

Astounding

SCIENCE FICTION

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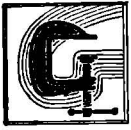
STIMULUS

BY ANDREW
SALMOND

It is a good and beneficial thing to kick an inferior in the teeth, rob him of his natural rights in the Universe, and cripple his future hopes. It really is—for the inferior, for the one who is exploited!

Illustrated by Freas





GENERALLY speaking, messages took a long time to catch up with the Major Projects Engineer. His duties were those of an inspector-general, his commission a roving one—and starship receivers were simply not sensitive enough to pick up subetheric transmissions from points much farther away than fifty parsecs.

On top of that, he was a law unto himself where work schedules were concerned. His staff would prepare neat little route programs for him—which he invariably ignored. His consistency in this respect was such that it was possible to build up a kind of negative knowledge of his whereabouts at any given time. For instance, if a query came in to his HQ, *Where's the Chief?* a quick reference to the copy-schedule would indicate, say, that he was supposed to be inspecting Project 723 on Pollux III—so Pollux III would be the last place where anyone would think of trying to locate him.

The Co-ord Council gave him a fairly free hand at running his show. At first they tried hard, very hard, to tie him up in the usual red-tape cocoon, but that phase hadn't lasted long. It finished, in fact, when the main analyzer at Central blew a circuit—for the fifth time running—trying to make sense out of the snarled-up batch of addled statistics which the Engineer had been pleased to term a completed return. Thereafter the Engineer was rarely troubled by the desk-pounders.

But the Council just *had* to know when they could lay their hands on him, metaphorically speaking. So they fixed him with a regulation. This required all star-class personnel to report in person at their HQs at predetermined intervals. It was labeled 'CC—MANDATORY', which meant that failure to comply brought instant and automatic demotion, *sans* appeal.

The Engineer grumbled plenty about that regulation, of course—but he took great care not to contravene it. The climb to top-of-the-shop in Projects had been long and hard, and it would have been insane to risk nullifying all that effort simply for the sake of making a defiant gesture.

Thus did CC know that he'd be on the spot to receive the instructions they'd issued in re the setting-up of a new Project involving the third planet of a G5 star in the Sirian sector.

The Engineer read the coded message twice—the first time hurriedly to get the sense of it, the second time very much less hurriedly to make sense *out* of it.

Clairvoyancy was not, by any stretch of the imagination, his long suit. As a crystal-gazer he'd have starved in a week; as a prophet he made a damn good Engineer. In other words, his esp ability was normal. So he could hardly be blamed for failing to appreciate that execution of the Council's latest order would radically affect the destiny of the Universe.

But if he wasn't able to tweak aside the veil of Time and read be-

tween the lines he was most certainly capable of reading what was *on* the lines—and what he read there didn't fill him with high delight. Not at all.

He had his own ideas about what constituted a reasonable Project. On more occasions than he cared to recall his and CC's ideas hadn't meshed. This was another of them—and his reaction was characteristically explosive.

It would be an exaggeration to say that his bellow threatened to splinter the plexiglass windows, crack the pressed-steel wall-panels, and fuse the multi-phase lighting system — but not much of an exaggeration. Undoubtedly the roar was loud, but the probability is high that it would have been barely audible in the immediate vicinity of, say, an atomic detonation.

Goth, his senior assistant, had heard the sound many times before. He knew what it generally presaged. When the Engineer blew his top he liked to tell the galaxy about it—in words of not more than two syllables.

This time it took ten minutes for the Engineer's fury to simmer down to mere boiling-point.

"Sheer unadulterated lunacy!" he bellowed. "Complete raving idiocy! How do they get away with it? That's what I want to know. Just how in the name of Mira does Psycho-Center ever manage to get a scheme like this"—he waved the offending flimsy—"moonstruck aberration considered by the Security Committee,

let alone approved, and triple-seal approved at that, by the full Co-ord Council?

"Goth, d'you recall that non-compos Project we put in hand on Deneb X six or seven trips ago, when we had to inject new life into a dying religion to mask Survey's bungling? Well, compared with this, that was the cleverest little number we ever—"

He broke off, shaking his head in despair. He laid the flimsy on his desk and thumped on it with his fist. "It's fantastic. And to think that there are still billions of our poor benighted co-citizens who can't figure out why taxes are so high. It's high time they were told the truth." He showed his teeth. "And how I'm going to love telling 'em. Just wait until I'm released from the security oath. I'll give those chairborne planners something to worry about for a change. I'll spill beans by the bucketful. I'll let enough cats out of the bag to populate a planet."

He glanced down at the message chit, and the room again rang with the thunder of his rage. "And by the Corona of Castor I'll most certainly make it widely known that of all the expensive, time-consuming, crack-brained Projects it was my displeasure to direct, this was the zaniest. That, I promise." He screwed the flimsy into a ball, tossed it over to his assistant. "Take a glim, Goth—and weep."

Goth read and agreed and let off some steam of his own. He wasn't merely being sycophantic either. He'd been with Projects almost as long as

his chief, and he, too, had seen some of the weirdest schemes imaginable emanate from Psy-Center. But never, he decided, never one quite so crazy as this.

Not that the new Project was unworkable. On the contrary. It could and would be duly executed, with the polished precision of which P-Unit was eminently capable—and justifiably proud. Both engineers knew that.

But that wasn't the point.

The how, the where, the when, were known.

But—the why?

Get on with it, said CC—in effect. Never mind the why. You might be able to figure it out while you're setting up the Project, but if you do, keep it to yourself. Remember the security oath. Remember the penalties. Don't pry and we won't ride you too hard. Just do as you're told and we'll all be happy. Right?

But it wasn't right, thought the Engineer savagely, and it never would be right. Far from it. To have planning and execution kept well apart in separate little vacuum-tight compartments was all very well in theory, but in practice it made for tormenting frustration and—

"What's the use?" The Engineer scowled down at his desk and laid his finger on the green button. "Time's a-wasting. Let's call that shaping conference and get this Project under way and out of the way just as fast as we can—"

He pressed the button . . .

Kessring's fingers were sweaty on the hand-mike. He tried hard, but not very successfully, to keep his voice even.

"She's dropping fast now. Height about a hundred thou—speed Mach one point seven—position dead over Tycho. Lateral jets seem to be working fine. She had a bit of a wobble after reversal, but it's fading. Not long to go . . ."

He talked on, the pitch of his voice rising quite perceptibly as zero second came nearer. His eyes darted from screen to telemetered dials and back again to screen.

"The libration's gone. She's dropping steady and straight as a needle. The emergency jets should cut in any moment . . . ah, there they blow. Her speed had better fall off fast now—Tycho is mighty close . . ."

"Height five hundred, speed safety plus five. In twenty-five seconds she'll be down to as smooth a landing as if she were a B 68 with a hung-up H-Bomb." An exultant note crept into his voice. "This is it, Earth—the moment of the century. Second count coming up . . ."

". . . Five, four, three, two, one. She's *there!*" Then, a microsecond later a gasp.

The gasp pulsed across the miles of emptiness, followed by a long pause.

Kessring's voice, husky, tinged with utter stupefaction, cut back into the mush of star-static. "Sugar Eight touched down on Luna at 172436 GMT and blew up on contact with surface." He let the single shocking

statement stand by itself for ten seconds, then he said dully, "I'll re-run the slow-speed cine, and call back in thirty minutes. Kessring on Art-Sat Two signing out."

He closed the switch, stood up. His face was gray.

General Dyce took his time over replacing the red receiver on its cradle. For several moments he stood looking at the instrument, not seeing it at all, his right forefinger jabbing absently at the scrambler button. Then he shook his head slightly, sighed, squared his shoulders, and turned to face the men seated at the long table in the wide high-ceilinged room.

He disciplined all expression from his heavy blue-jowled features before he spoke. "Pentagon's just had word from Kessring that S.8 went up in smoke ten minutes ago. Palomar's confirmed the explosion."

The only reaction to his statement was that grave faces grew graver. The news he'd imparted was something his audience had hardly been expecting *not* to hear.

There was no trace of levity in the general's voice as he continued, "So—bang goes another billion." He walked to the table, sat down in the empty chair at the top end. He pulled a cigar from his breast pocket, bit off the end, lit it, swiveled it to the left corner of his mouth. He leaned forward slightly, his hands flat on the table top.

"Right. We won't waste precious time discussing the loss of S.8. That

information serves only to treble the necessity for this conference—so let's get down to business." His eyes fixed on a tall balding man seated halfway down the table. "Dr. Valdi, would you care to start the ball rolling?"

The tall man gave a quick jerky nod, cleared his throat, and rose to his feet. He spoke rapidly but with a marked tendency to avoid elisions that indicated English was not his mother tongue.

"For the record, gentlemen, the purpose of this meeting is to investigate the failure of our three S-type rockets, numbers six, seven, and eight, to land safely on the Moon. I feel it would be pointless to recapitulate, since each and every one of you knows all the facts." The reflection of the overhead lights flashed in the lenses of his rimless spectacles as he moved his head in a slow arc from left to right. "What is wanted—urgently—are ideas."

He spread out his hands, palms upwards. "Please do not hesitate to advance any theories you may have, no matter how foolish or far-fetched they may appear to you. The time for diffidence is past"—his lips twisted wryly—"the time for straw-clutching has arrived." He sank back into his seat.

One after another, the men at the table got up and talked.

Time passed. The air in the room grew blue with cigar and pipe smoke.

At the end of three hours, Dyce stood up, looked round the table, and shook his head. "Individually and

collectively, you disappoint me." His tone was scathing. "Apparently there isn't one of you who can't give at least half a dozen watertight reasons why the ships should *not* have exploded when they hit Luna. If you're wearing a Sec badge in your lapel, you're five-hundred per cent positive that sabotage can be ruled right out. If you're a slipstick expert, you can produce fifty pages of math to prove that the rockets were completely sound, that the reactors were incapable of blowing their tops."

He scowled, brought his fist down hard on the oak table top. The heavy glass ash tray danced briefly. "But, the facts are plain enough. The ships *did* explode. We still haven't put an unmanned vessel down safely on the Moon. *Why?* Where's the joker?" He paused, let his rhetorical questions sink into the silence. "We've got to find the answer—and soon. For as surely as Luna isn't made of green cheese, all hell is going to break loose when the Appropriations . . . What's the matter, Doc?"

Valdi, had made a sudden, stifled exclamation, and sat bolt upright in his chair.

The physicist opened his mouth and after one or two false starts said shakily, "General, your expression about the composition of our satellite—that is the only possible explanation."

Dyce's eyebrows climbed up his forehead. Then his neck crimsoned, his craggy chin went out, and he barked, "What's that? Green cheese?"

"No." Valdi cut him short, waved an impatient hand. "I mean that we have been following a blind trail. We have satisfied ourselves that there were no flaws in the ships, accidental—or otherwise. Yet the ships, one after the other, exploded on contact with the surface of the Moon. Is it illogical to suggest that we re-examine our ideas concerning *the constitution of our satellite?*"

He paused, pallid in the glow of the fluo-strips, glanced up and down the table. "I can see that most of you have followed my line of thought. And it leads to a conclusion that I hesitate to put into words."

For the space of a dozen heartbeats a strained silence enveloped the room. Dyce was one of the few who did not sense the mental stress-fields which had been created by Valdi's final remarks. He swore under his breath, *Physicists! Cryptic devils, the lot of 'em.* He counted up to ten mentally then snapped, "What do you mean? I still haven't caught on. Let's have it—and no more double-talk."

Valdi looked him straight in the face, and Dyce was startled to observe the expression of utter despondency in the other's eyes. "If my supposition is correct, general, Man will never reach the Moon." His voice was very low. "You have surely heard of . . . see-tee matter?"

This time the general understood the reason for the tension which came into instantaneous existence in the room. The color drained from his face, his fingers tightened involuntari-

ly round the arms of his chair. "Holy smoke!" he breathed, with sudden sick dismay in his heart. "Not—that!"

But it was—that.

S.9 went up and out and circled Luna at a hundred miles, and pre-set automatic launchers in the hull ejected loads of heterogeneous ballast—sandbags, scrap metal, rocks—at thirty-minute intervals. D'Aladin on A.S.1 had a ringside seat, and Palomar had its heavies trained, spectros attached.

Twenty harmless, molecularly- and atomically - stable consignments—twenty explosions. Each of them as brilliant as an A-bomb burst; each as searingly significant as the first bow, the first wheel, the first fire—

Short-lived, ultra-hard, ultra-lethal radiation—and a new series of pock-marks on the cratered plains.

Moon was definitely not for Man.

Contra-terrene—c-t—see-tee. Matter with the signs reversed.

Proof of its existence filled in very neatly some rather gaping holes in microphysics theory—but that was a very small consolation. It raised Cain among the cosmogonists. And it gave the *coup de grace* to every hypothesis involving joint Earth-Moon origin that had ever been postulated.

An old, old dream faded into limbo. The S-type rockets were scrapped. They were neither big enough nor powerful enough for the next stage—the forty-million-miles jump.

Ten years elapsed before the back-room boys thought up the theta drive.

It took less than ten months to build a ship to house it. It took the ship less than ten days to reach Mars—and return. The Red Planet was—also contra-terrene.

Within a year Man knew the worst. There was not a planet, nor a satellite, nor an asteroid, in the whole wide compass of the Solar System on which Earth ships could land—ever.

The cosmogonists tore their collective hair, searched frantically for new ideas—and new math with which to handle them.

At that stage a lesser race might have given up. But Man had always been a restless, persistent creature, and the stars called, and in an incredibly short space of time a highly-ingenuous refinement of the theta drive gave him supercee. Then ships went winging out across the midnight gulfs to Proxima, Procyon, Capella, Sirius—

Not all the ships came back. A see-tee meteor in the Capellan system put paid to one. The overdrive of another failed halfway to 61 Cygni. But those that did return had the same despairing story to tell.

The cosmogonists threw in the towel. It was possible to formulate any number of theories to explain the existence of a solitary normal-matter planet in an otherwise completely see-tee volume of space. The problem—an insuperable one—was to fit any of the theories into the framework of conventional science. (And, at the time, no one paid any attention at all to the subject-matter of a plaintive letter published in the correspon-

dence columns of a South American astronomical journal. The writer appealed for information about—meteorites. He alleged that there had been no reports of new meteorites discovered on Terra for several decades, despite the fact that the most impressive meteor displays ever recorded had occurred in that same period).

So—Man pulled in his ships. One by one they came back from the depths. One by one they returned to the only planet that would accept them. One by one they settled forlornly, without fanfares, on the vast landing fields which had been constructed with high optimism when the first starships were launched. And one by one the fields were de-commissioned, and the vessels that were to have opened up the galaxy grew old and rusty on the silent asphalt plains. Fifty years after the S.8 had gone up in supernal splendor on Luna, the *Asgard*, lying quiescent in the void with a crew of dead men a parsec out from 61 Cygni, was the only Earth-ship in space.

It was at the entrance to the spaceport of Zanz, capital of Rigel IV, that the Engineer bumped into the Psychologist. Or, to be more accurate, it was there that the Psychologist located the Engineer. But, at the time, the Engineer didn't know that; to him the meeting was pure chance. He hadn't seen the other for years, and he greeted him with rough, boisterous affection, pounding him on the shoulder, punching him in the

biceps, showering him with questions without pausing to listen for answers. Then, as he ran out of breath, his gaze fell on the insignia on the lapels of the Psychologist's cloak.

He did a rapid double-take, his eyebrows shot up comically, and he said in an awed voice. "Whirling galaxies! Top of the shop now, eh?" He whistled. "And, if my memory's not playing me false, you rate a courtesy title—'sire,' is't not?" Then he grinned, stuck his hand out. "Congratulations, Psy Vorgan. You've certainly gone far and fast since we last met."

"Nice of you to say so, chief." The Psychologist tried hard, but not very successfully, to look modest. "But don't run away with the mistaken idea that these gewgaws"—he gestured at the comet badges—"make me one of Psy-Center's big wheels. Haven't you noticed they're silver, not gold?" He tapped himself solemnly on the chest. "Probationer, that's me. Permanent grade's still umpteen missions and twice as many exams distant."

"So the stories I've heard about the tough prob. setup at the Centers weren't apochryphal, after all?" The Engineer pointed a thumb at himself. "I'm thinking it's just as well this character stuck with Projects—he'd never have made the grade. But you'll get by, old friend—I'm certain of that." He glanced at his wrist-chrono. "On a mission now?"

The Psychologist didn't answer immediately, and the Engineer looked up to catch sight of an amused glint

in the other's eyes. Immediately suspicion flashed across his mind. He grabbed the Psychologist's sleeve, inquired in a tone not far removed from a bellow, "By the Nebulae of Nivenon, d'you mean—?"

"Quite," replied Vorgan imper- turbably. "Top marks for deduction. You needn't tell all Rigel IV, though." His face creased in a grin. "You didn't really believe this meet- ing was accidental." He craned his neck to look out over the vast space- port. "Where's your ship tucked away? At the far end of the field, I suppose?" He glanced back at the Engineer. "Oh, come, come, chief— you can wipe the surprise off your face now. I'm still waiting to hear you say how delighted you are at the prospect of sharing my inimitable company during the next couple of years. Consider the opportunity we'll have for tri-di—"

"The expression on my face," in- terrupted the Engineer, with a gleeful note in his voice, "is not, I assure you, surprise. It is exultation." He rubbed his hands. "Just think: at long weary last I'm going to have the chance of showing you how matrix chess *should* be played, and also of finding out the whys and the where- fores of some of the Projects that—"

"Hold it." The Psychologist held up his hand. "Pleasure before busi- ness. Have we time for a nectra or two before—" He gestured skywards with his thumb— "Or, don't you drink when you're driving?"

"Who—me, sire?" piped the En- gineer in a ludicrous falsetto. "Oh,



no, sire—never, sire. Ouch.” His breath left him as Vorgan prodded him forcefully in the solar plexus.

“Don’t ‘sire’ me, you loon—and don’t kid me either. Come, let us indulge in a celebratory imbibition.” Vorgan rolled the expression on his tongue. “Celebratory imbibition. What felicitous coining. Made-to-measure for a sobriety test. Hey, wait for me,” he called after the Engineer, who was stalking off purposefully in the direction of the spaceport bar.

Three months passed by. The Engineer continued on his tour of inspection, dropping in on Units orbiting the planets of half a dozen suns; the Psychologist tagged along, asking questions, making notes, offering suggestions. In between, they indulged in mutual reminiscence—and interminable games of dimensional chess. The Engineer won most of them; his ability to visualize clearly in three dimensions more than compensated for his inferiority in subtlety. But at last there came a jump through hyperspace in the course of which the Engineer appeared to lose his grip: the Psychologist beat him with ease three times running—

Vorgan reduced the strength of the diamagnetic field, watched the pieces sink slowly to the base of the matrix. He shot a glance at the Engineer, who had an abstracted expression on his face. *Hm-mm—he’s lost interest all right. I’d like to take a bet on the location of the Project we’re heading for—*

He picked up one of the pieces,

a neuter, held it up to the light, made a show of examining the intricate carving. “Vegan ivory,” he mused aloud—then, without altering his tone, “What’s the next Project on the list, chief?”

He was watching the Engineer in the wall-mirror. He saw him start violently, observed with interest the sudden widening of the eyes, the dropping of the jaw; then the swift regain of control, the settling of the features into watchful lines. The Psychologist gave himself a mental pat on the back. *Bulls-eye!*

“Sol III.” The Engineer’s tone was flat, expressionless. “Why do you ask? Know the system?” He threw out the questions quite casually. To a less acute observer he would have given the impression that he didn’t particularly care whether they were answered or not.

For a moment Vorgan was tempted to prevaricate, just to make things more interesting. But he resisted the impulse, replied in a manner every bit as offhand as the Engineer’s, “Sol? No, I’ve never visited the system. I merely asked because—” He pretended that enlightenment had just that moment dawned, and slapped hand to forehead, “But, of course, Sol III. I know about *that* Project, all right.” He turned to face the Engineer. “An unusual one; very unusual. It’s been on the go for quite a while now, hasn’t it?”

The Engineer yawned, said in a bored voice, “Why, yes, I suppose it has. A fairly long time.” He lapsed into silence, unaware that the ex-

pression in his eyes belied the lack of interest in his tone and manner. Vorgan smiled to himself. *Come on, chief, don't act so coy. Ask, man, ask!* Aloud he said, "What's our ETA?"

"Not very far off." The Engineer twisted round in his seat, pressed a button on the control board. A small screen lit up, disclosing a set of seven white numerals on a dark background. The numerals made up a seven-figure number, the first two digits of which were zeroes. The units digit altered rapidly from 2 to 1 to 0, and as the 0 was replaced by a 9, the tens digit flickered from 8 to 7.

The Engineer considered the information on the screen briefly, then snapped it off with another jab at the button. "Six hours, plus or minus ten minutes." He swung back to face the Psychologist. "Just time enough, in fact, to find out if my tri-di skill has deserted me forever." He grinned. "Set 'em up, Psy."

Vorgan said lightly, "Suits me fine." As he maneuvered the pieces into the matrix he was thinking, *What magnificent restraint! But you'll ask, chief—if you've any imagination at all, you'll ask.*

Five hours and fifty-seven minutes later—just as the Psychologist was on the point of resigning—the robonav hiccupped, a series of pilot lights flickered across the control panel, and the direct-vision screen lost its featureless appearance. The jump through hyperspace had been completed.

As the Engineer got up to attend to the board, Vorgan scrutinized the

screen. There were several bright stars in the view, the most brilliant by far being an orange-yellow G5 spang in the center at the intersection of the cross hairs. He eyed it thoughtfully.

Some time later the ship, guided by light puffs of her steering jets, drifted up to the hull of a huge metal cylinder that hung apparently stationary in bleak emptiness a hundredth of a light-year out from the G5 sun. The Engineer jerked his head at the vast expanse of metal that filled the screen. "Our destination," he said, quite unnecessarily, "the Unit controlling the Sol III Project." *And, thought Vorgan, the note in your voice is—eagerness?*

The transfer to the Unit took no time at all.

There was someone waiting for them on the far side of the air lock's inner door. The Engineer's eyes widened when he saw who it was. "Goth!" he exclaimed in surprise. "What are you doing here? Your schedule—" He broke off, sudden concern tightening his features. "Trouble?"

The assistant engineer said slowly, "Yes—and no. I was on the Achernar II job when I got a signal from Alanth that something peculiar seemed to be going on here." He stressed the verb. "So I dropped in to investigate."

He stopped speaking rather abruptly and looked pointedly at the Psychologist. For a moment the Engineer didn't catch on, then he gave

a short laugh. "Pardon my manners—or lack of them. You two haven't met before, of course. It's all right, Goth, you can talk in front of this fellow—he's inner circle. Flash your badge, Psy." After performing the necessary introductions, he re-addressed his assistant. "I take it that you sorted out the trouble, then?"

"That's the odd thing." There was bafflement in Goth's tone. "It appears to have been a false alarm. But I can't understand how Alanth came to make an erroneous analysis—he's no neophyte." He shook his head puzzledly. "His report was this: According to the auto-recorder, the anti-disturbance mechanisms built in to the nega-transformers on Three all functioned simultaneously, yet the subetheric trip-alarms had failed to go off." This made no sense at all to Vorgan; it made plenty to the Engineer.

"So *all* the a-d devices went into operation, eh? Simultaneously? And the alarms didn't work? Now I'll tell you one." The Engineer's voice dripped sarcasm. "No — on second thought I'll save it until I see Alanth. You found the recorder faulty, of course." He made the last sentence a statement, not a question.

His assistant looked troubled; he rubbed his forehead with the back of his hand. "Anti-disturbers and s-e alarms just don't fail, chief . . . well, not in series, anyway, simply because they're not *in* series. So I took the recorder apart. After plugging in a tested replacement," he added hurriedly, as he noticed the glint in the

Engineer's eye. Then he shrugged. "I'm still searching for the fault."

"Keep at it." The Engineer dismissed the matter. "I'll have a word or two with Alanth later." He turned to the Psychologist. "Care for a look round? This Unit's a lot different from the others we've visited."

Vorgan nodded absently, his eyes following Goth as the latter walked off down the corridor. *He's more concerned than he is prepared to admit. What's been going on here, I wonder?* But he wasn't given the opportunity to speculate more deeply. The Engineer ushered him gently but firmly towards the shaft of a gravlift.

By this time the Psychologist was fully acquainted with the thorough manner in which the Engineer was accustomed to inspect a Unit, and he was accordingly surprised at the rapidity with which this particular tour progressed. *There can be only one explanation*, he thought. *The chief's covering it up well, but his patience must be wearing mighty thin.*

It was.

"This," remarked the Engineer, as he held his hand in front of a photocell, "is the cubbyhole that's reserved for my use—kind of cabin-cum-office—during inspection visits." The metal door dilated. "Step inside, Psy—there's a nectra-dispenser installed here." They entered the room and the door slid silently shut.

The Engineer waved towards a relaxer. "Make yourself comfortable." He did something to the desk in the middle of the room, and part of it

fell away to reveal a built-in dispenser. Vorgan reached out, selected a tube, stuck the mouthpiece in the sterilizing chamber of the dispenser. Then he went across and sat down in the relaxer. *Here it comes—*

"Psy, you've been giving me the runaround."

"Who? Me?" Vorgan raised his eyebrows, feigned an air of hurt surprise.

"Yes—you. And well you know it." The Engineer perched on the corner of the desk, picked up a nectra-tube and took a long pull. "Do I have to spell out my query?"

Vorgan relented. "Uh-uh. Let me guess. You want to know *why*."

"What else?"

Vorgan cleared his throat. "A reasonable enough request, I suppose." He grinned broadly at the Engineer. "You've had this one stuck in your gorge for a long time, haven't you? And there's no need to glower at me. I didn't invent the secrecy restrictions. But I can tell you why they exist, if you're interested."

The Engineer indicated assent, and Vorgan continued, "Way, way back, when the Federation was in its infancy and Projects had just been instituted, a bad slip up occurred. A Projects chief tried off his own bat to improve on a technique that had been worked out by the Co-ord Council of that time.

"He'd been ordered to install a brace of stimulators on a certain world. No names, no packdrill—all I'll say is that its luminary was a Rim star, one of the brightest.

"From his operating instructions the Engineer learned that the purpose of the stimulators was to accelerate the mental growth of a race of bat-people who were climbing Civilization's ladder fast—but not fast enough. The planet's sun was entering the pre-nova stage, a helping hand was essential, and Psy-Center considered that it would do the bat-folks' group-ego a power of good if they managed to kick themselves into space well before N-day and save themselves—or so they would think—without outside assistance."

Vorgan made a sweeping gesture with his hand. "So—the Engineer had been filled in. He knew that all he had to do was sink the stims, settle his Unit in orbit a light-week out, and observe. But no—he had to meddle. His 'Project under way' report to CC had hardly been filed before he'd decided that he didn't care at all for the look of the big black spots that kept spoiling the star's complexion. He soon convinced himself that there was need for more speed than CC had estimated—and, without a word to a soul, he took a speedster back to the planet and advanced the settings on the stimulators."

There was a soft click as the nectra-tube, released by Vorgan, sprang back into its socket on the dispenser. He leaned back, his hands laced behind his head, and continued, "This, remember, was in the days when the dangers inherent in the use of stimulators weren't fully appreciated even

by Psy-Center, therefore it's hardly necessary to say that the Engineer had no knowledge whatsoever of the risks he was running by tampering with them. To him the stims were simply engines, the pre-setting controls analogous to throttles—move 'em back and you got less power, move 'em forward, more power. He moved them forward—and the intensity of the stim-waves irradiating the planet increased, logarithmically, infusing new life into dying brain-cells, invigorating living ones, awakening dormant ones—

"He succeeded in pushing the bat-people up the IQ-scale fast all right, no doubt about that. But he'd failed to observe that there was plenty of life on the planet besides the bats. Or, if he *had* noticed it, he hadn't grasped the significance of the fact that there was one species the bats had never quite managed to get on top of. Lizards, winged lizards, carnivorous as all get out, and prolific as neutrons in an atom-pile.

"So, while the bats developed from bright to very bright, the lizards moved up from dull to bright. There were a lot more lizards than there were bats, though, and before you could say 'Galactic Federation' a planet-wide dust-up had started. In no time at all the bats weren't reaching for the stars — they had their backs to the wall, fighting for survival."

Vorgan sighed, shook his head. "It was a proper shambles. The Engineer had fifty fits when the first reports came in, but even then he

didn't take swift resolute action. Instead, he dithered for ages trying to figure out the best way to remedy things. There wasn't one, of course—an omelette can't be unscrambled. Meanwhile, the situation on the planet grew steadily worse—and the star was showing no signs of relaxing in its determination to detonate right on schedule.

"Eventually he came to his senses and hollered for help. CC took one look at the picture, gnashed their collective teeth, then cut red tape left, right, and center getting a rescue expedition organized. The resources of half a hundred star systems were mobilized, squadron after squadron of transport vessels rushed Rimwards, and they managed, somehow, to get all the bats, and the lizards, off the planet in time. A couple of hours after the last rescue ship had lifted into space and shifted into the safety of supercee, the star exploded."

Vorgan paused, reclaimed his necra tube. "I leave it to you to imagine how delighted CC were, having to clear up *that* mess. The Engineer was drummed out of Projects, of course. He had to be given full Lethe-treatment to save his sanity, but what became of him after that nobody knows—or cares."

He pointed the tube at the Engineer. "There, then, is the explanation of CC's adoption, from that time on, of its famous hush hush policy—the one you P-lads complain so bitterly about. The purpose behind a Project is kept dark—until the time is ripe. Which, for this particular Project,

is, as you may have guessed, *now*."

He sipped the nectra, glanced out of the wall-port at the glittering star-curtain beyond, went on, "Still, chief, I'm sure you must have worked out *something* for yourself. If you think back over what you were asked to do, and have done, and let your imagination travel around a bit—"

"How you Psycho boys talk!" The Engineer scowled. "Look here. Data: Projects was ordered to carry out nega-transformation of one medium-size planet, to wit, Sol III, then to set a Unit in orbit a hundredth of a light-year out from Sol, said Unit to have its alarms triggered to the 'formers installed on the planet. Period. How many solid, seamless conclusions do you expect me to be able to draw from *that?!!*" He shook his head. "Uh-uh, no dice. I'm a practical man. You do the thinking for me."

Vorgan sighed, raised his eyes to the ceiling in mock despair. In the fashion of psychologists the Cosmos over he cogitated briefly, and not for the first time either, on the weird and wonderful course Civilization might have taken if the running of things had been left in the hands of engineers—and he gave a mental shudder.

"Right." He adjusted the relaxer until he'd found the optimum comfort position, marshaled his thoughts. "Here goes. To begin with, I'll have to fill you in on several matters relating to—population.

"In the galaxy, and by that I mean the main system, the satellite clouds,

and the globular clusters, there are, in round numbers, thirty-five million planets. Thirty million are inhabited, about two million are part-colonized, the rest—no good. Too big, too small, too radioactive, too one thing or another.

"Birth rate everywhere is on an upcurve, particularly on the parthenogenetic worlds—and space is sewn thick with them. Mortality rate, thanks to recent advances in anti-agathic medicine, is on the downbeat. Galactic population, in fact, is increasing at the rate of five per cent per century, and you don't need the Z-Computer at Cosmo-Center to work out how overcrowded this stellar system of ours is going to be in twenty centuries' time. Take it from me—there won't be any such thing as wide open spaces any more, on any planet, anywhere."

He paused, ostensibly to take a sip at the nectra tube, in reality to let the Engineer get a word in.

For several minutes the latter's face had been trying to register a number of different expressions simultaneously—surprise, enlightenment, disgust. He opened his mouth, choked, spluttered, eventually burst out with, "Spinning spirals, it's as clear as the light of S-Doradus now. You need say no more, Psy—I can guess the rest. But of all the dirty underhanded tricks to play on a race! Keeping them planet-bound! It makes me sick to think of it—and of the part I've played in the jobbery." His expression grew lugubrious. "I suppose CC plan to use the same device on every

up-and-coming species from now on?"

Vorgan had difficulty in keeping his face straight. "No, no, no! You've got it all wrong, chief." He wagged a reproving finger. "Ware the dangerous habit of conclusion-jumping. It'll land you in trouble one of these days." His tone altered. "But to return to the population problem I mentioned. You haven't asked why we don't spread out, explore and colonize one of the nearer galaxies. Andromeda, for instance."

Wrinkling his forehead, the Engineer looked for a catch, but could see none. "Surely you know the answer to that one," he said after a moment or two, "or have you forgotten all about a little thing called the decrement effect?"

The Psychologist nodded. "Precisely. The decrement effect. The factor that makes supercee—supercee as we know it, that is—inoperable in intergalactic space." He looked thoughtful. "I don't think anyone's yet evolved a satisfactory theory to account for the existence of the effect. The only thing that's certain is that it's tied up in some way with gravity fields—or, rather, with the absence of g-fields." He shrugged. "Anyway, for that reason, exodus is out. Therefore we clipped the Terrans' wings."

This, in view of the Psychologist's recent denial, sounded very much like a blatant *non sequitur* to the Engineer, but he made no comment and let Vorgan carry on.

"Know anything about Terra?"

The Engineer shook his head, not trusting himself to answer civilly. *Great day in the morning, Vorgan, aren't you ever going to get to the point?*

"It's an unique world. Unique in the sense that it's the only planet in the galaxy on which a race has evolved that has leaped from neo-lithic culture to space-flight in less than forty millennia. Forty—and the galactic average is one hundred and forty!" Vorgan glanced across at the Engineer. "That startles you, doesn't it? There's an awful lot of mental power confined in that see-tee cage of yours, chief!" He chuckled briefly. "Wonder how well you'll sleep o' nights now you're in possession of *that* information?"

Then his face grew serious. "But think, man, just think of the driving force there must be behind those Terran minds. Minds that conceived and constructed fission weapons only a half century or so after they'd built their first puny electric power plant. Minds that developed a star-drive less than a century after they'd launched the first lighter-than-air craft into the atmosphere of their world. Minds, in fact, that up till now have knocked down every obstacle, natural or unnatural, that the race has encountered in its surging progress."

He paused dramatically. "Right, then. Can't you guess what we've done? We've denied the Terrans the rest of their system's planets, we've denied them the stars in this particular island universe. But d'you honestly think they'll quit striving now?"

Vorgan shook his head decisively. "Not that race, chief! In effect, we're using them to get us out of a jam. We've dropped our Number One problem in their laps—and the prediction is that in less than half a millennium they'll come up with an efficient streamlined intergalactic drive. As soon as that happens we'll step in, of course, and normalize their world." He spread his hands wide. "It's as simple as that."

The Engineer removed his eyes from the view beyond the wall-port which he had been studying with broody gaze during the latter part of Vorgan's discourse. He took a deep breath.

"I'd just hate," he said quietly, but with an intensity of feeling that made the Psychologist blink, "to be the purveyor of *that* information to the Terrans—especially in five centuries' time. I've a suspicion they're not going to like the story—not one little bit. There's a limit—"

He broke off, started to prowling the room restlessly. Suddenly he halted, looked curiously at the Psychologist, and asked, "What did you say?" Vorgan shot him a sharp glance. "What d'you mean, what did I say? *You* were doing the talking."

The Engineer opened his mouth to reply, then shut it without saying a word, bit his lip, and began to pace up and down the floor again. After a moment or so he said, "What I can't understand, Psy, is why in the name of Mira the Terrans couldn't have been admitted to the Federation as soon as they developed supercee.

Surely it would have been more sensible—and more humane—to let them *co-operate* with Cosmo-Center on the igd problem?"

A frown passed over Vorgan's face. He declared flatly, "It wouldn't have worked. The Terrans have an aphorism, so I've heard, to the effect that invention is the offspring of necessity. That's a fundamental truth, where they're concerned." He leaned back in the relaxer, his fingers playing absently with the tube to the necetra dispenser. "According to the Predictors, if the Terrans had been allowed to gain their planets they'd have spent at least a couple of centuries grappling with the problems connected with colonization before their minds turned to interstellar flight. And even if we'd denied them their sister worlds, but given them the stars, the impact of galactic culture, so the graphs showed, would have blunted the edge of their mental drive, stultified their mental growth, and with all the will in the Universe they just would not have been temperamentally capable of reaching an appreciation of the driving urgency of the igd matter.

"They had to be given an incentive, you see, to reach out for not just another planet, or another star, but another galaxy. Impetus, stimulus, goad—call it what you like. At Psy-Center we prefer the term: forced growth." He sighed. "Tough on the Terrans, I agree—but only for a time. They'll benefit from it in the long run. Surely you can see that." But even as he spoke he could tell



from the expression on the Engineer's face that the other wasn't convinced at all.

There was a long strained silence.

The Engineer was thinking: *I know the why now, but I'll be burned if I'm any more content. Planet-bound! Thank the stars I won't be around when this Project comes to the boil . . .*

And the thought that started to revolve in the Psychologist's mind was: *It's for the good of the galaxy, of course, but—I wonder if, after all, we've done right . . .*

The walls and ceiling of the room

suddenly glowed with lambent green flame.

"Spinning spirals!" The Engineer looked aghast, made a wild dive towards the desk. "That's the visual for AAA emergency. First time in two hundred years—" The interphone had time only to emit a weak buzz before he snatched it from its cradle.

Vorgan could hear a tiny voice squeaking away, but the words were indistinguishable. The Engineer understood what the voice was saying, though, and his eyebrows started to crawl up his forehead as he listened.

"Huh . . . HUH? . . . And the alarms? . . . You've checked? . . ."

In his exclamations there was a monstrous surprise—and something else.

He said sharply, "Enough. I'm on my way over. Hold everything."

He was halfway along the corridor to the grav-lift before the Psychologist caught up with him.

"I trust you've no objection to my stringing along." Vorgan didn't make it a question. It would be *lese majeste* for the Engineer to turn down the request of a CC adviser—and he knew the Engineer was well aware of that fact. He went on, "Incidentally, what's the panic rush in aid of? Is the Unit likely to go up in a big blue flash any moment now?"

The Engineer didn't slacken his pace. He spoke without turning his head, and made no attempt to match Vorgan's bantering tone. "You'll find out soon enough when we get to Control Point. But I'll tell you this much now—you'd better be prepared for the shock of a lifetime!"

His jaw muscles tightened in stubborn lines, a clear signal that he intended to give nothing else away. Vorgan felt his pulses quicken. *The shock of a lifetime? Does the chief mean that literally—or was he only being picturesque?* He shrugged. *No matter. We'll soon find out—*

The lift whisked them to the entrance to Control Point. The Engineer raced ahead, making a beeline for the main desk. He brushed aside a very worried-looking Goth, shut off all the switches, then cut them in again quickly, one after another.

Vorgan looked over his shoulder.

He had seen it many times before, but momentary vertigo gripped him, as it always did, when the space-screen became alive, shimmered into focus. The constellations, pinpoint patterns of hard brilliance embedded in a backdrop of sheerest jet, moved as the Engineer's fingers found the traverse control. The G5 sun expanded, the automatic filters cut in then out as the screen's focus altered and the orange star slid away to one side.

A planet sprang into existence, ballooned to fill quarter of the screen, receded into infinity. Vorgan had time only to observe that it was reddish in tint and traced with fine lines from pole to pole. More stars, then another world, cloud-wrapped, enigmatic, swirled across the plate, disappeared.

The Engineer began to show visible signs of concern. His breathing grew fast and sweat formed on his forehead. But he still made no comment, offered not a word of explanation.

At length he took his hands from the control board, turned to face the Psychologist. His face was flushed, his expression an amalgam of emotions. Vorgan didn't speak: elucidation could wait until the Engineer had found the right words. But his mental bulwarks took a pounding when the Engineer's next reaction made itself suddenly, shockingly, manifest.

Laughter. Peal upon peal of near-hysterical mirth. But it wasn't infectious mirth.

Quickly suppressing his initial sur-

prise, Vorgan eyed the Engineer closely, clinically. A dispassionate analysis formed in his mind: *A prime emergency, and the top man laughs. Therefore: the emergency is non-existent, or—for a moment his mind rebelled at what appeared to be the only possible alternative—or it's so incredible a crisis that the Engineer can't handle it . . .*

He cut short the analysis. *Not enough data.* So he waited, immobile, expressionless.

At last the cachinnation ceased; the Engineer leaned weakly against the desk. "Sorry," he gasped contritely, "sorry about that. But I just couldn't help seeing the funny side of things, 'specially after that lecture of yours."

Vorgan felt abruptly cold. A tन्द्रil of amorphous fear touched his mind. *There is something here that—* He tried to control his voice, but to his own ears the tremor in it was tremendous. "Let's share the joke then, chief, shall we?"

"It's no joke." The tone was serious—too serious. "Terra has—gone."

"Gone?" It didn't mean anything. No mental bells rang, no alarms buzzed, no jigsaw section clicked into place. It was an empty word, as devoid of meaning as a . . . as—

He couldn't think of a simile.

"Gone?" Blankly, he repeated the query.

"Departed, hit the star-trail, vanished." The Engineer's worried look had faded, and his manner had grown brisker. In a small corner of the Psychologist's mind the diagnosis

formed, *Here is a man who has lost an incubus—*

The Engineer went on, "Terra is no longer in the Solar System. Goth was examining it on visual twenty minutes ago when it disappeared. And that means it went away three and a half days ago. *Three and a half days!*" He snapped his fingers, spun round on his heel. "Goth! When did you get that summons from Alanth?"

The assistant engineer's eyes narrowed in sudden thought. He strode across the room, pulled the Unit's signals log from its cubby, turned the pages, came back and placed it open on the main desk. Silently he pointed to the entry recording the signal that had brought him from Achernar.

The Engineer nodded. "So Alanth was right. And the auto-recorder wasn't defective after all." He grimaced. "Means we're going to have a very tough time explaining why the alarms didn't function. Problems galore."

He turned back to Vorgan, who was standing quite still trying to control his racing thoughts. "What I can't figure out, though, is why the Terrans went to the trouble of taking their satellite along with them to—well, wherever they're going."

"WHAT!" Vorgan's mind fastened on this last remark of the Engineer's, grappled with the tremendous implication contained in it, spanned a contracting logic-gap, and reached a conclusion whose import made him reel.

"You mean," he forced himself

to speak slowly, "that Terra and its moon have *together* left this system?"

The Engineer riffled the pages of the signals log with his thumb. "That's what I said, Psy. We're taking immediate steps to notify CC and the web stations." His glance went to Goth, who read its meaning straight away; he slipped quietly from the room.

The Psychologist slumped down on to the vacant control stool. His brain felt as though it were immersed in liquid helium. As from a great distance he heard the Engineer say, "It's a stunner, of course, but I can't see how it's going to affect things as badly as your expression appears to indicate. Offhand I'd say that the Terrans, when they hit on the secret of star-driving a planet, which isn't much of a trick once the supercee principle is clearly understood, decided to go off on a hunt round the galaxy for a see-tee system. These boys are triers, all right." He leaned against the desk as though he hadn't a care in the world. "Don't worry, though. We'll pick 'em up." His voice rang with confidence.

Vorgan straightened his back, shook his head. He felt sick and empty. "Don't be a blind fool," he said wearily, "We won't 'pick 'em up.' Nobody's going to pick them up—ever. Can't you see why not? Haven't you spotted the most significant, the most disturbing feature about this vanishing act?"

He paused, but the Engineer chose to interpret the questions as rhetorical.

"What idiots we've been! Indolent, overconfident, purblind imbeciles!" He pounded his fist hard on the desk top. "Look—we handed the Terrans a whale of a problem to cut their wisdom teeth on, didn't we? Come on lads, we told them, whip us up a super-overdrive. But, simultaneously, we gave them a *second*, simpler, problem! Why, surely we should have foreseen that a race we expected to crack the igd nut for us wouldn't stay foxed for long by the see-tee hocus-pocus!"

His voice grew uncharacteristically impassioned. "Can't you envisage them, tied down to their tiny overpopulated world, alone—so far as they knew—alone in a star system constructed of contra-matter? Can't you imagine their minds at work, struggling hard to formulate a theory that would explain the 'see-tee' nature of their sister-planets and the nearby stars? For to them, remember, their planet was normal, the rest abnormal.

"And at last they'd arrive at the only logical solution—that their normality was artificial, that no sane hypothesis of planetary or stellar origin could possibly account for the existence of a solitary *x*-type planet in a *y*-type system. At a guess I'd say it was the existence of the *y*-type satellite that broke the first scales from their eyes.

"Put yourself in the Terrans' shoes, then—better, in their minds. Their world, they are now suspiciously certain, has been deliberately metamorphosed. The whys and the wherefores

they can't guess, but they *know* they've been manipulated. From there on the rest, to them, must have been as easy as riding an anti-grav sled. What had been done could be undone. I'll bet it took them, once they put their minds to it, less than a decade to locate and ferret out the principle of the nega-transformers you thought you had hidden so cleverly all over their world. With their minds sharpened by suspicion they'd naturally be on the lookout for anti-interference devices—and when they found them they obviously took proper precautions to insure that none of the devices would operate until they were ready for the Grand Finale. And *that* event was scheduled when they'd built enough *posi*-transformers to reverse the see-tee effect and make their world normal again." He paused for breath.

The Engineer was looking incredulous. "You mean to say you think they knew—*about us?*" Skepticism made his voice hard.

"Of course. The disappearance of Terra *and its moon* doesn't make sense otherwise. Taking the satellite along was equivalent of a flourish of trumpets, a roll of drums, or—more likely—the cocking of a snook. A typical Terran gesture." A faint smile flickered across Vorgan's features. Then he went on, "Here's how I see it. They tumbled to the see-tee trick. And shortly after that they sent spies out into the galaxy."

"Why—!" The Engineer gasped, as Vorgan's words set off a memory

chain-reaction in his mind. "Those rumors of 'ghost' ships, out Betelgeuse way!"

"Precisely. Betelgeuse—where CC record offices are sited. Another obscure mystery explained — another piece of the jigsaw fits into place. The 'ghost' ships—vessels that appeared and disappeared like will-o-the-wisps. No one gave serious thought to them, remember? Terran ships, of course, equipped with small Terran-built nega- *and* posi-transformer units, sifting out the truth. It couldn't have taken them long. And the ships homed to the mother-world, carrying with them the secret of Project Forced Growth."

Vorgan traced an abstract pattern with his index finger on the glass of the space-screen. "From what I know of their psychology, I can guess how they reacted. They spat on their hands, rolled up their sleeves—and buckled down to the task we'd set them."

"NO!" The Engineer's rejection was explosive. "No, I don't see that at—" He stopped short, then asked, "Did you speak?" He answered himself, "No, of course you didn't. Must be something the matter with the acoustics of this room—or my hearing." Rubbing his ears with his palms he went on, "Now, supposing—just supposing, mind you—that your surmise about the Terrans having caught on to the see-tee trick is correct, surely they'd come sailing triumphantly out from their system and make it known that they'd trumped our ace? That's what I'd expect any normal

race to do in the circumstances."

His jaw suddenly dropped as he realized what he was saying. He smacked fist into palm. "Why, there's the answer. That's what they *have* done, in fact. I'll bet my pension to a pair of old boots that Terra is being set in orbit round Proxima or Sirius at this very moment, and the Terrans are indulging in high-powered back-slapping all round. What d'you say to that, Psy?"

"Old friend," replied the Psychologist, shaking his head sadly, "how many times must I remind you that the humans of Terra are not and never have been a normal race—not by Galáctic standards of normality. If we'd only paid more attention to *that* facet of their make-up when we planned this Project—" His voice grew dreamy as he pondered on what might have been.

The Engineer made an impatient gesture. "You were saying—?"

Vorgan picked up the broken thread. "No—the Terrans wouldn't be satisfied with merely putting the nega-transformers out of commission. They'd realize that such a course of action would represent only a single barely significant move in the game—like moving a king out of check. Their psychology would demand that their move, when it came, should *win the game*.

"So—I believe that they brought the full force of their minds to bear on the problem that the galaxy had dumped in their laps." He took a deep breath. "And I'm convinced by

the events of the last hour that—they solved that problem."

The Engineer snorted derisively. His face twisted and he said angrily, "Solved it, eh? Don't give me that, Psy!" He paused momentarily, then continued in a more level tone, "You're just making guesses, y'know. By your own account, that particular nut just can't be cracked in that short space of time, even by a super-race. Why, you told me yourself that the Predictors reported it would take half a millennium—and here it's less than a century since P-Unit put the hex on Terra." He paused, shook his head slowly from side to side. "Frankly, and with all due respect to your undoubted ability, I feel I'd rather put my trust in the Predictors. Why, man, they couldn't be *that* far out!"

"Oh yes they could," demurred Vorgan softly, his fingers playing idly with one of the desk controls. "Where Terrans are concerned I very much doubt—now—whether the prognostications of mechanical predictors can be taken seriously. Intuition, not logic, is what is needed."

He sighed heavily. "How wrong we were to use forced growth on that race. Mark my words—we shall have cause to regret that decision for the rest of our lives." His chin sank down to rest on his chest. "I still say they found the superdrive—and that they have no intention of letting us in on the secret, either. That, to the Terran mind, would be the ideal revenge. Poetic justice, they'd call it."

He gazed unseeingly into the blank plate of the space-screen. "I wouldn't

be at all surprised," he said, his voice dropping to almost a whisper, "if they weren't laughing their heads off over it this very moment. In Andromeda."

("No—not Andromeda.")

The voice was clear and confident and seemed to come from all directions at once. Vorgan, lost in his reverie, though tiredly, *I'm not going to argue any more*. Then, in dawning wonder, *WHOSE VOICE WAS THAT?*

He whirled, to read only blank bewilderment on the face of the Engineer. He opened his mouth to speak—then simultaneously both he and the Engineer became aware that they were not alone in Control Point. As one they turned—and froze.

He stood about ten feet away—a stocky, dark-haired alien with a round, pleasant face. His eyes were intense blue, deep-set, twinkling with secret laughter. His arms were folded on his chest, his hands empty.

The Psychologist's mind spun in perplexity. *A TERRAN. But how—?*

("Yes, Psy Vorgan, a Terran—")

The Psychologist's eyes widened. The stranger's lips had not moved: the "voice" had spoken inside his head. It continued, ("—and, as you now realize, a telepath. But telepathy is the lowest-valued card in the hand we hold *now*.") There was a hint of repressed exuberance in the mental message.

Abruptly the Terran vanished, reappeared with his head nearly touching the curved ceiling, fifteen feet

above floor-level. He drifted down until his sandaled feet hung several inches from the floor—and stayed there. Vorgan heard the Engineer give a startled grunt, then his blood chilled with a nameless fear as he watched his companion start off on a rapid, involuntary circuit of the room, flat on his back, five feet in the air. The uncanny force which propelled him brought him back to his starting-point, lifted him into a vertical position, and deposited him on his feet beside Vorgan. He stood swaying, gasping sounds coming from his throat.

His face white, his thoughts in turmoil, the Psychologist heard the "voice" speak again in his mind.

("Telepathy — teleportation — telekinesis. An ounce of proof is worth a ton of discourse—hence the demonstration. You'd give a lot to possess just one of these powers, wouldn't you, Psy Vorgan? Can you wonder, then, that we of Sol III consider Project Forced Growth to be the best plan ever to come out of Psycho-Center?") The tone of the Terran's thought was light, but there was no trace of mockery in it. His eyes smiled, and the smile was friendly, not derisory.

("The see-tee trick was clever. As things turned out, though, it might have proved a much better trick, from your point of view, if you'd installed nega-transformers on every world in the System *except* Terra. Still, what you did knocked us for a loop and baffled us for a long time. It might have been baffling us still—but for

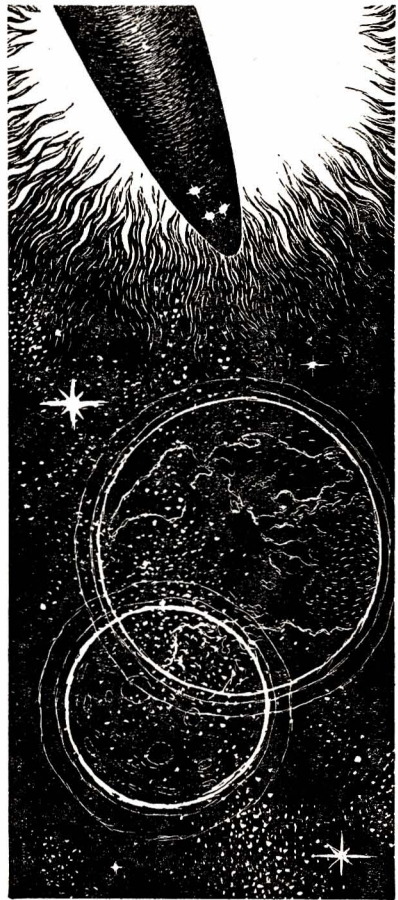
one little by-effect the existence of which you couldn't possibly have foreseen.")

The Terran looked down at the Psychologist and shook his head. ("Your guess was wrong, Psy Vorgan. It wasn't the impossibility of, to use your expression, 'a solitary x-type planet in a y-type system,' that gave the game away. *That* penny dropped later.") His eyes twinkled. ("I hope you understand the metaphor.") He was silent for a moment, then he went on in a different tone. ("I'd better start at the beginning—at the time the Project was initiated operationally, a year or so prior to our sending up manned space stations to orbit our world.

("On sundry dark nights P-Unit personnel descended in small, fast, radar-screen ships, and planted scores of those remarkable devices known as nega-transformers all over Terra. They concealed them well—we had trouble finding them when, at a later date, we went looking for them equipped with the co-ordinates of their positions! When the installation was complete the ships withdrew to this Unit, and at a pre-selected moment a signal was transmitted which triggered the 'formers, all of them, simultaneously.")

The Terran's gaze settled on the Engineer. ("Patience, chief—you'll find out shortly how we got to know all that.

("The 'formers did the job for which they'd been designed. They generated overlapping fields which



extended inwards to Terra's core and outwards to a distance four thousand miles beyond the tropopause. Inside those fields, e-m charges reversed, plus and minus changed places, and everything on or above Terra—its land masses, oceans, atmosphere, the 'formers themselves—turned see-tee in a millisecond. The metamorphosis wasn't detectable by our instruments,

of course—in the language of relativity, Terra was a 'closed system'.")

He shrugged his shoulders expressively. ("You know what happened after that. We launched the artificial satellites, then rockets to Luna—and fifty years later we were back where we started. No Moon-base, and no planet-base either in our own or in any other system.

("It took us several decades to locate the flaw in your Project. We're not very proud of that. Hindsight's admittedly a bit of a mental whip, but we feel we were very slow at catching on. What delayed us was—of all things—overspecialization in the sciences.")

He shifted his stance on the invisible platform five inches above floor-level. His lips twisted wryly. ("Yes—overspecialization. Physics, for instance, had split into half-a-dozen main branches, and fifty sub-branches. Astronomy—nobody was an all-round astronomer any more. If he didn't study sunspots all the time, he spent his life examining Moon-craters—or else he was a variable star specialist, or a nova expert. Or an authority on meteors—or meteorites.

("Meteors. We'd had them through all our recorded history. The same with meteorites. And fifty years elapsed before it occurred to someone to try to correlate the complete absence, over a very long period of time, of meteorite reports, with the phenomenal number of meteor displays that had been brightening the night skies, and often the day skies, for—again—a long, long time.

("The rest followed automatically. A check back through the records indicated that something peculiar must have happened about fifteen months before the first space-platform was launched. Up till that time, meteors and meteorites—after that time, more meteors than ever before, but no meteorites. Something smelled. If our noses had been more sensitive, we'd have detected the fishy odor long before half a century was up.

("Still, we hadn't exactly been marking time during that half-century. When the ships came back from the stars with the news of the 'see-tee' nature of the rest of the immediate universe — well, frustration wasn't the word for it. We'd been ready and eager for space—and the door had been slammed in our face.

("The setup was one practically made-to-order for the psychologists and sociologists. For decades they'd been warning us that we were, as a race, putting far too many of our eggs in one basket—the technological one. And, lo and behold, here was technology, in the shape of astronautics, taking a beating and showing no signs of being able to recover from it. 'Right,' they said, 'it looks as if we're going to be stuck on this one world, if not for keeps, at least for a long, long time to come. No use crying for the Moon any more—or for the stars—they might as well be in another dimension. What you can't have you've got to learn to do without. *But*—there's obviously a necessity now, more than there ever

was at any other period in our racial history, for a planned ecology on a world-wide scale. And for that, one hundred per cent co-operation between nations is a *must*. But we'll never get that until national representatives understand one another completely. Poor communication has been the root-cause of most of the world's troubles to date. So—let's concentrate on cracking *that* problem'.”)

The Terran smiled at Vorgan. (“The social scientists were, as a body, remarkably single-minded. Perhaps—who knows—it was a sense of destiny that kept them marching along in perfect step. They took a pot-shot or two at their first target—the devising of a truly universal language—soon realized that hitting it wouldn't necessarily solve the problem, and raised their sights higher. They became convinced that the answer was to be found in a deeper understanding of the working of the human mind itself.

(“And when the money and the research that had gone into spaceship construction was channeled into investigation of the esp fields—why, we started getting somewhere fast. In ten years more progress was made in psionics than in the preceding ten thousand. In forty years we came—a long way.

(“It was in telepathy that the greatest initial strides were made. By the time the meteor-meteorite paradox had been recognized, telepathy had been forged into a tool—a kind of super-scanner. We know now that a

trained telepath's 'sphere of receptivity' has a diameter of nearly one point five light-years—and this Unit is only a few light-days out from Sol.

(“So the Unit's existence became known to us—I leave you to imagine the violence of our first reactions to that discovery—and from the minds of the operating staff we learned all about the nega-transformers planted on Terra. But we ran into a blank wall when we searched these minds for the purpose behind the Project, and we had to go all the way to Betelgeuse before we uncovered the truth. And the rest you know.”)

Vorgan blinked rapidly, came out of his trance. He knew the Terran could read his mind; he gave voice to his thoughts for the benefit of the Engineer.

“My congratulations to you and your race.” His voice was humble. “It is obvious that we of Psycho-Center gravely underestimated the potentialities of the Terran mind. And it is also obvious that your race has proved beyond question its title to the galaxy — may you control it with greater wisdom than your predecessors.”

The stranger's voice laughed gently in his mind. (“Don't wish *that* on to us, Psy. Why, with the powers we possess now, we—”) The thought snapped off, and the Terran's eyes narrowed in concentration for several moments. (“Perhaps this will give you a deeper understanding.”) He made a curious little self-depreciatory gesture. (“But don't run away with

the idea that this is a one-man show. For this demonstration I need help. *Come in, Link One!*") He pointed at the blank space-screen.

It became miraculously alive. In the center of the view hung an island universe, majestic, coldly beautiful, a static whirlpool of light. ("Recognize it?") Vorgan stared. It looked familiar, but he couldn't name it. It wasn't Andromeda, or—

("That — is *this* Galaxy.")

Vorgan stiffened. *Of course—*. Then his gaze swung to the Terran. "Another psi-trick? Hypnotism?"

("No. You see what you see, Psy. You are looking at our home galaxy from a point on the fringe of the Greater Magellanic Cloud. At this moment the Unit is separated from the Solar System by a spatial gap of twenty-six thousand parsecs—")

Vorgan felt his senses swim. The implication of the Terran's statement was staggering. *Minds that can pick up a ten-thousand ton cylinder and sling it in an instant across an intergalactic gulf—*

He opened his mouth to speak again—and was interrupted by the Engineer.

"NO!" It was the first time the Engineer had spoken since the Terran had appeared in the room. His features were contorted in disbelief. "NO." He repeated the denial. "That I can't swallow. Mira only knows what kind of distorter-circuit you've been hanging on our senses, but you've overstepped yourself at last." He twisted his neck round, glared at the dark-haired stranger.

His tone was belligerent. "Trickery, Terran—keep it for children." He strode purposefully towards the control desk. "There's obviously some device here—"

He touched the controls. The smile did not leave the Terran's lips. The field of view altered, the whirlpool disappeared—darkness—then a sudden blaze of light. ("The Cloud—at close range.") There wasn't a trace of equivocation in the Terran's whispered thought.

Vorgan could not tear his eyes from the stellar splendor in the screen. Part of his mind noted that the Engineer's hands were wrestling with the magnification controls. And nothing happened; the image wouldn't reduce. He thought, *There's your confirmation, chief—*

The Terran nodded as he caught the thought. ("Exactly. I must stress, though, that to teleport the Unit over such a distance isn't a simple matter. It is not a task that can be performed by one mind alone. Watch the screen. *Link One!*")

There was no sensation of motion—but the brilliance in the screen was replaced by a spangled darkness in which only one bright star was visible. It was, quite unmistakably, Sol.

Softly the Terran spoke once again in the minds of the Psychologist and the Engineer. ("The psionic key opens many doors—in the past as well as in the present. For example—*Link Two!*")

For a timeless instant the Engineer revisited his office in Projects HQ. The HQ was located rather more

than a hop-skip-and-jump away from Sol. To be precise, it was constructed on a moonlet which circled the outermost planet of supergiant Mira.

His feet moved of their own volition, carried him forward to the long gray plastic-and-steel desk behind which he'd taken great pains to spend the minimum of time since he'd climbed to the top post in Projects. The desk top was bare, except for a screwed-up ball of paper. His hand, motivated by an impulse that didn't originate in his mind, reached out to pick it up . . .

Psy Vorgan felt the blood pound at the back of his head. He recognized his whereabouts instantly. It was his privacy cubicle in the Advanced Psychotherapeutics Techniques Center on Arcturus VII—and he knew that APTC had been disbanded and moved to Regulus—*when? Was it forty-five or fifty years ago?*

Clamping down on his racing thoughts he opened a locker, and his fingers suddenly possessed a will of their own and reached out to grasp . . .

They were back in Control Point.

Slowly the Engineer straightened out the crumpled piece of paper. He read and reread the coded symbols imprinted on it, his mind refusing to credit the authenticity of the signals that his optic nerves kept flashing to his brain. What he held was the message chit that had set the Sol III Project into operation nearly a century before—

The Psychologist's mind was full

of a wonder such as he'd never experienced in his life before. As he thumbed slowly through the sheaf of lecture notes, in his own script, which were over five decades old, he felt as though he'd been vouchsafed a glimpse through a window into infinity and had observed—

The Terran's thought cut across his musing. ("No device—no trickery. Merely a further demonstration of the powers of untrammelled minds. I think you understand now why we'll be eternally grateful to Psycho-Center for originating Project Forced Growth. Admittedly the end-result is far different from what Galfed planned, but the Project can hardly be termed a failure. We've shown you

how intergalactic travel can be achieved—and when you take charge of Psy-Center two years from now, Psy Vorgan, it shouldn't take you long to fashion your own key.")

Vorgan smiled faintly, shook his head. "You overrate my abilities—and my importance in the scheme of things. I assure you there's as much likelihood of my 'taking charge of Psy-Center,' as you put it, in two years time, as there is of . . . well, of Sol's going supernova five seconds from now."

The Terran chuckled. ("Sol's stable enough, granted—but I still say you'll be top-man in Psy-Center in two years.") The timbre of his thought altered slightly. ("I'm not guessing, either.")

Vorgan tensed; the smile left his face. He stared unwinkingly at the stranger for a long moment, then he took a deep breath and said in a low voice, "I think I understand. Clairvoyancy, too?"

"Your mind works fast, Psy. Yes—clairvoyancy. We haven't progressed very far along that line, though—had other things to think about. Not very many of us can probe as far as a month ahead, and only a handful as far as two years.")

Vorgan discovered that his mind no longer reacted to surprise. *And no wonder, he thought heavily, no wonder—in the past few hours it's had enough to last it fifty lifetimes.*

His eyes lifted again, met the Terran's. *Past, present—and future. I realize now why your race has no de-*

sire to take over the galaxy. Your sights are set higher, far higher. Right?

("I wouldn't put it that way.") The Terran's face grew serious. ("The fact is that we've come up fast and we feel we need time, and freedom from interference, to—consolidate. And we cherish our independence—we prefer to forge our own destiny, rather than have it arranged for us.

("So—we're quitting the Galactic scene, going into voluntary exile. For a time. If Galfed want to search for us, they're welcome to try. And they *will* try—but we've got a two-year window into the future, and there's no sign of their succeeding in that time.")

He drew himself erect. ("I'll leave you to your worries now. There will be rather a lot of them, I'm afraid; both of you are scheduled for some pretty intensive grilling sessions with CC's top question-askers.") Once again the irrepressible smile lit his features. ("But you'll live through them, never fear. And perhaps, one day, we'll meet again.")

His arm went up in jaunty salute—and he vanished.

For several moments Control Point was quiet except for the muted hum of the circulators. Then Vorgan stirred, changed his stance. "And that," he said softly, "is very definitely *that*." With a supreme effort of will he dispelled the feeling of somber regret that threatened to enshroud his mind, and when he turned and addressed the Engineer his tone was

light. "Well, chief, the Sol III Project's wound up now, so there's no point in letting this Unit squat in this sector of space any longer. Tell Goth to engage the overdrive and let's hit the trail for home." He started walking towards the doorway. "Whereabouts is that room with the nectra-dispenser?"

As he stood at the grav-lift shaft, waiting for the Engineer to catch up with him, he was thinking, *If the Terran was right, I'm going to be a busy little bee during the next two years—and for a long time afterwards. Might as well relax while I've still got the chance—*

Out on the Periphery, a blue-green world, accompanied by a massive cratered satellite, circled a main-sequence star which was designated on Galfed star-charts as—planetless.

In a city on the night-side of the blue-green planet a conference was breaking up. It had been a peculiar kind of conference; not all of its members had attended in person.

The chairman and the vice-chairman stood talking near the tall window that formed one side of the conference hall. The vice-chairman was saying, (" . . . To reach Andromeda? I give them fifty years.")

His companion shook his head slightly. ("Less than that, I'd say—much less. They've made no progress at all in psionics, true—but they've been given an almighty stimulus now. Don't forget, they've been *shown* the road; we didn't even know the road

existed—let alone where it led to.") His deep-set blue eyes gazed out at the lights of the city. ("I wonder how long they'll take to discover just how many minds are needed to teleport a planet.")

("Yes, I wonder.") The vice-chairman smiled. ("It'll be interesting to watch them finding out.") He turned his head, glanced round the now - empty room. ("Everybody's gone home now. Time I left too, or the little woman will be trying out a forced teleport on me. Adios.") He disappeared.

The chairman sighed, moved towards a chair which faced the window. As he sat down his pipe drifted out of his pocket, steered itself to between his teeth. He bit down on the stem, thinking whimsically, *Little tricks please little minds—* Then soberly, *No—not little minds any more. More powerful, now, than any others in this galaxy. This galaxy, yes—* His eyes lifted to a night sky in which less than a score of stellar points twinkled. In the vast black gulfs between the stars the extragalactic nebulae gleamed mistily, faint feeble glowworms in a monstrous canyon a million megaparsecs deep. *But what of these?*

And his mind followed the thought to its logical conclusion. *I wonder whether some day, out there, we'll encounter "foemen worthy of our steel"—*

It was just as well for his peace of mind that he could not scan a century ahead . . .

THE END