

TOMORROW, THE STARS!

William Walling

*In night and wretchedness, per
aspera ad astra, God grant it!*

Richard Wagner, 1841
(upon completing *Der
Fliegende Holländer*)

Hardcover first edition published by St. Martin's Press entitled
THE WORLD I LEFT BEHIND ME
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Updated, revised & retitled 2003

"Tomorrow the Stars," ISBN 1-58939-412-7 (softcover); 1-58939-428-3 (electronic version).

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ONE

Mister Smith

I lost all track of time poring over the redshift data from a très distant supernova, and nearly missed the late bus. Would've missed it, in fact, if not for my esteemed colleague, Dr. Jefferson Belal Das, who stopped by the office compartment. "Bunking here tonight?" he asked, his quip typically droll. "Last call, unless you've a lonely weekend in mind."

"Uh, oh!" A glance at the bulkhead chronometer. "Thanks, Raja. Wait up, will you?"

I kid Jeff about the rag he hardly ever wraps around his head. He admits to wearing it on visits to New Delhi, just to please his mother, a Bangladeshi Muslim, and Hindu father, a high mucky-muck government lawyer. I happen to know even those occasions are a concession to early baldness, not familial devotion. He's as thoroughly Americanized as any foreign-born gent can be. His groundside passion is restoring antique autos.

I hastily rearranged the clutter, locked the desk and found Das floating topsy-turvy in the passageway. We went hand-over-hand along fixed freefall safety lines leading "up" to Galileo's zenith airlock, zipped in tandem through the umbilical tube's claustrophobic tunnel, and interrupted a steward in the act of closing the bus's outer hatch.

"Dr. Shore," intoned the steward, a touch surly due to our tardiness, "Dr. Das."

"Ahoy the weather deck!" hailed the Raja, giving a fair imitation of the Ancient Mariner with a grave sinus condition. "Stand by to unreef your mizzen sheets and weigh anchor."

The steward pouted as he battened the inner hatch. Jeff and I pulled our way forward, finding plenty of empty seats. Most of the staff had fled Galileo Observatory on the "early bird" shuttle, which runs only on Fridays. I spotted our director, Dr. Mattingly—yes *the* Sir John Mattingly, O.B.E., F.R.A.S., with a rasher of alphabet soup tacked on at the end—and tugged myself into a facing seat. Jeff settled in beside me and latched his safety harness.

Our leader's youthful brilliance had earned him a Hoyle Fellowship at Cambridge. Sir John, a preeminent stellar physicist of long standing, had been knighted by Charles VII shortly after the publication of his incisive

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analyses of data returned from the Centaurus Probe. He looked up from a *New York Times* electronic edition. “Ah, there you are, Shore. Hullo, Jefferson. Thought perhaps we’d left you two behind.”

The Raja grinned. “TGIF, Sir John. Working late?”

“Yes, confound it! There simply aren’t enough hours in the day.” His blue eyes crinkled pleasantly, Mattingly’s authentic British charm is something impossible to counterfeit. Some time ago I realized his reputation as a curmudgeon was largely undeserved. There’s much more to our director than the tweedy, muddling-through “Colonel Blimp” facade he presents when confronted by media newshounds, or boorish interviewers.

Das plugged a disc into the armrest viewer. He was soon lost in the elex edition of a day-old Delhi newspaper.

Sir John went through his usual throat-clearing ritual, a preamble I’d gotten used to hearing. “Rather hoped I’d bump into you on the ride home, Roger. If you and your lady have nothing better planned for this evening, why not come to the theater with us? Chap I once knew quite well is playing Holofernes in a live transmission of *Love’s Labour’s Lost* from the New Globe down in London. He was kind enough to send along four tickets.”

“That’s gracious of you, Sir John, but I, uh . . .”

“Come, come, Shore. Surely *some* of you Americans are Shakespeare buffs.”

“I, er . . . Not sure I can find a date at this late hour,” I said lamely.

The director’s lip curled. “Cosmologists!” he said with a twinkle. “You’re all precisely the same, every ruddy one. Not interested in one blessed thing closer than a few billion parsecs. How about you, Jefferson?”

The query roused Das from his newspaper. He begged off ingenuously. “You’re acquainted with a stage actor, Sir John?”

A nod. “Grew up with the fellow. Haven’t seen or heard from Geoff since we tramped the Cotswolds together as boys. Now he pops up from nowhere. We were both raised in Stratford Commune, yous see.”

I perked up. “Stratford . . . ? Shakespeare’s village?”

“Excellent, Shore!” There was no malice in the director’s chuckle. “But I daresay Stratford can no longer be called a ‘village.’ Margaret and I revisited Warwickshire during my sabbatical two summers ago. Dreadful! Scads of locals underfoot, not to mention gaggles of tourists. Couldn’t wait to be shut of the place.” He gave it a last try, repeating the invitation to accompany him and his wife to the theater.

I felt cornered. I hedged, hemmed and hawed, waffled and backfilled. In the end, I promised to try and round up a date the minute we docked at Earth-Luna. About then the thrusters rumbled to life, making conversation not worth the effort.

Our “bus” is a relic—a second generation Lockheed-Martin Orbiter. Due to wear, tear and obsolescence, NASA judged the clunker no longer able to meet atmospheric re-entry safety requirements. Taken out of service, it’s been knocking around out here on-orbit ever since the dorsal clamshell doors were welded shut and the spacious cargo bay vacuumproofed. Surplus airliner

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seats of mid-twenty-first century vintage somehow or other found their way out to Earth-Luna, and were installed in the barnlike interior. No one would dream of returning the rattletrap to atmosphere, but for the daily commute to and from co-orbiting Galileo Observatory it serves the purpose nicely.

Sir John dozed, a diurnal habit. The Raja finished his newspaper, ejected the coin-sized disc and replaced it with an elex edition of *The Washington Post*.

The second pressures adjusted between the bus and E-L, I hustled through the airlock ahead of everyone else, flew through the umbilical tube, and tugged myself into the complex's nadir berthing stack. I dodged into the nearest convenience booth and phoned Clarice, a *GrossEuropa Raumschiff* stewardette I had dated on occasion. The image of her scratchy-voiced roommate condensed in the vidicom display, and my query earned a funny look. I should have known, said she, that Clarice was working aboard GER *Asgard*, outbound to the trans-Jovian satellites. The aggressive young lady spent a moment hinting that she herself might, maybe, if I could sweet-talk her into it, be available. I passed on the offer less than tactfully. Three more calls netted zilch. It was Friday evening, and hopeless. Every gal I knew was either busy, or out.

I took the lift home to my two-room hidey hole in Radial Three, showered, dressed, and grabbed a sandwich in the Earthview Room's crowded snack bar. I met Sir John and Margaret Mattingly, herself a Dame of the British Empire—a reward for her outstanding career on the holographic stage. As we approached the theater's marquee, Sir John clucked in mock sympathy at my dearth of popularity. He gave away the fourth ticket to a young woman at the end of the box office queue.

Love's Labour's Lost struck me as witty, colorful and well produced, although the archaic language made the dialogue damned difficult to follow. The cast was superb, including Mattingly's boyhood pal. Between acts, Dame Margaret explained how the King's Men had formed under Charles VII's sponsorship, their goal to recreate the tradition and atmosphere of the Elizabethan-Jacobean Stage. The theater at the base of Radial Five is larger than the one in spoke three. For some reason, the holographic stage reproduced there fluoresces less obviously when actors move about, or gesture abruptly. Can't say Shakespeare's exactly my bag, but the production was diverting as well as entertaining.

Applause accompanying the curtain calls continued sporadically as the virtual actors took their virtual bows. Sir John, raising his voice over the applause, told us he meant to send a congratulatory e-letter to his former chum, the actor who'd played Holofernes. We hung back on the fringe of the crush as the theater emptied. I was chatting with Dame Margaret when Sir John was suddenly confronted by an exceptionally tall, pipe-stem slender stranger.

#

As I said, he was *very* tall—far and away the tallest individual I had ever seen. His skin was dark, but not Negroid, rather the flushed complexion

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of someone too long in the sun, but mottled in an unseemly way, as if the pigments had somehow washed and run together. He wore a close-fitting topaz jumpsuit that looked new, expensive. Heavily tinted dark glasses obscured his eyes, lending him a demi-sinister appearance. Something about his hair looked “wrong,” too, but I couldn’t put my finger on what it was.

In a resonant, uninflected monotone—more of an artificial computer voice than anything resembling normal speech—the tall stranger said, “Dr. Mattingly.” It was a directed statement, not a question.

“Why, er . . . yes. Don’t believe we’ve met, sir.”

“I am Smith. May I trouble you with a question or two?”

Obviously intrigued by the other’s unusual appearance, Sir John bristled nevertheless. “I fear this is neither the time nor place for an interview, Mr. Smith. Are you from the media?”

Smith disregarded the question. “I was able to assimilate . . . That is, I was privileged to read your published account of data compiled from the Centaurus Probe. May I ask why that particular star system was chosen as the destination of your pristine interstellar venture?”

“Why . . . ?” The director frowned. He seemed to be readying a tart rejoinder, then some inner conflict made him hesitate. “You shall have to ask my predecessors, Mr. Smith. After all, the probe was launched more than three-quarters of a century ago.”

It was not the answer I’d expected to hear. I’ve seen Sir John cut better men dead for imposing on his privacy. And at a time like that, with Dame Mattingly and me standing there gawking, the director’s compliant attitude was startling. Something about Smith’s general appearance, his flat, monotonal voice, raised my hackles.

“You are aware of the reason,” insisted Smith. “Will you please make it known to me?”

Mattingly’s nostrils flared. He framed a withering reply, then again amazed me by subsiding. I couldn’t believe it when he said, “Rather obvious, isn’t it? Rigil Kentaurus and the trinary system’s other two stellar components are little more than four light-years distant. The probe was our sole hope of obtaining significant extrasolar data without a generations-long wait. After all, Rigil is a G₂V main sequence star a bit smaller than Sol, yet very similar. The likelihood of earthlike planets occurring round a such a primary must’ve seemed an odds-on wager to the team responsible for devising the program and setting things in motion. As it came about, they backed a winner.”

Smith did not react upon receiving this information. “I also wish to learn,” he added, his artificial-sounding, unmodulated voice lending the question more solemn overtones than he might have intended, “how the precise data in your report was derived from weak, erratic impulses transmitted over such a relatively long distance.”

I could have fielded that one, but didn’t expect to hear Mattingly so much as try. His outward manner belligerent, as if he were preparing to tell Smith to bugger off, Sir John said with obvious reluctance, “Actually, the machine did most of the work for us. It accepted the googols of spectrographic

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and video-scan digital signals transmitted by the probe, then selected a best of bests which —”

“Machine . . . ?” The query was sharp, rude-sounding, although that may not have been Smith’s intention.

Sir John swelled visibly. Again, the anticipated thunder and lightning failed to materialize, adding immeasurably to my surprise as well as that of Dame Margaret. The director’s brow furrowed. Acting as if he were torn by some internal conflict, he reconsidered the question. “Why the, er . . . The computer, of course—the ultra-mainframe here in Earth-Luna Station. We, uh . . . maintain a lasercomm link to the observatory.”

After a silent, two-beat pause, Smith was emboldened to ask how the computer managed to differentiate between valid data and random impinging energies.

By this time Dr. Mattingly was wearing a harried expression. “Ah, but you see radio frequency noise *is* random,” he explained, “and therefore nonadditive. The data stream, continuously reinforced with each transmission, gradually evolved into the computer-augmented, authoritative data used to determine the precise orbital mechanics and compositions of the twelve scattered bodies revolving about Rigil’s, Beta’s and Proxima’s common center of mass.”

A lengthy silence ensued. I sensed wheels turning in the treetop-tall stranger’s head. “Ingenious,” he finally said. “The approach is sophisticated, highly inductive.”

Then without a nod, a thank you or by-your-leave, Mr. Smith turned on his heel and stalked from the deserted theater, long strides carrying him away rapidly.

“Well, of all the . . . !” Dame Margaret stamped her foot—an unsatisfactory exercise under Earth-Luna’s pseudo-gee spin. She clutched the back of a seat, regained her balance. “Who the devil does that odd-looking giraffe think he is?”

The director’s less than wholehearted shrug gave me added cause for wonder. He made a pretense of casually dismissing the encounter, but it didn’t fool me, or most certainly Dame Margaret. It was easy to see how forced Sir John’s outward aplomb really was. Crow’s feet tightened the corners of his narrowed eyes, his hands palpitated slightly. “Haven’t the foggiest,” he muttered. He made as if to say something else, but trailed off uncertainly. “One runs across all sorts of . . . odd ducks.”

“Really, John! What in the world made you put up with that stringbeanish fellow’s insolent questions?”

Mattingly drew breath. He squared himself. “Suppose it seemed the quickest, simplest way to be rid of the pest. My dear, will you pardon me one moment? I must step in here.” He shot an unmistakable glance my way.

I took the cue, excused myself and followed Sir John into the mens’ room. He studied his hands absently, holding them beneath an ultrasonic cleanser while waiting for another pair of chatting gents quit the lavatory. When the sliding door whisked shut behind them, he dropped the pose. “An

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unsettling experience, Shore. Damned unsettling! This . . . Smith person, what did you make of him?”

“Unusual,” I said, a major understatement. I groped for the proper tack. “It surprised me, Sir John, when you, uh . . . I mean, you did handle him with . . . You showed a great deal of restraint.”

“Restraint indeed! Only wish it were so. I would’ve sent the peculiar pest packing the instant he appeared, except . . .” He paused, regarded me soberly. “I won’t have you think I’ve reached my dotage, Shore, but I must say there was something deuced strange about that fellow. I found myself *wanting* to answer his impertinent questions. Couldn’t have lied, or stretched the truth, if my life depended on it. It was most disturbing.”

I couldn’t come up with an appropriate rejoinder.

The director’s eyes defocused in thought. “Roger,” he asked in a different voice, “may I impose upon you for a small favor? Would you mind contacting Earth-Luna Security in the morning? I should like to see what can be learned about this . . . Smith.”

“Glad to, Sir John. I’ll order a check first thing.”

“Good, good.” Still looking very troubled, he said, “Let me know straightaway what the security chaps come up with. Can’t be too careful, you see. I’m privy to . . . That is, I happen to be in possession of touchy information regarding a matter few other individuals are aware of, and I . . . Were Smith to ask the wrong questions, it would be . . . awkward, to say the least.”

“I’ll take care of it first thing, Sir John.”

He responded with a blink, an uncertain nod.

#

I kept my promise, phoned for an appointment, then went over to the admin offices in Spoke Two and spoke to a grizzled senior inspector who told me he’d worked in Earth-Luna ever since the complex was assembled and manned. He listened to my tale with an expression of mild skepticism, inputted the name and sketchy essentials to the computer terminal on his desk, and assured me that Smith’s dossier would be on my desk at the observatory no later than midweek.

Late Tuesday “morning” he called me on vidicom. “Sorry, Dr. Shore. No dice. Our trace hasn’t turned up one cockeyed thing on your Mr. Smith. Altogether, three men with that surname passed through the complex since a week ago, Friday. None, however, could’ve been the exceptionally tall gent you described. You and the Mattinglys seem to be the only folks who noticed him.”

“*Noticed* him! Inspector, surely *someone* remembers seeing a guy his size.”

“Afraid that’s not the case. You, uh, stressed the fact that he was mighty tall.”

“Two meters, and then some I think, with an unhealthy skin condition.”

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“Umm-m-m, tough to believe anyone else could’ve missed such an outsized character. But honestly, we’ve scoured the whole blamed complex, checked out every orbital shuttle, every inbound and outbound planetary vessel except one . . . The exception’s *Corregidor*—a UN torch ship doing a constant burn for Titan. The ion track blocks direct communications. But wouldn’t you say Smith’s chances of stowing away aboard a military cruiser were less than nil?”

I was forced to agree. “Between slim and none. Even so, will you check with the UN later?”

“Absolutely,” he assured me. “Tell Director Mattingly we’ll stay on top of it.” The senior cop’s body language and tone led me to believe he’d forget all about Smith the second he switched off. “I’ll buzz you pronto if and when something turns up, promise.”

“Thanks, Inspector.” His image faded in the vidicom terminal.

Sir John was out of his office when I stopped by to fill him in. Later in the “day,” I ran into him when I came inboard after a session out in the freefalling x-ray module. I gave him the negative report.

“Ruddy security Jaspers!” An indignant grimace. “Someone could waltz off with the hundred-meter instrument and those dullards would never learn of it. No sign of him, eh? Did the inspector actually have the brass to tell you that? Yes, yes, I understand. Well, these days Earth-Luna has grown into something of an orbiting beehive. I myself am absolutely certain Smith is holed up in some out of the way nook or cranny.”

“He told me the complex had been checked from stem to gudgeon.”

Mattingly looked pensive. “Um, yes. Well, let it go for the nonce. If he’s gone, he’s gone. But I certainly would’ve liked to learn more about that peculiar gentleman.”

I dismissed Smith and the entire incident from my mind until lunchtime, Thursday. I was yakking with a pair of techs who had been helpful during a long exposure of NGC 5128. The freefalling hundred-meter instrument’s stability is advertised as being “ultraprecisely three-axis controlled.” Never one to swallow advertisements whole, I always try to con someone into monitoring gyro voltages during a long run. Call it superstition, or whatever. I insist that my optical plates don’t end up with minor smears in the ultrafine emulsion caused by piddling voltage imbalances. Computers don’t care, but people do. Or should.

I was explaining my voltage-balance theory to the technicians, between times sucking a squeezebottle of coffee, when the squawk box in commissary cracked once, then blurted, “Dr. Shore to the director’s office. Dr. Roger Shore, puh-lease.”

“Uh-oh!” A wry grin from one the leas tech. “What’d you stick your foot in now, Doc?”

“Most likely misspelled Galileo in my activity report.” My feeble attempt at jollity earned a pair of minor chuckles. “‘Scuse me, guys.”

My first glimpse of Sir John’s arctic countenance, compounded by the Medusa-like stare he pinned me with, wrecked my happy-go-lucky mood.

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The Raja was sitting in the office, inspecting his fingernails with woebegone concentration. His expression seemed to announce that he'd been caught with both hands in the cookie jar.

Sir John was tense, and terse. "Our mystery friend has put in a second appearance."

I didn't have to feign surprise. "Really? Has Security—?"

"No, no! Those nincompoops couldn't find their own derrieres using both hands. Das found him. Rather, *he* found Das. Jefferson, will you kindly describe what took place?"

The Raja and Dr. Mattingly share the same specialty—stellar physics. Jeff assisted Sir John in correlating the data retrieved from the Centaurus Probe, then critiqued and co-authored portions of the final report. "I was . . . working alone in the lab," he said hesitantly, "using vernier calipers to spot check the measurements of prominences on Rigil—printouts from the second to last transmission sequence. Something made me . . . look up.

I had no trouble intuiting what would come next.

"This tall, spooky looking gink," Jeff said, "was hanging there in midair, right beside the workbench. I asked who he was, how he'd gotten into a restricted section of the observatory. He was gawdawful tall, Roger, with weird skin condition that made him look like—"

"I've seen him."

"*You've* seen him?" Das's brown eyes widened. "Oh, sure; I forgot what Sir John told me . . ." He glanced at the director. Sir John motioned impatiently for him to continue. "Well anyhow, the tall gink ignored my question, acted as if he hadn't even heard it. He began quizzing me. He wanted to know about all sorts of esoteric criteria—what Rigil's solar constant meant to us in relation to Sol's, how we correlated the sodium emission spectra and stellar core temperatures of Beta. Specifics like that.

"And I . . ." Jeff licked his lips. "Hate to admit it, but I answered every one of his off-the-wall questions without argument. Truth be told, it would've been impossible *not* to answer him. It was totally crazy, Roger. I felt like a ten-year-old being interrogated by the schoolmaster. There was a . . . It was like I couldn't help myself, couldn't fight a strong compulsion to answer everything he asked."

The director fumed quietly. "I have firsthand knowledge of the sensation Jefferson just described. It's inexplicable, an uncanny urge to . . . No, let me rephrase that. It was as if someone or something were standing over me and *making* me respond."

I puckered up and gave a low whistle. "Smith, here in Galileo? How did he get aboard?"

"Only wish we knew." Mattingly pursed his lips. "Had a private chat with the head dispatcher at Earth-Luna. To a man and woman, neither he nor any member of the bus's crew has any knowledge of carrying Smith, or anyone remotely resembling him." The director's bushy brows contracted. "It's our duty to try and reconcile these odd happenings. We simply *must*

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discover who the fellow is, learn what he's up to with his infernal questions. I absolutely guarantee to make certain the job is accomplished . . .”

TWO

Cosmology

In this instance, the director's confidence proved to be misplaced. Immediately after Jeff's strange encounter, Galileo's entire staff was ordered to turn to. We exhaustively searched every cubic meter of the main structure, each compartment and locker in the hundred-meter instrument's freefalling module, and every cubby in infrared, extreme ultraviolet, spectroscopy, x-ray and the other research modules. We failed to unearth the slightest shred of evidence tending to confirm Smith's existence. It was damned strange, yet I had no reason to doubt Jeff's account of the visit. Whimsical now-and-then raghead the Raja may be, but he's totally reliable.

The weekend passed quietly. In the early ayem, Monday, Sir John's unhappiness found a new vent. Unbeknownst to him, one of my junior colleagues, thinking to be helpful, had taken it upon himself to alert British Intelligence to Smith's odd comings and goings. A pair of MI-7 agents arrived aboard the morning ground-to-orbit shuttle and at once clashed with E-L's Security Directorate over jurisdiction in the affair. Never let anyone tell you nationalism, or provincialism for that matter, ends at the ionosphere.

The situation worsened when the office of the UN Attorney General became involved. The crew of our bus, as well as all members of the observatory staff, underwent alternate grillings by teams of "experts." Other than elevating assorted blood pressures, the sleuths accomplished nothing. At this point Sir John lapsed into near-apoplexy. He told the investigators in no uncertain terms that he planned to appeal directly to the Crown. In the light of that far-from-idle threat, MI-7, E-L Security, and the UN investigators nursed their bruised egos and backed off a hair. They even pretended to cooperate with one another.

Separately and in concert, the snoops discovered no clue to the identity or whereabouts of the mysterious Mr. Smith.

I used my scheduled hours a few subjective "days" later to oversee a series of exposures in the hundred-meter instrument's prime focus capsule. You work in vacuum out there, wearing a cumbersome pressure suit. I wanted to try NGC 5128 again, digitizing with charge-coupled-device amplification on an especially fast red-sensitive emulsion, since longer wavelengths of the visual spectrum penetrate gas clouds more readily than shorter ones. NGC 5128 is a genuine fascinator—the twenty megalight-year distant collision of a diffuse nebula and a spiral planetary, each with a major black hole at their

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respective hubs. NGC 5128 emits a thousand times the x-ray and radio frequency produced by run-of-the-mill galaxies.

I came inboard shortly before noon, Zulu time, doffed the vacuum gear and stowed it in the airlock service compartment, then dropped off the plates at the lab for processing. I had a quick lunch in the snack bar, returned to my cubicle around one-fifteen, and talked to the voicewriter for maybe five minutes, working on the umpteenth revision of an overdue report. To parrot the Raja's words, "Something made me look up."

He hung there in midair, hunched over to avoid bumping the overhead, his soft boots a half-meter above the deck matting. One slender, fine-boned hand grasped the temperature-controlled cabinet where I archive photo plates. In the same dead voice that had chilled me in the theater, he said, "Dr. Shore."

Scared? Hell yes I was scared! I leaped from the chair, or tried to; wearing freefall restraint harness makes unconsidered movements just a bit ludicrous. My mouth was dry, my heart was trying to hammer a hole in my chest. "Y-you . . . You're not supposed . . . to be here, Mr. Smith."

"Since I am," he declared in that eerie monotone, "may I trouble you with several inquiries regarding your work?"

It washed through me, the most subtle, most unnatural urge to comply. Instinct shouted a loud warning. I wanted to punch the vidicom terminal, call for help. Instead, something made me say, "Sure . . . Of course."

He must have sensed my agitation. "Be at ease, Dr. Shore. No possible harm can come of our meeting. Tell me, what is your personal visualization of the universe surrounding us?"

"I . . . You mean . . . in, uh, so many words?"

"In the fewest words you feel needed to describe your personal interpretation, emphasis on 'personal'."

"But, I . . ." Greatly disturbed, I groped for an out. "It's . . . impossible to discuss cosmology with a lay person. I know, because I've tried. If you were conversant with Armbruster's work in unified field theory it might be different. Lacking that background, it would be futile to —"

"Your language is endowed with rich shades of meaning," he said. "We shall dispense with symbolic logic, although you may take it for granted that I am versed in the fundamentals."

I must have looked even more badly shaken when he'd said "your" language, not *the* language, or *our* language. I clutched at the only available straw, hoping to learn something about him. "I assume . . ." I faltered. "I mean, Standard English must not be your, uh, native tongue?"

"It is not" he said simply. "But that is neither here nor there. Cosmology, if you please, Dr. Shore."

I recall thinking that whoever he was, Smith had a slick touch when it came to enticing strangers to tell all. No longer merely compliant, but feeling eager to accommodate him, I drew breath and pitched in. "My, er, colleagues consider me . . . conservative for remaining devoted to the classic Penrose-Hawking-Steinhardt model. It pictures the four-dimensional spacetime plenum

as gravity-driven, accelerating in the expanding mode, and positively curved.”

“The proper names you mention mean nothing to me. An accelerated expansion into what, Dr. Shore?”

“That’s . . . a trick question, with no answer possible. A simplistic analogy compares the sidereal universe to an expanding soap bubble, with component galactic clusters more or less evenly spaced around the periphery, so that each vantage point within it appears to be at the center.”

“I assume that is a widely held view?”

“More or less prevalent, I believe. Some colleagues insist on holding out for the steady-state hypothesis, but their models tend to break down at one impasse or another—a demand for the continuous ‘creation’ of mass and energy, for example. Negative spacetime curvature has been more or less dismissed as incompatible with a number of . . . semi-predictable events.”

As when he’d confronted Mattingly in the theater, Smith was outwardly unmoved by my simplistic description. “What,” he inquired with that maddening lack of inflection, “is the present limit of your cosmological search?”

“Uh, roughly fifteen-point-two times ten to the ninth power light-years. Redshift data indicates that quasars occurring at extreme range—we refer to them as ‘horizon objects’—emit ‘look back’ light brighter than that of nearer quasi-stellar sources, and give a fifteen-billion-year-old hint of the primal singularity theoretically responsible for jump-starting time in the physical universe.”

“A singularity . . . Ah, yes. Spoken of as the ‘Big Bang, is it not?’”

“That’s the . . . colloquial term. Many cosmologists feel we’re approaching the ‘edge’ of the expanding universe, just as Sandage postulated long ago. Blue Fuzzies recorded at even greater distances, are . . . Whew! Everything I’ve said is a gross —”

“Blue Fuzzies . . . ?”

“Another colloquial term. When the hundred-meter instrument gathers light from an apparently empty sector of sky during extremely long exposures, solid state, charge-coupled-detectors amplify the extremely faint images, and then computer-process them. The objects, whatever they may be, are so distant and redshifted that their estimated recession velocity is approximately eighty percent of photon velocity.”

“I see. Do you yourself consider the universe to be boundless, Dr. Shore?”

“Well, the inference of ‘boundless’ is . . . infinite,” I said hesitantly. “An infinite universe strikes me as totally unreasonable, but I can’t give a specific basis for that opinion. The weak force is always attractive, never repulsive. That must mean gravity had to be in abeyance at the instant of the primal singularity, or perhaps gravity and time simultaneously came into existence with the, uh, Big Bang. There might even have been a gravity-time reversal if, as Armbruster postulates, the two are interrelated, synergistic. But the mere fact of the weak force, as we know it, must mean the universe is either expanding or contracting, and cannot remain in a constant, fixed steady-

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state condition.”

“The ‘horizon objects’ you mentioned. Would it be possible to examine a sample of your records?”

“Yes, sure. Some recent exposures are there in the file.”

Mr. Smith obediently pushed himself away from the cabinet. He drifted toward the door, squelching any notion I might have had about bolting into the passageway. I none too steadily unsnapped the chest latch of my freefall restraint harness and opened the file.

He moved close beside me, waiting patiently while I clipped several printouts in the hold-down fixture on the bulkhead beside my desk. They were excellent negatives, exposed on the new ultrafine emulsion developed in Galileo’s lab. Mr. Smith studied them intently. “What are these superimposed indices?”

“Comparison spectrograms. They indicate how far the various wavelengths have redshifted?”

“You used that term a moment ago. The Doppler effect I believe it’s called.”

“Correct.” Despite my earlier apprehension, I began to realize Smith was pretty astute. “Redshift calibration indicates the extreme distance of these quasars. Deduction tells us they’re receding at a high percentage of lightspeed. Background radiation detectable in all directions of the sky has apparently slipped even farther, all the way out of the angstrom band into gigahertz microwave frequencies, which tends to support evidence of the primal singularity—the, uh, Big Bang.”

“Is that inference based solely upon what you call ‘redshift’ measurements?”

“Basically, yes. There are other subtle indicators.”

Smith pushed away from the desk. His overlarge head turned slowly and he stared directly at me, the opaque lenses of the dark glasses he wore made his blind gaze unnerving. Then, as if a switch had been thrown, the urge to comply with his wishes doubled in strength. “Dr. Shore, have you any specific knowledge of a program aimed at developing a faster-than-light space vehicle?”

I didn’t have to think about the answer. “FTL? None whatever. There’s been conjecture aplenty, except no matter how many varied theoretical approaches come along the engineering is still a long way off. We thought thermonuclear fusion was a tough nut to crack, but it turned out to be child’s play compared to FTL. I suppose sometime in the future it may become a reality, but —”

“Then you yourself know nothing of a program seeking to further that objective?”

“Nothing” I said frankly. “In my opinion, the time hasn’t come to build that railroad.”

“Railroad . . . ?”

“Sorry, a figure of speech, a saying.”

Smith pulled himself back toward the file cabinet. “Would it be

William Walling

possible to view some studies of nearer objects?"

"Certainly." I dragged out a few showpieces—the Veil Nebula exposed in blue light, the Lagoon, NGC 5364 in Virgo, and an awe inspiring plate of our neighbor galaxy, M31 in Andromeda, which seemed to interest Smith more than the others. Laymen are often lost without a positive printout, preferably in color. Smith's intense study of the plates gave no indication that he had the slightest trouble reading negatives. Whoever the hell he was, Smith was no layman. At length he said, "Dr. Shore, if your 'horizon objects' were indeed receding at a rate comparable to a high percentage of photon velocity, would they not then acquire inordinate mass properties?"

"They certainly would."

"And is that conclusion compatible with rigorous logic?"

I was too stunned by the question's ramifications to invent a comeback.

He turned away, pushed off from the file cabinet and slowly vectored toward the door. Without knowing how I knew, I realized he was finished with me. "Mr. Smith," I said, "would you mind explaining yourself? Dr. Mattingly's work—the work of everyone here in the observatory—is being interrupted by investigators trying to track you down."

"Regrettable." A towering specter in a topaz jumpsuit much too enigmatic to be real, wholly inscrutable behind the shades hiding I knew not what, he clutched the handle of the hermetic safety latch. "Such information could not possibly be beneficial, but it might cause a measure of irrevocable harm. Forgive me, Dr. Shore. I must decline to say more. However, since you have been so extraordinarily helpful I will leave you with two . . . hints. There is a term in your vernacular, 'a red herring,' that you would do well to contemplate. When you do so, think negatively. I wish you success in all of your future endeavors."

He had to bend from the waist to squeeze through the hatchway. I remembered to breathe again a second or two later. I launched myself after him, wrenched open the hatch.

The passageway outside my cubicle was deserted in both directions.

#

E-L Security, the UN snoops, and the British cloak-and-dagger types took turns having me on the carpet. Now and then Sir John would pop in, hover like a dyspeptic thundercloud for a short while, and then storm out. I eventually recalled the voice-actuated computer program I'd been using when Smith first put in an appearance. I did not remember turning it off.

This late-breaking news created a burble of excitement. A pair of E-L Security snoops hustled to recover via telemetry the holodisc data backing-up the resident memory of my mainframe-in-a-matchbox out in Galileo.

I visited the lavatory, came back and slugged my fourth or fifth squeezebottle of coffee, and tried unsuccessfully to relax. Wearing a profoundly unhappy expression, Sir John toyed with a gold-washed stylus. He refused to meet my gaze.

The E-L inspector and his associate came back looking pleased with

themselves. They said my computer had still been recording merrily when they contacted the observatory. I took the duped disc, inserted it in Mattingly's playback unit and fast-forwarded past the esoteric gabble and unedited mish-mash making up the rough draft of my report. I let my spiel run its course through the partial sentence I had spoken before first noticing Smith's presence.

And received the shock of my life.

The disc contained only *my* words. In abject disbelief, I listened to myself tell Smith he was not supposed to be there, listened in open-mouthed wonder to the ensuing silence during which Smith had announced his desire to question me. My explanation to the investigators was punctuated, by the gargling, air-sucking noises I couldn't help making.

The grizzled E-L Security Inspector who'd sloughed me off during the previous week didn't bother to hide his simpering grin. The other Sherlocks exchanged knowing glances.

Sir John glowered at the gathering of snoops, his manner that of an entomologist preparing to dissect a specimen. He ordered them out of his quarters in a frosty, not-to-be-argued-with growl. When they were gone, he folded his arms stoically, head cocked, and listened to the remainder of my off-and-on soliloquy in stony silence.

He blanched, looking startled. "Good Lord!" Bending forward hurriedly, he switched off the playback and turned, gazing at me warily. "Roger, be kind enough," he said, "to snap the lock on the door."

In something of a daze, I did as requested. "Sir John, I know how hard it is for you to believe what I—"

"Believe . . . ? Don't talk nonsense. Of course I believe you, believe you implicitly." He meditated for several heartbeats. "Just before I silenced the playback, you mentioned FTL, theoretical methods, engineering and so forth. May I ask what prompted those comments?"

I related Smith's interest in the topic. "He asked whether I knew of a program aimed at developing an FTL space vehicle."

Sir John suddenly looked even more haggard. He came around the desk, folded his arms belligerently and demanded to know if those had been Smith's exact words.

"Well, maybe not exact. But that was the gist of his question."

The director squinted accusatively at the playback unit. "Bloody awful!" He cut another withering glance my way, then looked away quickly. "I think we'd best hear the remainder."

Interrupted by disturbing periods of silence, the disc wound on, while I subconsciously recreated Smith's lost words in my mind. Sir John hung on every syllable I uttered. When it was over, he restarted the playback and asked if I'd mind going through it again and reconstruct Smith's portion of the "dialogue" as best I could. After a number of false starts and stops, I spent half an hour filling in the blanks.

Mattingly ejected the disc and locked it in his safe. He cleared his throat repeatedly—a staccato preamble I'd come to know well. "Shore, would

you mind terribly if I asked you to wipe the record of this . . . conversation from your machine out in Galileo?"

"No problem, Sir John. I can dupe the draft of my report, delete the rest."

"Please do so. Take care of it at the earliest possible moment, if you will. Tell me, have you any notion at all what the cheeky bastard meant by his cryptic parting remarks?"

"A hunch," I said. "No, more than a hunch. The obvious implication of 'red herring' is that the redshift hypothesis is a bogie. We might reconsider rethinking the —"

"A . . . bogie?" He frowned severely.

"A ringer, Sir John. An invalid premise, a null hypothesis."

"Um, I see. Yes, yes, quite."

"The other shoe he dropped could mean we're off base in thinking of the spacetime foam as positively curving back on itself."

"Off base? Really, Shore! I sometimes think your Americanisms were invented specifically to try my sanity." Sir John wagged his head. "Speaking of implications, your encounter with Smith, when added to the . . . 'faulty' recording deriving from it, implies something a good deal more than merely overwhelming. You yourself 'heard' Smith, just as the three of us did that evening in the theater. Yet not one of his . . . utterances activated the computer's circuitry. What does that imply?"

"Telepathy," I said, weak-voiced. "I thought of it in passing, Sir John, but . . . You yourself commented on Smith's totally uninflected speech. Maybe that's how it works."

"Perhaps . . ."

I finally screwed up enough courage to ask the twenty-four-billion-dollar question. "Is there an FTL program in the works?"

He cleared his throat in staccato fashion, a typical preamble to saying anything that, for whatever reason, made him feel uncomfortable. "I fear it isn't a fit topic of conversation. I regret my inability to say more, but I'm not at liberty to do so. If that sounds officious, I hope you'll find some way to forgive me."

"No problem. I think I understand."

"I'm certain that not the case, however . . ." A bleak grimace I interpreted as the product of frustration. "You've no doubt considered the ramifications of Smith's stealthy visitations, not to mention the unsufferable Twenty Questions game he's played. I was targeted first, then Jefferson, and now you. You're far too intelligent not to have drawn the same conclusion I've reached, outrageous and untenable though it may be."

"A visitor from . . . Out There."

He snorted. "Sounds like ruddy foolishness when one bites the bullet and puts it in words, doesn't it? Yet upon close examination of the ingredients, no other explanation seems remotely possible. We have Smith's unexplained appearances and disappearances, plus several inferred telepathic communications, capped by his ingenious method of extracting answers

Tomorrow the Stars

whether or not one wishes to supply them. Tote those factors, integrate them, and it makes the likelihood of an extraterrestrial presence all but inescapable. It's a rationale we shall have to . . ."

The director broke off. He scowled and drifted to the peek-a-boo set flush in the padded bulkhead of his study, a segment of Earth-Luna's outer skin. The louvers were open; at the moment we happened to be in Earth's umbra. A tracery of unwinking stars splashed across the narrow field of view.

"Roger," he said, sounding distant, "do you recall Biron's memorable lines from the play we saw on the evening Smith first put in an appearance?"

"Uh, no. Afraid not."

Mattingly pinched the bridge of his generous nose. He closed his eyes, the burden of his years weighing on him heavily. Solemnly, in round Shakespearean tones, he quoted:

*"These earthly godfathers of Heaven's lights
That give a name to every fixed star,
Have no more profit of their shining nights
Than those that walk and wot not what they are."*

Neither of us said anything for seconds. Sir John straightened, a curious light in his eyes. "Come, Shore," he said with renewed enthusiasm, "let's hie ourselves over to the Earthview Room and do what sensible men do when confronted by less than sensible circumstances."

"I don't feel too sensible, Sir John . . . What have you in mind?"

"I suggest that we get roaring, falling-down drunk," he declared. "Yes, that is precisely what we shall do."

We did.