

"Miracle Worker," or "How Else Can I Keep Up My Reputation...?"

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*In tribute to James Doohan,
Whose earthly remains were launched into space
On Saturday, April 28, 2007.*

A sudden shock. Light swirling and brightening. White, blinding white, and a luminous daytime blue, and a startling golden glory. The deck under his feet felt somehow... fluffy. And tenuous, as if walking on air.

"Welcome aboard, Mister Scott."

He squinted at a tall, nebulous figure, shatteringly bright white against the clear blue background, vaguely gold about the head. Something about it looked... authoritative. Extremely authoritative. He saluted.

"Aye, Sir. Thank y', Sir." He shifted uncomfortably. "Ah, Sir..."

"Yes, Mister Scott?"

Memory swirled, flickered. "Eh, do I call y' Cap'n, Sir?"

"That's fine, Mister Scott."

"Oh. Ah. Well then. Thank y', Sir. I mean, Cap'n, Sir. Eh... light's just a **w**ee bit bright in here, i'n't it, Sir?"

"Sorry about that, Mister Scott. Is this better?"

"Aye, Sir. I mean Cap'n, Sir." He squinted harder as the light receded, trying to make out details in the wash of blue and white and gold. Memory seemed to be fading, and he was not at all sure just what he was doing here. "Eh, is that robe the new dress uniform, Sir?"

"Mister Scott, you must be wondering why you have received this sudden transfer..."

"Oh, aye, Sir... Cap'n... Sir... I mean, I was right in the middle of one of m' technical journals when..."

"Mister Scott, I have a critical engineering problem of great scope and subtlety for you."

"Sir?"

"Though of course your time was approaching anyway... well, well, there'll be time for all that. Stroll around a bit, Mister Scott, get acquainted with the staff, see how things run around here. We'll talk later."

The figure signaled to one of a group of attendants standing nearby in robes of dazzling gold, all of whom seemed to be wearing, behind the robes, some sort of a close-fitting white cloak, layered like mail, but softer somehow. Bits of the strange material fluttered randomly in nonexistent breezes.

“My assistant will get you settled in.”

“Ah, aye, Sir.”

The cloak felt strange, feathery. It fluttered of its own accord. He sneezed as a feathertip brushed his face.

“Oops, sorry about that. There you go. Standard issue.”

“Standard...?”

“Personal antigrav units. You’ll need ‘em; our matter-energy converters put out a lot of gravity. They’re quite massive.”

“Well, then... ah...”

The man in gold grinned. “Call me Rafe. We’re pretty informal here.”

He shook his head. “Rafe, what am I doin’ here?”

“Oh, the boss’ll brief you later. For now, just try and get used to the place. Wander around, check things out. Our technological base is a bit higher than you’re accustomed to, but from what I’ve heard, you’ll pick it up in no time at all. Care for a tour of the Engine Room?”

Through the gentle confusion that seemed to have taken over his mind, two words shone bright and clear. “Engine Room?”

Rafe raised a hand, and a second attendant, robed in fiery red, was with them suddenly, feathers fluttering ever so slightly as if he had just alighted.

“Mike here will show you around the place. He keeps an eye on the tech; I’m a desk jockey. Just sing out if you need me. Right now I’m late for choir practice.” He winked, and with a brief professional nod at the attendant in red, vanished.

A single white feather drifted slowly down where he had been.

“Well, then,” said the man in red, “what would you like to see first?”

The blue giant star was massive, all right.

It was the largest of the many working units they’d inspected so far, and the hottest, too. The vague haze of gold that hovered around their shining bodies seemed to function as a heat-sink. For some reason it was brighter around the head. Odd effect, that.

The red giants were big, too, of course, but they were no longer working units, technically speaking, putting out barely a tenth of the blue star’s heat though still industriously chugging away in the hot layers around their now-inert cores. As each one reached the end of its life-expectancy it was taken off-line, to be replaced by new, hot, blue-white models, fresh from the stellar forges and dense with hydrogen. Infinitely useful stuff, hydrogen. And every now and then the controlled explosion of a suitable old star replenished the supply of heavy elements.

This big blue one, now, was a real beauty. Absolutely huge Class O, one of the special few that could be stoked high enough to produce some of the more complex atoms south of the binding curve. These flared hot and burned out quickly, while the good, solid, main-sequence work-horses, less showy but longer-lived, might easily go on fusing hydrogen in ponderous but effective proton-proton chains for nine, ten billion years or more in serene complacency. He sniggered, some fragment of memory calling forth an old stellar physicist's joke: *Six protons go into a star, but only two come out...*

All as it should be, and all consistent with whatever shards of memory seemed available to him. But still something bothered him, nagging away at his sense of efficiency.

Something was not quite right.

"Well, Mister Scott, I've been hoping we'd have time for a chat soon." The blue-robed man sat with steepled hands in what looked like a comfortable armchair made of the same white, fleecy material as the floors, but with a brushed look to it, like molded cirrus. With a wave of his hand he indicated another like it. The second chair had not been there a second ago. "Call me Gabe."

"Uh, thank y', Gabe." The chair was incredibly soft; he seemed to sink into it as if into a cloudbank. He leaned back, feathers easing comfortably into the fluffy substance. Wrestling with the gravity-well of the blue-white giant had left them a bit sore. "Eh, they said y' were th' one t' talk to, with any, eh, questions..."

"Absolutely. I'm here for you. What's the problem?"

"Well, I've been havin' a look 'round, y'see, and... ah..."

"Yes?"

"Well, th' setup is amazin', just amazin'. I dinna know how y' manage t' handle such a large-scale operation so smoothly – why, th' coordination of th' hydrogen refuelin' alone must be a staggerin' problem..."

"Uri over in Material Resources handles that end of things."

"Well, it's impressive, impressive. But... what I mean t'say is..."

"Ah, I see you've noticed it. He said you would."

"Ach, well, Mike said it'd been there for as long as he... well... but it's just that I can't bear t' see a really good design runnin' at anythin' less than top-level efficiency."

"You should talk to the boss. I think he'll be ready to brief you now."

"Ah, Mister Scott. Gabe said you were settled in a bit and up for our little talk. You've had a look around, I take it?"

"Aye, Sir. Verra nice, verri nice indeed. Those stellar furnaces are just marvelous, grand design work there, and th' cosmic-string coordinate-transfer system..."

"But...?"

"Well, Sir, that is, Sir, I mean, I... well... I couldn't help noticin'... th' leak, Sir."

The luminous figure sighed. "Sit down, Mister Scott."

White cirrus chairs appeared where once had been empty blue space. He blinked. He sat.

"You see, Mister Scott, I designed this Universe myself a few billion years ago. It was quite a big project, I can tell you, staggering initial investment. Things were a bit confused at the outset, but since we got past those first few picoseconds and started getting the laws of physics disentangled from each other, it's been running quite well, overall. With one... minor issue."

"Aye, Sir. Energy keeps on runnin' out, an' it's not re-enterin' th' system in any usable form."

"Yes. Now, at first I thought the problem was that I had designed this as an open Universe. I added some extra mass and closed it, but - no good. The leak's still there."

"Well, Sir, if y' took the engines off-line for a bit an' re-examined th' structural web..."

"No, no; they're connected to life support in, well, some rather complicated ways - you can talk to the boys over in biochemistry about that, but the bottom line is that even the most minor work on the system requires horrendous work-arounds. And my troubleshooting team is useless here. Brilliant scientists, mathematicians - Boltzmann, James Clerk Maxwell, that Heisenberg fellow - no good at all. Typical intellectuals; they think they've actually accomplished something by giving it a name and hashing out a bunch of equations for it." The glorious figure leaned forward, its glow intensified. "I need someone who can **fix** it, Mister Scott. I need an **engineer**."

"Sir?"

"Mister Scott, if we don't do something about this Entropy thing, the Universe - engines, life support, everything - is going to start to run down in just a few more billion years."

"Entropy, eh...?"

"Yes. When can you have it fixed?"

"That's a pretty tall order, Sir."

He felt the nebulous figure glare at him.

"Can you do it, Scotty?"

"Oh, aye," he said, and the old, slow grin passed over his features, lighting them from within. "But, well now, Sir, a job this big... y'know, it's goin' t' take a few days..."
