to once and for all time remove itself from serious consideration as a solution to nuclear fusion power generation.

Or was it . . . ?

one

HARVEST MOON

THE SLOW-PACED LUNAR day was waning, and so was Myron. But then weariness was endemic after two solid weeks of harvesting.

The United Nations wise-heads charged from afar with nominal oversight of the Selene Pilot Program doubtless viewed the coming sunless period as a chance for well-deserved rest and recreation. Operations Manager Myron Cromwell knew better. For most Selene personnel the coming fortnight of supposed R&R would consist of obligatory workouts on the exercise machines, catch-as-catch-can television piped up from the blue skies and green grass of home, intermittent lasercomm contact with earthbound relatives and friends, listening to canned music, watching films, plying various hobbies and crafts, or partaking of the recreation room's endless round-robin of chess, poker and contract bridge. His own "downtime" would be peppered with spates of paperwork interspersed with the onerous task of bending a confessional ear to the complaints and whinings of disgruntled, homesick crewmen; or worse, taking his turn at playing farmer to tend the greenhouse module.

Encumbered in bulky vacuum gear, Cromwell parked one of the low-slung electric jitneys used to transport crewmen around the site and depowered the open vehicle. He swung the articulated legs of his pressure-suit around in the seat and planted his protective overboots on the lunar surface, stirring the Sea of Tranquility's well-trampled dust as he approached the habitat.

Far over the naked, too-close horizon a storied event had taken place when Astronaut Neil Armstrong jumped down from

the ladder of the Lunar Module and laid pristine boot prints in this selfsame regolith. There were thousands upon thousands of boot prints now, many of them made by he himself.

Too many, Cromwell thought wryly.

Having again exceeded the recommended hours of surface exposure, he would again be forced to verbally duel the unsympathetic medic over the readout in his pressure-suit's microdosimeter. Calibrated to gauge the effectivity of the suit's integral shielding material, the instrument recorded a wearer's cumulative exposure to energetic solar activity as well as galactic cosmic radiation. Competitive to the nth degree, relishing argument for the sake of argument, he would nevertheless be forced to again plead no contest. The sole medic on site used an indefensible tactic to win by default every battle related to a surface worker's marginal overexposure to radiation. All he had to do was recite the same tired litany of potentially dangerous aftereffects: nausea, fatigue, central nervous system debility, cataracts, hair loss, general physiological deterioration, and a latent pre-cancerous condition.

Passionate about winning at anything and everything, Myron did not simply dislike losing; he *detested* it.

Revisiting the surface, an unlikely prospect during the dark lunar semi-cycle to come, meant another claustrophobic two-week stint cooped up belowground. He halted at the top of the walled ramp leading down to the habitat for a parting survey of the stark, surrounding desolation. Unleavened by any hint of atmosphere, sun dazzle all but touching the knife-edge horizon lit the moonscape obliquely, turning the visible portion of the mare's three hundred thousand square kilometers into a sterile, gray-scale panorama dappled with inky, sharply defined shadows. The uninviting vista was broken only by the prototype strip-miner's silhouette and the upper curve of the solar mirror's huge dish.

Dubbed "Selene's Chariot" by a classical-minded crewman, the tracked, telerobotic harvester massed more than twelve metric tonnes. Fabricated and tested at the Dysart Technologies Industrial Facility in Michigan, then disassembled, shipped piecemeal and reassembled here in vacuum, the harvester

had been designed to excavate volumes of regolith destined for first-stage processing into multiple varieties of placid and volatile pay dirt. Striving to meet its assigned performance benchmarks, the sophisticated harvester ground along at a stately ten-meters-per-hour or less, depending upon regolith depth and composition as well as the nature and frequency of obstructions. Stereoscopic video data transmitted from dual charge-coupled-device cameras scanning for non-negotiable craterlets, projecting outcrops and larger boulders allowed remote control of the Chariot from the habitat command center. The ponderous vehicle left in its back and forth wake kilometers-long swaths remindful of a sterile, monochromatic plowed field. Dust plumes raised by multiple scoops oscillating to collect regolith, or cycled waste dumped overboard as the harvester churned forward, fell swiftly to rest in Luna's airless, low-gravity environment.

Off to the south, atop a semi-portable pylon erected on the near ringwall of the largest crater in the vicinity, the polished metal mirror had followed the slowly moving Sun with computer-driven precision, reflecting concentrated solar energy to the furnace receptor dish atop the Chariot. Its fuel-cells depowered on the eve of lunar night, the strip-miner had ground to a halt, the solar mirror had rotated away from the setting Sun and turned its face downward; it and the Chariot would remain somnolent throughout the coming sunless period.

Cromwell faced away from the blinding, horizontal sunlight and had to reduce the polarization in his pressure-suit's faceplate lens. Bathed in sunset flame, the upper escarpment of Palus Somnii loomed above the curved, intervening horizon. The spacecraft mass-driver launch system gleamed in the low sun like a bright copper filament, a linear caesura that climbed the palisade not far from a canyon cutting deeply into its flank.

If all went well in two weeks, shortly after the succeeding lunar dawn, a space-to-space drone loaded to one-sixteenth capacity with ultra-precious helium-three would slingshot up the mass-driver rails and be boosted unpowered into orbit above Mare Crisium. After circling three-quarters of the Moon's crater-raddled farside, the drone's thrusters would ignite, sending it on

an automated, three-day trajectory to its destination, low-earth-orbit about the energy-hungry homeworld.

Again assuming that all went well, the drone would rendezvous with a co-orbiting transatmospheric freighter, be taken into the stub-winged vehicle's cargo bay and shuttled to the ground. The less-than-hoped-for quantity of ultra-precious, helium-three harvested since the first pair of deliveries would earn Dysart Technologies, Ltd. upward of eighty or ninety million new dollars, depending upon how far the price would be driven up by a handful of forward-looking international fusion community investors bidding fiercely for product, minus the self-allocated kilograms retained to fuel the company's prototype fusion system at the Dysart Energy Division R&D facility in the remote reaches of Nevada's Great Basin. Despite a booming seller's market in helium-three, the remuneration would amount to less than a pittance compared to the mammoth, multi-gigabuck investment DT had thus far poured into the Selene Pilot Program.

If, thought Myron, *all went well*. It was this recurring uncertainty that never failed to generate a twinge of anxiety. To date all had not exactly gone as scripted, but there was reason to believe a turn for either the better or worse was in store, depending upon what varieties of fallout fell out in the wake of an imminent visit by three "fact-finding experts" due to arrive from the familiar, cloud-draped blue world decorating Luna's jet black, unfriendly sky. With mordant sarcasm Myron reflected on the cynical observation of a crewman who had defined an expert as, "Anyone from out of town."

As had happened frequently of late, the drab moonscape triggered a flashback to the trials and tribulations of his formative years in Wales, when the semi-moribund coal industry had been on its uppers and miners were being pink-slipped in droves—a dismal footnote to scattered mine closures. He recalled his youthful confusion over the swelling panic in County Dyfed as here and there once-rich, economically recoverable veins began to peter out. He vividly pictured his young self picking through the slag heaps with other ragamuffins, hoping to scavenge a few usable lumps of coal with which to help fight the endless cold. He thought of the skimpy meals and infrequently skipped meals

in his parents' company-owned clapboard house; the power brownouts and blackouts; the ballooning roster of idled neighbors with nowhere to turn for a livelihood. Cold and hungry months had elapsed while his father schemed and planned, cajoled and threatened, and eventually finagled a family migration to Calgary.

In that bygone era Canada's Northwest Mining Association had boasted a whimsical bumper-sticker slogan: IF IT CAN'T BE GROWN, IT'S GOTTA BE MINED! One of his fondest memories hinged on the elation shown by his father and older brother over the prospect of working in a deep open-pit mine instead of facing the daily hazards of being crushed deep underground, victimized by an explosion and fire, drowned, asphyxiated, or succumbing to Black Lung and a premature exit from a *very* hard existence. Then as now, a miner's daily routine consisted of monotonous drudgery peppered with spells of abject terror, a regimen compounded for lunar strip-miners by the added threats of explosive decompression and radiation exposure hanging over their heads.

A flicker of light in the jet sky caught Myron's attention. He craned, pressing his head back against the quilted padding of the pressure-suit's headpiece. Once the flare died, it was next to impossible to pick out the descending ship's sunlit glint. Seconds later a quadrate of exhaust plumes erupted, winked out, and then burned steadily. The blunt space-to-space vehicle dubbed a "boxcar" by U.S. Aerospace Forces slowed its downward plunge, slowed still further and, balancing rump-first on outboard-cantilevered thrusters, fell slowly toward the surface to vanish beneath the foreshortened horizon.

Myron nudged the chin control and spoke into the throat microphone. "Cromwell, here. Open your ear-holes, habitat. Come in, habitat."

Punctuated by a faint dit of static, a lightly accented voice crackled inside the p-suit's headpiece. "Myron, don't tell me you've invented another problem for me to solve."

— "Nein Herr Doktor Francke. Die Herren von der Erde hat

“Please,” interrupted the voice, “a Welshman’s native tongue is broken English. Stick to it, eh?” Formerly a tenured professor of physics at the University of Munich, Dr. Alois Francke and Myron enjoyed their perpetual game of batting back and forth malapropisms and jovial insults.

“Right you are, Doc. Listen, unless I’m hallucinating the high ‘n mighty bean-counters Jean-Marie’s been sweating out hit the deck a minute ago.”

“I make that a true statement,” replied Francke. “I’m the designated meeter-greeter out at the landing site. But really, Myron! Even coming from someone as obnoxious as you, calling our distinguished visitors ‘bean-counters’ exceeds the bounds of understatement.”

Myron grinned. “Nothing,” he quipped, “exceeds like excess. The terrible trio may count humongous, king-sized beans, but they’re still just beans.”

“Curb thy salty tongue,” admonished Dr. Francke, “and get thee hence. Jean-Marie wants a word with you before welcoming our guests.”

“Tell our illustrious director I’ll get back to him right after I check my appointment book.”

“Myron!”

“Steady, Doc; don’t race your motor. Tell the Bossman his favorite whipping boy is looking forward to another dull séance. Cromwell, out.”

Descending the shallow-pitched ramp, Myron commanded the habitat’s outer hatch to cycle open. He entered the evacuated airlock chamber and stood patiently, legs apart, arms akimbo, while clinging moondust was electrostatically removed from the suit’s protective buffer garment and the insulated overboots worn to protect the suit’s integral footwear. If introduced into the habitat, sharp-edged, micron-sized particles posed only minor health problems when inhaled, principally “hay fever” symptoms, whereas nanometer-sized particles were prone to lodge in the lungs and induce fibrosis, or migrate into the bloodstream where the long-term effects occasionally proved more serious.

Pressure came up slowly in the lock chamber. When the light winked green, indicating ambient barometric equivalence within lock chamber and habitat, he punched the oversized switch plaque with the heel of a gauntlet. The inner hatch cycled open, admitting him into the airlock service compartment's warm, oxygen-nitrogen environment.

Opening the faceplate lens, he wrinkled his nose at the pressure suit's legacy—a ghostly odor of machine oil tainted with a whiff of his own perspiration. He unsealed, wriggled free with practiced dexterity, doffing the cumbersome vacuum gear he had lived in off and on for almost two weeks. Divesting the suit of its buffer garment and overboots, he hung the ancillary items separately to await safety inspection and more thorough cleansing.

The work of an amateur painter among the crewmen, a poster-sized watercolor depicting the Selene Pilot Program's stylized logo graced the honeycomb-sandwich partition behind the director's utilitarian plastic desk. Clad in filmy, rippling gossamer, the goddess reared defiantly erect in a golden chariot, a curling whip held high in one dainty hand, while the other clutched the reins of a pair of prancing white Arabians.

Myron sipped black coffee from a squeezebottle and studied the painting with skeptical indifference. He admired the artistic endeavor, but considered the logo a piece of artsy-fartsy dreck. "It's pretty, the Devil said," he quoted, "but is it *art*?"

Seated at his desk, Dr. Boucher did not look up.

Familiar with the director's crusty manner and warm heart, Myron said, "Sure hope the half-dressed filly knows how to handle that Ben-Hur rig she's driving."

Dark eyes lifted, locked for blinkless seconds with Cromwell's. Jean-Marie Boucher was known for using his far-from-secret weapon, a Medusa-like stare, to far greater advantage than the bluster employed by many self-esteemed executives.

The ensuing silence threatened to drag on, and Myron fidgeted restively. “Doc Francke,” he said to break the refractory spell, “told me he was going out to meeting the nosy experts.”

The director’s arctic stare persisted. “La belle Selene,” he said, “commands her steeds with consummate authority, which is more than one can say for the slapdash manner your controllers drive the Chariot. The root question, dear colleague, is not how you handle your duties, but whether you can be trusted to handle your mouth.”

“Come on, Bossman,” pleaded Myron, “no word games. I’m too bushed for banter.”

“And perhaps too outspoken as well.”

Myron’s sigh was purposely theatrical. “Guilty as charged.”

Dr. Boucher’s glower persisted, though it dimmed from force four to force three. “In the normal course of business,” he said slowly, “I delude myself into believing I’m capable of coping with your impudent tongue and spiny disposition. During the coming visitation, however, those sterling attributes will not be tolerated.”

“The, uh, inquisition?”

“The inquisition,” said Jean-Marie, accompanying the confirmation with a curt nod. “While our guests are with us I want you to keep one singular fact in the forefront of your consciousness at all times. Among the three individuals soon to come calling is a gentleman of extraordinary vintage.”

“I suppose you mean the U.N. bigshot who —?”

“No, no,” denied the director. “Energy Secretary Llancolm and I share an acquaintance dating back to my Quai D’Orsay adventures in the diplomatic corps. Lanny is intelligent, inordinately capable. Unfortunately, his heritage encourages strangers to perceive him as the sort of individual a transplanted Welshman like yourself might consider . . . well, rather stiff.”

“A stuffed shirt?”

“Thank you, yes; ‘stuffed shirt’ says it nicely. We shall get no static from Lanny; his post as U.N. Energy Secretary automatically places him in our tent. More to the point, he is intimately acquainted with the staggering problems we’ve

overcome . . . Your pardon, the problems we have partially overcome. His report is certain to have a positive impact within the United Nation Organization proper. All things considered, you will discover M'sieur Llancolm to be an accomplished gentleman, so do not be fooled by the oh-so-British muddling through facade he presents to the public at large."

"I hear you, Bossman."

"And I in turn," said Jean-Marie, "am gratified to hear you say it. Our second guest, Senator Raymond Kyle is nominally prominent in America, but something of an unknown quantity elsewhere, and therefore an unknown hazard. It therefore behooves us to treat each of his statements and questions, meaningful, astute, simplistic, asinine, or whatever, with exaggerated caution."

Myron dared a fleet grin. "Diplomatically?"

"Oh, diplomacy by all means! We shall accord the American legislator every known diplomatic nuance in existence. We shall shower him with every fawning tribute in the lexicon. The galling truth is that international schisms have generated the major controversy now raging between the moneyed power-bloc led by Vonex International and the associated petroleum cartel, and the respective American and U.N. leaderships, a triply unfortunate circumstance that places us squarely in the middle. If American congressional support fails to materialize, Selene II and the full-blown Prometheus Project could easily founder in turbulent waters. The key to winning over Senator Kyle will be to show him much more deference and respect than he may deserve."

"Sorta like drowning a cat in cream?"

The director gruded an unsympathetic blink. "In a manner of speaking, I suppose. Pithy aphorisms aside, however, it is the third inquisitor who justifies extremely wary walking. Upon first acquaintance Vonex Chairman Reichert will strike you as a kindly, docile, grandfatherly type, a gentleman of the old school who worships the deity of his choice each Sabbath morn, decries loopholes and pays every centime of taxes owed, never exceeds the speed limit, and cares for family, pets, friends and

acquaintances with enviable diligence. Nothing could be further from the truth.

“M’sieur Reichert’s perch at the apex of the conglomerate Vonex monstrosity,” continued Boucher, “coupled with his demonic unpredictability, perfectly complement the notably astute gentleman’s phenomenal wealth, prestige and behind-the-scenes political influence. Chairman Reichert wheels and deals in stratospheric financial circles, where he amply and consistently showcases a pair of outstanding virtues: his total absence of conscience or humility. The fate of not merely our pilot program but the immediate future of nuclear fusion technology hangs in the balance. In light of that stern fact of life, Reichert is the most dangerous man alive where Dysart Technologies is concerned. If you seek Torquemada among the inquisitors, look no further.”

“Seek who . . . ?”

“Never mind,” said the director.

“Bossman, if this fatcat is such an all around badass, how’d he get himself appointed to the snooper team?”

“An informed guess,” replied Jean-Marie, “would be to suggest that a number of palms were successfully greased.”

Myron thought it over. “Okay, so why should I want to meet Mr. Moneybags, or for that matter the other two snoops?”

“Because,” declared Dr. Boucher, “I am convinced of the necessity. Absent yourself during the welcoming amenities if you wish; I know how tired you must be coming off surface duty. But when we convene for the first inquisitory session I want Dr. Francke on hand to respond to every technical issue that arises, and you standing-by to answer any queries pertaining to field operations I may put to you.”

A puzzled squint. “Queries *you* may put to me?”

“Queries,” emphasized the director, “*I* may put to you. Between times you are to sit on your hands and pretend to interest yourself in the proceedings. You will neither interject any salty comments, nor respond directly to any questions posed by the inquisitors. Understood?”

A second grin from Cromwell. “Not even diplomatic responses?”

The director's underlip curled. "Myron, dedicated operations overseer that you are, have you ever heard the proper definition of a diplomat?"

"No, but you'll relieve my ignorance."

"So I shall, to the extent such an ambitious feat is possible. If a diplomat says yes," explained the director, "he means maybe. If he says maybe, he means no. And if he says no, he's no diplomat."

Myron chuckled. "A good one, Bossman!"

"I sincerely hope the gist of my lesson has registered in your fertile mind."

"Fear not," said Cromwell. Rising and stretching, he yawned gappingly and inquired if The Stockholder had made the last-minute call he knew Jean-Marie was expecting.

"Not as yet," said the director. "M'sieur Dysart may not bother to call. Having little or no belief in pep talks, he rarely stoops to micromanage corporate affairs; it simply isn't his style. He uses meticulous care in selecting a top echelon executive, awards appropriate degrees of authority and responsibility, and then conscientiously looks the other way in expectation of management wonders to be wrought. Should the results prove disappointing, another executive soon replaces the he or she found wanting. For our sake *and* Selene's," added Jean-Marie, "every facet of our discussions with the inquisitors will be encrypted, down-linked in real-time to San Francisco and Geneva for appraisal by The Stockholder, his executive committee, and the United Nations leadership.

"The reaction of our visitors to the rationales, justifications, pleas, show-and-tell graphic data and whatever else we choose to lay before them, will be reviewed, dissected, regurgitated, analyzed, picked to pieces a second, third and perhaps a fourth time, then reassembled, re-regurgitated and re-analyzed ad infinitum. Approval of Selene II depends entirely upon whether the U.N. Economic & Social Council agrees to put its chop on the prospective joint venture, but that cannot take place, I must remind you, until the American Congress and the U.N. General Assembly vote to consecutively endorse Selene II

as a semi-private enterprise ultimately to be administered by the U.N. Energy Consortium.

“No slips-ups will be tolerated during the coming visit,” warned the director. “At minimum, I want two of our distinguished visitors to depart wholly convinced that we have done, and are doing, our absolute utmost with the tools and skeleton personnel provided by the gentleman we employees jocularly refer to as ‘The Stockholder.’ I want our visitors, other than M’sieur Reichert it goes without saying, to leave sympathetic to our problems, cognizant of our accomplishments, and willing if less than eager to endorse Selene II’s near- and long-term goals. I want Lanny and the senator to leave thoroughly dazzled by the first tottering steps we have taken toward industrializing Luna.”

“Hear you five-by-five, Bossman. Count on me.”

“Oh, I shall!” Boucher sounded as if he meant it. The intercom’s insistent buzz cut short whatever else he was about to say. He stretched to touch a button. “Yes?”

“Mr. Dysart, Jean-Marie. Voice only, channel two of the secure lasercomm link.”

“Thank you.” His trust in Myron implicit, the director checked to assure himself multi-level encryption firmware was activated and switched the call to speaker. “*Bonjour*, Lyman.”

The transmission lag seemed to stretch longer than the usual few seconds. “Hi, Jean-Marie,” drawled the world’s wealthiest individual. “Dead air time in these back-and-forthings annoys me worse than a giant hemorrhoid, so let me spiel and get off the horn. I know you’re all set to pipe groundside everything that comes down up there, and we earthbound bystanders are itching to take a long, hard look and listen.

“Catch is,” continued Lyman Dysart, “minutes after we learned the jolly threesome had touched down near your dig a giant horsefly fell in the ointment—a switcheroo you need to know about beforehand. Seems our dear friend, Chairman Reichert, was suddenly taken ill, or so we’re told. Very suddenly, maybe *too* suddenly. Appendicitis is the story bruited about in a Vonex news bulletin, but who knows?”

“Point is, switching riders this close to mid-stream strikes me as unlikely at best, and at worst flat-out weird. After busting a gut and spending beaucoup new dollars to invite himself along on the . . . ‘fact-finding’ junket, Belkin’s been frothing at the mouth over a chance to poop our party with a double-ration of bellowing, ranting, raving and carpet-chewing. Our people down here found out the ringer dispatched to run the errand in his place is a surprise to no one: Vonex Corporate Chief Counsel Aaron Beebe. After learning of the switch, I was warned to pass along word that it’d be a damn good notion for you to count your fingers if and when you happen to shake hands with Beebe. A super-sharpie by reputation, he’s supposedly being groomed to someday fill Reichert’s tasseled, custom-lasted loafers.

“As for how to handle Reichert’s stand-in and the other two fraud and treachery sniffers,” added Dysart, “you’re on your own. You need no words of encouragement from me; besides, you’re much better than I am at pitching eve-of-battle speeches. The bottom line is short and unsweetened: do not, repeat *not*, take a single microgram of guff from Reichert’s errand boy. No sass of any kind, hear? Not so much as a nuanced slight.

“Okay, I’ve had my say,” concluded Dysart. “Hang tight up there, and tell the number one goof-off in your stable, Myron Whatsizname, to mind his manners with the visitors or I promise to shoot the Moon and spank him myself. *Adieu, mon ami*. Best of luck!”

A shadow smile tickled the corners of Dr. Boucher’s generous mouth as he switched off.

Feigning acute indignation, Myron uttered a caustic snort. “Spank me, hah! No way would I bend over for that, not even coming from the biggest of Big Bossman.”

“Should The Stockholder decide to withhold the prescribed punishment,” drawled Jean-Marie, “I shall be delighted to do the honors myself.”

An hour and twenty minutes later Dr. Francke ushered U.N. Energy Secretary Llancolm out of the habitat airlock

chamber. He was trailed by an older man Boucher assumed to be Senator Kyle, while close behind him was . . .

Jean-Marie froze.

Succumbing to an affliction common among first-time lunar visitors—the uncertainty of footing in a gravity field roughly seventeen percent of what they were accustomed to—Vonex International Board Chairman Belkin Reichert shuffled clumsily into the habitat.

Dr. Boucher found himself caught up in the hypnotic gimlet stare of ice-blue eyes that looked sharply at odds with the portly gentleman's ruddy Santa Claus countenance. The chairman's riveting scrutiny made Jean-Marie feel like a slice of live bait being sized up by a hungry predator.