



*Bent on conquest, they sprang  
from mists of Legend into  
terrifying reality*

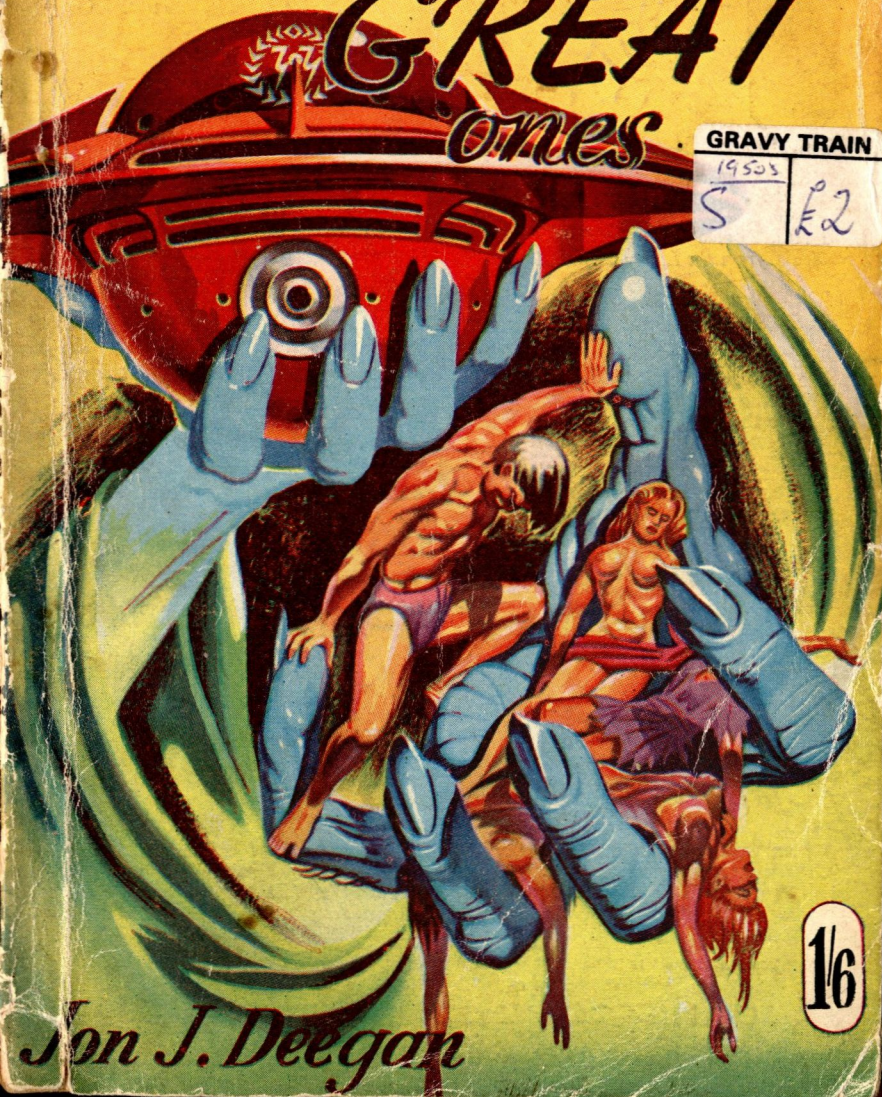
# the GREAT Ones

GRAVY TRAIN

19503

S

£2



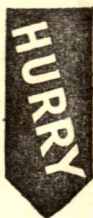
Jon J. Deegan

1/6



"Two weeks ago I bought a 'Joan the Wad' and to-day I have won £232 10s. Please send two more."—B.C., Tredegar, S. Wales.

Extract from "Everybody's Fortune Book," 1931.



*Guaranteed dipped in water  
from the Lucky Saint's Well.*

## JOAN the WAD

is the  
**LUCKY CORNISH PISKEY**  
who

**SEES ALL, HEARS ALL, DOES ALL**

JOAN THE WAD is Queen of the Lucky Cornish Piskeys. Thousands of persons all over the world claim that Joan the Wad has brought them Wonderful Luck in the way of Health, Wealth and Happiness.

### HISTORY FREE FOR A STAMP.

If you will send me your name and address and a 1/- stamp and a stamped addressed envelope for reply, I will send you a History of the Cornish Piskey folk and the marvellous miracles they accomplish. JOAN THE WAD is the Queen of the Lucky Cornish Piskeys, and with whom good luck and good health always attend.

### AS HEALER

One Lady writes: "My sister suffered very badly for years, but since I gave her a Joan the Wad to keep near her she is much easier. Do you think this is due to Joan or the Water from the Lucky Well?"

### AS LUCK BRINGER

Another writes: "Since the War my wife and I have been dogged by persistent ill-luck, and we seemed to be sinking lower and lower. One day someone sent us a Joan the Wad. We have never found out who it was, but, coincidence: if you like within a week I got a much better job and my wife had some money left her. Since then we have never looked back and, needless to say, swear by 'Queen Joan.'"

### AS MATCHMAKER

A young girl wrote and informed me that she had had scores of boy friends, but it was not until she had visited Cornwall and taken Joan back with her that she met the boy of her dreams, and as they got better acquainted she discovered he also has "Joan the Wad."

### AS PRIZEWINNER

A young man wrote us only last week: "For two years I entered competitions without luck, but since getting Joan the Wad I have frequently been successful although I have not won a big prize, but I know that . . . , who won £2,000 in a competition, has one because I gave it him. When he won his £2,000 he gave me £100 for myself, so you see I have cause to bless 'Queen Joan.'"

### AS SPECULATOR

A man writes: "I had some shares that for several years I couldn't give away. They were 1/- shares, and all of a sudden they went up in the market to 7/6. I happened to be staring at Joan the Wad. Pure imagination, you may say, but I thought I saw her wink approvingly. I sold out, reinvested the money at greater profit and have prospered ever since."

*All you have to do is to send a 1/- stamp (Savings Stamps accepted) and a stamped addressed envelope for the history to—*

**44, JOAN'S COTTAGE, LANIVET, BODMIN**

For Canada and U.S.A. send 50 cents for History, or 2 Dollars for both History and Masc



# THE GREAT ONES

PANTHER



BOOKS

HAMILTON & CO. (STAFFORD), LTD.  
LONDON



## Panther Books

**Newest wonders** of our age are the great calculating machines popularly known as "electronic brains." Foundation of all undertakings in this modern world, either theoretical or practical, is mathematics—the science of figures, based upon irrefutable physical laws.

**So if we have physical laws,** why not also *psychical* laws? Could a synthetic "brain" calculate possibilities of human behaviour, balancing the law of probabilities against untold millions of ways in which free-thinking Man might react to certain situations?

**When the Fabulous Great Ones** traversing incredible depths of space in their fantastic, circular ships, set up an operating base within our galaxy, they were convinced that a strategic plan for the conquest of mankind could be devised in this way.

**Yet, despite their cold,** superior logic, aided by the fantastic Choirs of Calculus, something happened that the Great Ones had not foreseen—something which actually defied mathematical formulae and sowed a tiny seed of doubt. . . .

by

**Jon J. Deegan**



# THE GREAT ONES

by

Jon J. Deegan



**Panther Books**

*are Printed in Great Britain and Published by*  
HAMILTON & CO. (STAFFORD) LTD.  
1 & 2 Melville Court, Goldhawk Road,  
London, W.12.



*By the same author :*

ANTRO, THE LIFE-GIVER

*This story is copyright and no portion of  
it may be reproduced without the written  
consent of the publisher.*

*All characters in this story are fictitious and imaginary and  
bear no relation to any living person.*



## PROLOGUE

### Diversion for an Empress

---

MRS. VAN HEMPSON the Fifteenth, voyaging towards Zenna II aboard the giant new space cruiser Empress of Cassiopeia, was bored and restless. She announced this unhappy fact at some length to the captain, who paused during his rounds to chat a while with distinguished passengers.

Spectacular in his braided uniform, he bent over solicitously and summoned a smile in which sympathy and concern were nicely mingled. "Dear lady! This will never do! Perhaps a comfortable seat in the star-gallery? Constellations are particularly impressive just now—"

Mrs. Van Hempson waved a languid, be-ringed hand. Her fat, discontented face seemed to indicate that when you'd seen one star you'd seen them all. The star gallery fails to amuse me," she said, in a whining, petulant voice.

The captain's smile remained as fixed as a mask. Only a tightening of the white, muscular fingers betrayed his feelings.

"Six months!" wailed Mrs. Van Hempson. "How can one pass the time during a whole six-month journey?"

"The games salon, perhaps?" murmured the captain, soothingly. "The concert hall? Two theatres? The library?"

"Books?"

Her tone made him wonder for a moment whether she could actually read. Maybe the effort of understanding the sentences was too great for so delicately-nurtured a pillar of society.

"Really," she said, "the line ought to pay more attention to amusements—"

"Amusements!" thought the captain, bitterly. Wasn't it sufficient in itself that this great ship which now bore them so swiftly across star-strewn wastes accomplished the journey at all, let alone in so brief a time as six months between Zeta Saggiarius and Beta Leonis? Couldn't any of the spoiled darlings realise how even a hundred years ago such a trip must have meant more than two years of discomfort, hardship and actual danger? Today—in AD 3958—Galactical Spaceways Incorporated had matters so well under control that they ran regular schedules.

It would have done Mrs. Van Hempson and her kind a power of good, he reflected, to be transported in time to early days of space travel—say, about AD 2300. A few weeks in the slow, cranky ships which crawled so laboriously round the solar system might have taught them a lasting lesson. His mind ran quickly over the dates learned by every child in kindergarten:

AD 2027—John Stewart Wilkinson, first man to  
land on Earth's moon;

AD 2091—first flight to Mars;

AD 2098—landing on Venus;

AD 2177—expedition to the moons of Jupiter.

He thought again of those flimsy contraptions, built of steel-alloy, and shuddered with admiring horror at the temerity of men who dared take such tiny, flying coffins into space. The largest of them was little more than five hundred feet long.

Then, of course, a couple of hundred years later men's ambitions had moved beyond their own system, bringing that famous day of Sol 15th, 2411, when the



Argonaut set out with Hartzmann's fantastic expedition of a hundred young men and women bound for Alpha Centauri—the first literal flight to the stars—every soul aboard knowing full well that neither they nor their children would see journey's end. But their grandchildren landed, although it took nearly three centuries before word of their survival could reach Mother Earth, four and a half light years distant.

And so the human race engaged thence onwards in cosmic hedge-hopping, racing into the galaxy with stouter ships—not faster, because building up speed in space is merely a matter of gentle, continuous acceleration, whereby the lightest craft can achieve immense physical speeds so long as she carries sufficient fuel to keep the jet-engines going—taking over more and more suitable worlds, even though on distant projects Hartzmann's system had to be duplicated.

Thus man's colonisation had been pushed out more than forty light years from Mother Earth, so that giant vessels equipped with every known safety device and every imaginable comfort wove spider-web routes between the stellar systems, and all the while expeditions such as those controlled by the Inter-Planetary Exploration Bureau continually pressed forward Man's frontiers in space.

"So few people of one's own social standing," Mrs. Van Hempson the Fifteenth was complaining. (Mrs. Van Hempson the First had been married to an early prospector who discovered the vast cobalt beds on Zenna II. Like a good wife, she washed his shirts, cooked his simple food and asked for little in the way of "amusement.") Altogether, she was a good deal happier than her immensely wealthy descendants and their discontented wives.

"The safety and comfort of our passengers comes before everything, dear lady," said the captain, smoothly. "The matter shall certainly be looked into." He snapped his fingers. "Steward! Some bouillon and a glass of

that special wine for Mrs. Van Hempson."

"Dear Captain!" she cooed, snuggling deeper into the soft rugs of her reclining chair. "You're so good to me!"

"What you want," said the captain, bowing, "is to stop stuffing yourself with rich food and have a couple of hours in the exercise room every day."

But he didn't say it aloud.

## II

In other, workaday sections of the great ship—away from gilded luxury and deep-carpeted salons—scurried an army of busy servants who enabled Mrs. Van Hempson and company to journey across star-dusted space so comfortably. There were cleaners, stewards, chefs, pursers, maintenance engineers, radio operators, navigators and pilots—all conscientiously carrying out duties which so neatly dovetailed that the organisation worked without apparent effort.

All round the clock (for Solar Standard Time is the rule aboard ships in free space) their unobtrusive efficiency continued, unbeknown to passengers who danced in the main ballroom, ate delicacies from a thousand different worlds in the discreetly-lit restaurants or watched latest stereoscopic moving pictures.

Yet surprisingly enough, at the top of the vessel in a cabin crammed with intricate apparatus, one particular member of the Empress of Cassiopeia's crew felt quite as bored as Mrs. Van Hempson. He sat on a dais from which he could watch the activities of five radio operators grouped before him. He picked up a magazine, yawned and dropped it again. Necessity, as part of his duty as yeoman of signals, to examine and rubber-stamp a message form provided relief so brief as to be aggravating. He sighed, rubbed his chin and looked at the clock, wondering whether it had stopped.

One of the operators unexpectedly snapped into action, flipping switches which set a light flickering at



his chief's desk and also notified the Officer of the Watch.

"What is it?" asked the Yeoman of Signals, interestedly.

The operator scribbled on a pad. "S O S—automatic." A puzzled frown wrinkled his brow. "No position, though—"

Amid a roar of static from the loudspeaker sounded faintly those triply-repeated signals that through the centuries have brooked no delay. "S O S—S O S—S O S—"

"Who's calling?" demanded a voice from the bridge. "I can only hear the distress sounders."

"No position given yet, sir," announced the Yeoman of Signals. "We're getting a direction fix now—"

"Hurry up, then! Maybe some poor devils are—" Rest of the sentence remained unspoken, yet every man within hearing distance knew what the Officer of the Watch was thinking.

The first operator shrugged. "If they'd only give a position—tell us who or what they are—just S O S won't get them very quick action."

The signal had come through on a regular distress channel, reflected the Yeoman. He hoped it was a call from human agency—the ship didn't possess much in the way of facilities for creatures based on chlorine or methane biologies. Besides, the class of passengers they carried might not care a great deal for the proximity of, say, a Worm-Man from Athos or natives of Kardoon with their eight legs and huge, single, yellow eyes.

"Where in Betelguese is that fix?" demanded the Officer of the Watch.

"Coming, sir! Vector 21—elevation 32 degrees—lateral 187 degrees."

"What's visible on the radar scanner?"

"Nothing, sir—nothing at all!"

"Keep trying. I intend to notify the captain."

"Very good, sir."

At least, it couldn't be a distant ship—maybe her

hull ripped open by collision with wandering cosmic debris. Or could it? If not a ship, wondered a puzzled Yeoman of Signals, what actually was the source of that faint, urgent call?

Up in the observation cabin they turned the big, autoelectronic scanner on the job. Invisible, impalpable fingers groped their way across the ether along the line of direction-fix, feeling for some object they might reflect back to the dark visor-screens. Operators waited patiently while those electric tendrils shot across the void at the 186,000-miles-a-second speed of light—waiting . . . waiting . . . until passing moments might bring with returning echoes some indication of what instrument continually flashed frantic, triple-grouped dots and dashes in their ears.

“Are we in communication with other ships?” demanded the Officer of the Watch. “Have they heard anything?”

“There’s the Belle Demoiselle, sir. She’s about forty million miles behind us, just turning off towards Vega. Waiting for a reply now—”

The worried officer on the bridge fidgeted uneasily. “Belle Demoiselle,” he muttered. “What a name to give a ship!” He looked up sharply as the loudspeaker honked again.

“She’s heard it, sir. Says she’ll leave answering to us, as we’re all that much nearer and she’ll need to make an eighty-degree turn to come this way. Unless we want extra assistance, that is, of course.”

The Officer of the Watch grunted. “Can’t ignore it, anyhow. I’d better see the captain. Altair alone knows what the passengers’ll say!”

Having finished his rounds, the captain relaxed in his private cabin over a leisurely cup of coffee, only to find himself confronted by this new responsibility. He regarded his subordinate shrewdly. “The radar screens can’t find anything?”

“No, sir. But—with respect—radio signals don’t



generate themselves spontaneously."

"Hm." The captain sipped coffee. "It might be some automatic signalling device that's broken loose from a ship—too small to show on the screens."

"Frankly, sir—I don't know." He glanced sideways at the man possessing control over this huge vessel and all who travelled in her. There were times during the long, routine, eventless months when the Officer of the Watch envied the captain his easy work—chatting with influential business men, bowing to the rich old ladies, charming the pretty girls by his smooth manners and smart uniform. Now he wasn't so sure.

"As you say, we can't ignore it." The captain sighed. "Better send a lifeboat to investigate. We'll have to decelerate, of course—"

They brooded briefly upon the implications.

"Passengers won't like it, sir," said the Officer of the Watch.

"Confound the passengers," said the captain, cold-bloodedly. "If there's some poor devils marooned out there, yelling for help, I'm not going to pass 'em by—"

The Officer of the Watch picked up his cap. "I'll do what's necessary, sir."

A steward entered, standing rather hesitantly near the cabin door. He coughed. "Mrs. Van Hempson's compliments, sir. She would be delighted if the captain could dine with her this evening—"

A model of self-control, the captain said "Inform Mrs. Van Hempson I shall be very pleased to do so."

He caught the other officer's eye as he went out, but not a muscle of his face twitched.

### III

"Attention, please!" said that crisp yet courteous voice over the ship's amplifiers. "Attention, please, all passengers. The ship will commence to decelerate in fifteen minutes. Kindly proceed immediately to cabins. There is no need for alarm—this is a routine manoeuvre.

Please take your places in the deceleration hammocks. Stewards and stewardesses will be in attendance. All passengers please proceed to cabins immediately—”

The message sounded through bars, ballrooms, lounges and theatres; along the quiet reading galleries and promenade decks.

“It is intolerable!” declared Mrs. Van Hempson. “Really, after one had so looked forward to a quiet voyage—”

A stewardess sympathetically removed rugs from her reclining chair in the big, artificially-sunlit deck where equally artificial, bracing breezes simulated a seaside air. “Let me help you to your cabin, madam—”

“This deceleration always makes me feel so ill—so ill. I have a most important dinner engagement this evening. I shall speak to the captain about it—”

“Yes, madam. Won’t you take my arm? Now if we walk gently towards the companion-way—”

Thus were a thousand first-class passengers cajoled, persuaded and chivvied to their cabins, after which the crew themselves were free to dash madly for their own hammocks.

The captain himself, occupying one of the vertical deceleration hammocks for duty personnel on the bridge, watched smooth, unhurried preparations. His pilotage crew embarked upon no small task in slowing the great ship from her 20,000 miles a second cruising speed to approximately half that velocity without upsetting passengers’ delicate stomachs.

Like other space ships in free flight, the Empress of Cassiopeia could have halved the time of her total trip by building up to the maximum theoretical 186,000 miles a second speed of light, yet there were dangerous snags that even modern science had so far failed to overcome—tiny pebbles of cosmic debris which, encountered at high velocities, would strike with a weight of several hundred tons and tear apart the stoutest armour plate. As it was, electronic dissipator screens beyond the bows



dealt with perilous sand particles, dissolving them with a dazzling, incandescent flash and a soft, almost imperceptible thud like weights hitting a feather bed, while automatic radar look-outs gave alarm of larger rocks in the path in time for the vessel's course to be altered. Yet speeding up schedules beyond a certain point meant that radio waves themselves proved too slow to provide a suitable interval of warning, and it was this factor that set a safety margin well below possible limits.

In the present instance, the ship must slow down in order for the small lifeboat, which already speeded along that mysterious S O S beam, to rejoin her parent vessel, and more than four hours would be needed to reduce velocity to 10,000 miles a second by methods that provided a minimum of discomfort for precious passengers.

The final hooter sounded in all parts of the giant liner. The First Pilot, his eyes apparently reading data from a dozen meter-dials at the same moment, flipped a final lever. Sweep-hand of a master clock co-ordinated firing relays and time switches.

Red lights flickered. Outside, a blast of atomic hydrogen blew from the braking engines and trailed across the coldness of the void like a tiny comet's tail.

#### IV

Roused by the discreet buzzer near his pillow, the captain raised himself on one elbow. "Yes? What is it?" The excellent dinner that evening lay heavy on his stomach. Could the strain of continual politeness towards Mrs. Van Hempson have proved too much for his digestion?

"Message from the lifeboat, sir. They've located the source of that S O S!"

"Oh? Were any of 'em alive?" The captain quite wide-awake now.

The Officer of the Watch appeared in some difficulty.

"They didn't find anybody, sir!"

The captain swallowed his annoyance and disappointment. "Automatic sounder broken adrift, eh?" He hoped the superintendent wouldn't be too severe with him for arriving on Zenna II about ten hours late.

"Well, sir—in a way—but there's something they can't understand—"

"Come on, then," said the captain, impatiently, "spit it out! What's all the mystery?"

He actually heard the other gulp. "They've never seen anything like it before, sir. It—it's a sort of metal casket—they can't even identify the material—"

"Lifeboat crews aren't usually trained metallurgists, are they?"

"Well—er—no, sir. But they say this is—well, different. The thing's still transmitting a distress signal on routine frequency—we can hear it on the ship's receiver—"

"Tell 'em to shut it off, then!"

The Officer of the watch raised his voice to a kind of despairing wail. "They can't open it, sir! Even oxy-caesium flame won't touch it! Yet there's some instructions on the thing—in English!"

The captain could have sworn that trickles of icy water ran along his spine. "In English?"

"Yes, sir! What shall I tell them to do?"

## V

Still travelling at reduced speed, the Empress of Cassiopeia cleaved her way across the star-spangled darkness. Save for a few hypochondriacs who claimed to be feeling effects of the deceleration, passengers engaged themselves once more in the daily round. None saw a little lifeboat creep towards an air-lock near the starboard keel-plate and become swung inward by magnetic retractor arms. None saw the peculiar, shrouded burden her crew carried so gingerly to a nearby workshop or heard the telephone call to the captain's cabin.



Grouped round the bench when he arrived were four men—the Duty Officer, the Duty Engineer, the Chief Laboratory Assistant and the lifeboat pilot.

"This is the gadget, sir," said the pilot, with that lack of formality for which flying crews are so notorious. "Located about 655,000 miles out, going quite slowly—about 1,000 miles an hour—on a course of 206 degrees. Can't stop the thing transmitting, although this de-gaussing cloth damps the emission down a bit. Frankly, sir, it's uncanny."

The captain thought so, too, but wasn't prepared to admit the fact openly. "Let's have this covering away."

Folds fell along the sides of the bench to reveal an oblate, ovoid casket of smooth, dull metal, without visible seams. He regarded it curiously for a moment, then waggled an eyebrow towards the Chief Laboratory Assistant. "Well?"

"Weight 37½lbs, sir. Ultra-violet, infra-red and gamma rays prove negative. No movement is registered by sound or magnetic detectors. The metal insulates all internal electrical impulses from our instruments—" he shrugged helplessly "—but it lets radio frequencies through. As for the material in the casing—" he ran fingers despairingly through thinning hair "—well, sir, we just don't know what it is."

"Where's this lettering?"

"Engraved along the lower side." He emitted a short, bitter laugh of frustration. "Engraved! Nothing we've got can even make a scratch on the surface!"

The captain bent down to peer at the wording. Indented neatly into the substance of that strange casing were the words: "To open, apply supersonic frequency of 104 kilocycles."

He straightened himself sharply. "Have you tried?"

The Chief Laboratory Assistant shook his head. "We waited for your permission, sir."

"A good thing too!" said the captain, grimly. "You know, just between ourselves, I'm not at all happy."

There's a thousand passengers, my crew and a very big ship here. Suppose it's a booby trap of sorts? Or a space-mine launched by someone who doesn't exactly love the human race?"

"But there's no war anywhere at the moment, sir," objected the Duty Officer. "Of course, it might be a leftover, so to speak, from hostilities in the past."

"Exactly." The captain tightened his lips in a face grown suddenly hard and pale. "Or, on the other hand, it might not. If only any of us had ever seen anything like it before—"

Sudden inspiration seized the Duty Engineer. "This 206 degrees course, sir—can we deduce a possibility from that?"

"We might if we knew how long this fantastic egg had been travelling—" He looked slowly from one strained countenance to another, then drew a deep breath. "I want volunteers to take that lifeboat out again and open the supersonic lock at a safe distance!"

## VI

"I am so bored," said Mrs. Van Hempson, petulantly. "Only your company makes the journey endurable, captain."

The captain bowed. "So kind," he murmured.

"You must recommend to the shipping line that they arrange more intellectual pursuits for passengers. To those who do not care for frivolous pleasures, life is apt to become burdensome. If only there were more persons of one's own social status aboard—"

He murmured again, this time with understanding and condolence.

"It is not your fault, of course," said Mrs. Van Hempson, graciously. "You have been most comforting, captain, and I have been selfish in keeping you away from your many duties—"

"Not at all, dear lady—" Thankfully, he saw a steward approaching.



"Excuse me, sir—the radio cabin—"

"Ah, yes, indeed." He continued to wear the mask. "I will be there directly." Charm turned itself on as though from a tap. "You will forgive me—?"

"Dear Captain!" sighed Mrs. Van Hempson.

He wished he dared run. He glanced through the visi-port. Somewhere out there in the compassing blackness, like dark velvet strewn with diamond-dust, lay an invisible speck with three brave men aboard—men who, so soon as he gave a signal, would turn a switch to excite a supersonic generator set to 104 kilocycles. What might happen then? A bright, momentary flare among those millions of blazing suns—or nothing?

## VII

The lifeboat's engines had stopped. Around the little ship hung the dreadful, eerie silence of space. In a forward cabin three men crouched over that smooth, egg-shaped casket, staring at its dull outline as though gripped by some hypnotic influence—staring from sweat-streaked countenances which shone pale and ghastly in the subdued light.

Someone whispered through parched lips "Switch on. It's time."

A generator whirled softly. A pressed button opened the secret radio channel between their little craft and the giant liner nearly 200,000 miles distant. Static crackled slightly over the amplifier. Small, familiar, everyday sounds eased the tension.

"Everything ready?" It was the captain's voice, strong and reassuring.

"All ready, sir."

"Go ahead according to your own arrangements. Good luck."

The three pale-faced men exchanged glances. One of them nodded. Another grasped a control knob. The third embarked upon commentary for record purposes in case worst fears should be fulfilled.

"Generator on—fifty kilocycles—moving up—am testing case of casket with audio-amplifier—no reaction." Ten seconds of breathless, sweating, greasy silence. "Sixty kilocycles—moving up—still no reaction—" Back in the big ship those grisly syllables croaked monotonously and unemotionally through the amplifier. "Seventy-five kilocycles—no reaction—eighty-five—"

A sharp corner of the radio bench dug fiercely into the captain's hand but he did not relax his grip.

"Coming up to ninety kilocycles now—no reaction—"

The Duty Officer opened his mouth to say something, but his superior shook his head in quick, frowning reproof.

"Nearly one hundred kilocycles—one hundred—one hundred and one—one hundred and two—no reaction—"

Eyes strained themselves against visi-screens and radar scanners.

"One hundred and three—one hundred and three point five—"

Was it imagination, or did the speaker's voice crack slightly?

"Nearly there now—up—up—just a little more—"

The captain didn't know how many others in the cabin might be praying with him. Certainly, he himself prayed. Oblivious to blood running down his torn fingers.

"One hundred and—" A pause that might have been all eternity. Then a loud, ringing shout of triumph. "It clicked! It's opened! There's a gap all round the top—about an eighth of an inch wide! I can see it!"

Tension went down with a series of shuddering sighs.

"Anti-climax!" breathed the captain. "And a very grateful one, as well!"

Imbued with new confidence, the voice in the amplifier went on "We propose to prise off the top. The thing's still transmitting—"



The captain restrained an almost irresistible impulse to urge them to take it easy. "They'll take it easily, all right," he thought.

"Inserting small chisel—levering now—top section's giving nicely to slight pressure—yes, it's off!" The words were accompanied by a slight, metallic clank. An intake of breath. "Well—I've never seen anything like this before! Why—it's made all in one piece! There's not a bolt or a screw or a rivet or—or anything! The transmitter's lifted out in one piece—underneath is a roll of—of—well, I don't know—like a bundle of metallic foil in sheets!" Another pause. "Why—there's writing on it! In English, too! It—it's so tiny I can hardly see—"

"At least," said the captain, with more of his old manner, "it hasn't blown up. That's all I care about. No sign of anything suspicious, I suppose?"

"No, sir. Now we've taken out the transmitter and the—the manuscript—the casing's quite empty."

"Good. I won't say at the moment how infernally grateful we are to you three men. I'll put it into better words when you get back. Come in as soon as you can—and thanks again!"

## VIII

Limp with exhaustion and relief, the captain returned to his cabin, assured finally of a good night's sleep. He had scarcely climbed beneath the covers when the buzzer sounded, every vibration of the metal tongue spelling urgency.

"Yes?"

It was the Officer of the Watch. "Captain—those men in the lifeboat—"

"Well, what about them?"

"They've been reading the first sheets of that writing from the casket! It's a warning from some Inter-Planetary Exploration Bureau men marooned between here and Arcturus—"

The captain's tired brain whirled. Inter-X? He'd heard about them, of course—squads with the unpleasant job of being first men so step on unexplored worlds; cool, daredevil crews who formed the vanguard among mankind's expanding frontiers. He didn't know about them working towards Arcturus, though. Between the Empress of Cassiopeia's present position and that bright star stretched a wilderness of space so great that one scheme after another had come to naught in the past hundred years. Before that they never even dreamt about trying.

"A warning?" he said, sharply, pulling himself together. "What sort of warning?"

"It's happened at last!" said the Officer of the Watch, with grim satisfaction. "You remember, sir, how many times headquarters have sent routine instructions about the possibility of other species achieving space flight. According to this manuscript some of them have done it! Ships are coming in from well beyond our part of the system. In fact, the whole galaxy's probably in serious trouble!"



# 1

## *Beyond the artificial sky*

**L**IKE incredibly tiny motes in the vastness of all space, nine other caskets similar to that strange apparatus located by the Empress of Cassiopeia's lifeboat float serenely into eternity. At least, so far as Man's knowledge goes only one has been retrieved. Admittedly, some may have fallen to swift destruction in flaming stars greater than Earth's sun; others may lie unheeded in the swamps of worlds where intelligent creatures will not evolve for many millions of years. Yet so immense are distances between planetary systems that probably all of them still sail through frigid, empty darkness with their initial velocity of 1,000 miles an hour, transmitting their monotonous S O S across ether-wastes where there is none to hear.

One of these fantastic eggs, however, had been intercepted and "hatched"—thereby fulfilling its maker's purpose. Inscriptions on metal foil within the peculiar casing told a story of such dreadful portent for all mankind that it was read to the accompaniment of bulging eyes and quick, shallow breathing. The manuscript began:

TO WHOM IT MAY CONCERN. IT IS VITALLY IMPORTANT THAT THE CONTENTS OF THIS

MESSAGE BE TRANSMITTED IMMEDIATELY TO:  
SECTION INTER-X, I.S.6, POLITICAL DEPART-  
MENT HEADQUARTERS, ZETA SAGGITARIUS.

Classification: HIGHEST SECRECY.

Originator: Inter-Planetary Exploration Bureau  
detachment No. 771/3/E (Arcturus). Inter-X parent  
ship No. 2213.

Region of origin: Arcturus sector, Zone 56, eleva-  
tion 44, bearing 94 degrees.

MESSAGE BEGINS: Extra-galactical creatures of  
high intelligence and scientific achievement far in  
advance of our own have been operating in this  
area. Believed identifiable with beings previously  
referred to as the "Great Ones." (See Records Depart-  
ment files: Fellik/Folk-lore/227/3/Mankton and Antro  
781/1/Evolution.) Scene of operations has now moved  
to unspecified location. Suggest all observation stations  
concentrate upon regions within 8.75 parsecs of Arc-  
turus, veering towards Procyon. This detachment now  
marooned on deserted planetoid travelling on exact line  
as Region of Origin (see above). Sufficient food, water  
and air for approximately three months. Request speedy  
rescue be arranged. MESSAGE ENDS.

For the benefit of anybody who picks up one of  
our ingenious little "eggs" (went on the manuscript)  
this is copy No.—EIGHT—of the ten we are launching  
on their journeys. We pray that one of them—some-  
where—will "stick," thereby achieving the double pur-  
pose of giving warning concerning the peril that hangs  
over our part of the universe and at the same time  
saving our own skins. In a small way we've done our  
best to gain a breathing space for mankind and its  
associated races. Whether it's any use, only the next  
year or so can tell.

There are quite a number of ironic factors about  
the situation. Mention of these Great Ones isn't by any  
means new. Folk stories handed down from incredible  
mists of time on a hundred worlds described fabulous



giants who once roamed their lands; mythology teems with references to mighty gods who ruled in awful ways.. Thor, for instance, and his counterpart, Vulcan, in the mythology of Earth—performing amazing feats of forging with iron and fire. They ought to have been present when with my own hands, after half-amused tutelage from beings I don't even pretend to understand, I fashioned a neutronium lens using the dwarf star as a furnace!

And nothing is more certain than that the Great Ones have been here before. Their remarkable visits definitely live in distorted, dusty fables, although we of Inter-X have come closer to them than that. Mankton, for instance—their strange and terrible oracle whom we destroyed on Fellik—and the grotesque menageries of Antro, whence their semi-shapeless servants fired spores from the Wells of Life to populate our galaxy. Despite this disturbing accumulation of evidence, headquarters seem to have done nothing save file the reports away and forget them.

Ironical factor No. 2—which we're naturally anxious to dispel as soon as possible—is that our superior officers aboard Inter-X Space Ship No. 2213 (somebody may have heard about her under the crew's nickname of "Old Growler") have already given us up for dead.

I'm not quite clear how we got into this business in the first place. Old Growler steadily plugged her way homewards after an expedition that had lasted more than eighteen months and we were all looking forward to seeing civilisation again and counting up our back pay. Not that we were idle during the trip, of course; headquarters has a way of seeing that all technical staff earn their salt, so that specimens collected from assorted worlds en route find their way to the desks for examination and classification.

I was conscientiously poring over some rather remarkable multi-cellular stem formations (botany is my profession) when the door opened to let young

Hartnell appear. He didn't knock, of course; he never does. In a rather absent-minded way he waved a hand and walked straight across to the most comfortable chair. I looked at him meaningly, but he took no notice, so I shrugged and went on with my work.

Next thing I knew he was rummaging through the locker drawers. "Got any cigarettes, Pop?"

"On the bench," I said, coldly. "Help yourself."

"Thanks. I'll take half-a-dozen. "I'm right out. Got a light?"

"Here you are. Anything else I can find for you?"

"No, I don't think so." Sarcasm is always wasted on Hartnell. He didn't even rise to the bait when I said "To what do I owe the pleasure of this visit?"

He flopped into the chair and brooded. I peered into the microscope again.

At last he said "I've been in the Astronomy Section this morning—"

I looked up. "Had another row with old Grubersohn?" I asked, interestedly.

"No, no, nothing like that. They've—well, they've seen something—something that isn't marked on the charts—"

I grunted. "No wonder Grubersohn didn't throw you out. I suppose he's rubbing his hands all the time and crowing about what a clever chap he is!"

I didn't really intend to be spiteful, but Grubersohn's strutting pomposity always makes my hackles rise.

"You know the thing they call the Coalsack?" asked Hartnell.

Astronomy isn't my strong point, yet I remembered once looking at the dark, mysterious patch like a black scar across the shimmering Milky Way not far from that star cluster known as the Southern Cross. Only theories explain its presence. Some think a screen of impenetrable cosmic dust shuts off light from stars across gigantic areas of space; others believe a titanic disaster wiped out all twinkling bodies there, leaving a square-



shaped "window" upon empty depths of space. But no one really knows why, in all other parts of the firmament, nebulae and island galaxies should stretch without end whereas in this enormous gap there is—nothing.

"The Coalsack?" inquired a voice from the doorway. It was Tubby Goss, the plump photographer who usually makes up our landing squad when sections of a new planet need to be explored. "Why?" he asked, brightly. "Somebody emptied it?"

I sighed, well knowing further work to be impossible now I was landed with both of them. "You want a cigarette, too?"

He seemed taken aback, but didn't miss the opportunity. "Well, Pop, seeing you ask me—very civil of you—" I jerked my head towards Hartnell. "See if you can make him say what's on his mind. He's in one of his moods again—"

"Moods?" said Hartnell, indignantly. "Nonsense! I'm telling you, aren't I? They've found another Coalsack out towards Arcturus—one that wasn't there a couple of months ago!"

We chewed this over in silence. Tubby summed up the reaction. "So what?"

"So it might be very important—that's what!" He got up to pace the room in agitation, whereupon Tubby promptly pinched the chair. "Old Grubersohn let me look into the telescopic visor-screen." He shivered. "I tell you, Pop, it gave me the creeps! Just a great, dark, round patch—cutting off starlight like a curved, black scimitar." He stared me straight in the eye. "Where did it come from—in the last two months?"

I shivered, too. I don't like things that can't be explained.

Tubby waved a hand airily. "Patch of dust, maybe—drifting—"

"Then why didn't they see it before it drifted where it is now?" demanded Hartnell, hotly. He seemed to be taking possession of this new Coalsack for his own

and resented derogatory remarks. "Come and ask Grubersohn if you don't believe me!" He walked to the door in a challenging manner.

I exchanged glances with Tubby and shrugged. "What can we lose?"

It must have been his new discovery that had put Grubersohn in a good humour. At least, he did no more than raise his eyebrows when we sidled into the Astronomy Section, pretending we'd called to see Jenkins (one of the photography assistants) and asked his permission with suitable humility.

He pursed his lips as though making a decision of utmost gravity, then relaxed and smiled graciously upon us. At least, it was a smile so far as Grubersohn was concerned; the corners of his rap-trap mouth eased themselves slightly at the corners.

He had a certain look in his eye, however. Teetering back on his heels, hands clasped behind him, he said "Certainly you may speak to Mr. Jenkins. I do not imagine for one moment, however, that such is the only reason for your visit. It will not have escaped the notice of three such knowledgeable young gentlemen as yourselves that my department has recently made a discovery of considerable importance." He spread a plump, white hand towards the visi-screen. "I refer, of course, to the new dark nebula of Arcturus—"

"So that's what it is," said Tubby.

Grubersohn glared. "You will kindly not refer to such an unusual phenomenon in that off-handed manner. The implication behind such a discovery is of highest importance. I shall be extremely disappointed if handsome commendation is not forthcoming from highest quarters." He breathed fiercely down hairy nostrils. "There is the screen. See how this expanse of blackness—almost circular and eighty thousand miles at fullest diameter—obscures stars in a section of space well-charted over the centuries. Put your eyes to the spectro-scope. See the lack of reaction to radar impulses.



Observe its movement at a rate of approximately seven hundred miles an hour in the direction of Procyon. Regard all these things, I tell you, and marvel at the achievements of well-directed team-work!"

I regarded them and not only marvelled—I shuddered again and felt my flesh creep. What precisely was the nature of this black sore eating its way across the firmament? Whence did it come? More important—where was it going?

Young Hartnell stared at the screen. "Quite a small affair compared with the original Coalsack," he said. Grubersohn, overhearing in the background, snorted. "Pity we can't find its depth. Is it a cloud of opaque particles—or a dark planet?" He looked round. "Here, young Jenkins, you can tell us about this."

Immediately forgetting his sulks, Grubersohn materialised before us. "No doubt I can speak more authoritatively than Mr. Jenkins," he said, smoothly. "One needs to be in possession of the entire picture before pronouncing upon such important subjects." He coughed slightly. "If this materialisation is, indeed, a planet, the density is exceptionally tenuous. We have already ascertained as much by gravitational comparisons of its size. The present distance is little more than ninety million miles. In our approach we have detected a certain curvature of orbit, yet because of the entire absence of reflected light no accurate observations can be taken. The Scientific Panel, I believe, are considering despatch of a scout vessel for closer examination. You gentlemen might be interested in this, no doubt, considering previous expeditions for which you have volunteered—"

"Oh, no!" I said, in quick alarm. "Not any more!"

I glanced at Hartnell. He and Grubersohn were regarding one another in a way I didn't like at all. The Chief Astronomer's lips bore the faintest hint of a sneer.

"No," I said, again. "We've got into enough trouble already on trips like that."

"Of course," said Hartnell, thoughtfully, "we wouldn't need to land. In fact, I don't suppose there'd be anything for us to come down on except a cloud of coal dust—"

"Quite!" said Grubersohn. "There would be no danger—"

"We weren't thinking about the danger," growled Tubby. "As you know darned well!"

"I was!" I said, entirely without shame.

They took no notice.

"Might be an interesting trip," remarked Hartnell. "Something to break the monotony. Round the Little Coalsack and back in time for tea—"

"We'll have to put in a lot of persuasion with the controller," said Tubby. "Since those last two voyages our names have been mud."

It was the most cheering sentence I'd heard since Grubersohn maliciously forced the conversation into such unpleasant channels. Almost brightly, I said "There's that, of course—"

I still don't know why I was fool enough to let Hartnell put our names forward. It's an even bigger mystery why they selected us to make the flight.



# 2

***“...something has  
taken control!”***

THE great launching bays in Old Growler's sleek, shining belly swung open noiselessly, retractor arms pushed our scout vessel free with a smooth, powerful impulse which set the little ship floating clear of the parent vessel. In almost parallel courses and at the same speed they travelled for a while, until drift separated them sufficiently for the scout to get away under her own power.

With young Hartnell enjoying himself at the controls—he once took a pilot's course and nothing pleases him more than playing with an elaborate mechanical toy—we set off independently, bound for the sinister black patch that gnawed incessantly at the star-strewn firmament, covering more and more tiny discs of far-off blazing stars as we came nearer the area it shaded in such evil fashion.

Initial speed, lent by Old Growler herself, sufficed to launch us vigorously on the journey, and Hartnell's manoeuvrings were confined to braking operations, combined with short spurts from the steering engines. His face, illuminated uncannily by the observation screen's

greenish light, assumed a mask of concentration. "See that star?" he said.

Far away, above the curving rim of blackness, shone a speck of light more brilliant than any other of the thousand suns which sparkled against the dark background of space.

"That's Arcturus," he went on. "I'm taking it as a guide. This Coalsack affair ought to come between ourselves and that star in about thirty-five minutes."

They were thirty-five of the longest minutes I've ever known. Gradually it seemed that a monstrous shadow cast itself progressively across the star-studded firmament, looming greater and ever greater until at last a huge ball of intense black, through which no shining pinpoints gleamed, towered threateningly over the little ship.

"What are you trying to do?" I asked, in a subdued voice. "Dive right through it?"

He took a hand from the controls and waved it airily, making my heart miss a beat when the ship swung slightly. "Why not? Might as well know what's inside."

"But—but—we're supposed only to fly round it! You know very well that's all the briefing officer said we should do!"

"Seems a waste of time and effort not to make a proper job, don't you think, Pop?" He actually grinned in my face.

He didn't grin, though, when all the engines suddenly went dead.

"What in Betelguese have you done now?" demanded Tubby.

"I haven't done anything," said Hartnell, puzzled. "They just died on us for no reason."

I looked on the visi-screen at the great, non-reflecting mass ahead of us, swiftly eating up the sparking universe. "You'd better do something quickly," I said, with a good deal more calmness than I felt, "or



we'll go right through the other side and not be able to stop till we hit Arcturus."

We helped him check the test-meters. According to every one of them nothing amiss had occurred. I stared at the rows of dials—like mocking, blind eyes gazing back at us—and felt really afraid for the first time. "What's it mean?" I croaked. "There's nothing wrong at all, as far as I can see—"

"They still don't fire, do they?" demanded Hartnell, in a harsh voice.

Last stars disappeared behind that expanding rim of darkness. No visible substance now lay before us—only a gloom deeper than that of the bottomless pit, an impenetrable blackness beside which the darkness of space seemed no more than twilight.

Stifling my growing panic, I said "Better let me tell 'em back at Old Growler—"

Somehow I anticipated opposition, but none came. I actually had my finger on the radio switch when starboard tubes suddenly operated momentarily, flinging me to the far side of the cabin and almost dragging Hartnell from the pilot's seat. Tubby's nose hit the bulkhead with a force that set his eyes watering copiously and brought language so lurid I was glad the controller couldn't hear.

Hardly had we pulled ourselves upright again when port-side jets blasted, sending us staggering in the opposite direction.

"Stuttering Sirius!" yelled Tubby. "What do you think you're playing at?"

Starboard engines fired, rattling us about the cabin like peas in a pod.

"Shut 'em off!" I shouted. "Either shut 'em off or give us a chance to reach the safety hammocks—"

Tubby dived there first and snapped home the safety catch to the accompaniment of highly-imaginative profanity directed towards Hartnell's ancestors. His nose was red and swelling visibly.

After a time he calmed down and said, meaningly "Some people might do well not to boast so much about how clever they are as pilots—"

I didn't say anything, being too busy getting my breath back. I saw young Hartnell's face, though, petrified into a mask of incredulous amazement.

"Shut up!" he said, through his teeth. "Shut up—and look!"

He lifted his hands from the controls, as though to show beyond doubt that no deception existed. And as we watched there came first a spurt of maybe half a second's duration from starboard tubes. A pause. Ten seconds later the port engines fired momentarily.

Then he turned to reveal features clammy with sweat and spoke a sentence of such dreadful import that my senses reeled.

"Something's got hold of the ship!"

My eyes bulged out with incredulity, while beads of cold terror burst from every pore. When I could speak, I said "What . . . do . . . you . . . mean?"

"What I say!" he snapped, fingers darting at control buttons like striking snakes. "Those engines are firing just right to keep us on a dead-straight line! Every time I try to swing her—"

He demonstrated by touching off the last emergency rockets—chemical contrivances for use if steering tubes fail. Next second came yet another sickening lurch as the starboard engines briefly blasted—despite ignition circuits being cut!—followed by corrective action from port motors. Effects of the emergency rockets had been promptly and efficiently offset.

"If we could only see—" complained Tubby.

Aligned cross-hairs on the navigation screen shone like threads of gossamer against that expanse of deadly blackness. By this time we had no means of knowing towards which section of the Coalsack our nose pointed. Somebody—or, still worse, some thing—had taken control out of our hands!



"I'd better call 'em back at the ship." I wished desperately for the power to raise my voice above a hoarse whisper, but fright clogged my throat. Breath wouldn't come properly and there was an icy hollow in the pit of my stomach. My hands trembled so much that I could scarcely turn the switches.

"Look!" said Hartnell. "Look at the meters! They've gone mad!"

Dial-needles swung rapidly back and forth with utter lack of meaning—not rhythmically together, as though centrifugal force might be affecting them by reason of the ship's motion, but in a crazy chorus of disharmony. The artificial horizon continually looped the loop.

I pulled myself together, trying to shake off the aura of horror which hung low and menacing in the cabin. "Scout Ship No. 46C calling base—calling base—"

They came back promptly. "Controller here."

"I didn't see the use of making a long-winded and formal report. "Out of control," I said, succinctly, not mincing matters. "Unknown influence appears to be pulling us into cloud patch—"

He took it so calmly that for one cold second I wondered whether they might have known very well this would happen—even before we set out. Then I remembered how nothing has so far been known to shake the equanimity of controllers—men who are reputed among space crews to possess tensile-alloy strands instead of nerves and freezing fluid instead of blood. I told him about the engines and the meters, but he seemed more interested in the brief descriptive phrase I'd used. "Cloud patch?"

"That's what it looks like from here. Anyway, we'll know soon—when we hit it!"

"Wait." I could tell by his tone he considered the remark unnecessarily frivolous. That curt "Wait," incidentally, is the routine method by which controllers

tell crews to stand by while they seek further instructions.

Absolute blackness still showed on all screens—direct visual, ultra-violet and electronic. Save for tiny indicator lights twinkling in the lower corner of each frame they might have been out of action. We possessed no more emergency rockets to fire in vain attempts to free the ship from that mysterious, intangible grip. Accuracy of direction seemed proved by the fact that the steering engines hadn't fired again. Whoever operated that uncanny mastery had got us exactly where they wanted us.

"We have checked your speed by radar observation," announced the controller. "You are approaching too fast—"

I choked with mingled chagrin and exasperation. "Haven't I already said we can't persuade the engines to fire?"

He ignored this. "Verify by data that phenomenon consists of opaque cloud," he ordered, stuffily

There crept over me a blank, amazed impression that he didn't believe what I'd told him—either about the engines or the horrifying, invisible snare in which we were trapped.

"Look here!" I said, in terms quite out of keeping with the respectful reporting routine crews are expected to use with controllers. "It's true! We don't know what's caught us—but we can't slow down and we can't steer! Do you understand? If we—"

"Stand down from the microphone!" he ordered, coldly. "Your conduct will be reported to higher authority for disciplinary action. Inform scout vessel's captain he is to take over commentary—"

A little pulse started beating just above the ear. I felt a wave of colour gradually flush up to my eyebrows and my face twitched with fury.

Hartnell actually winked. "Cheer up, Pop! Into every life some rain must fall—"

He'd hit the right note in the nick of time. Another



moment and I'd have exploded in a way that would only have made matters worse. The blood drained from my enraged, congested features, and I said, rather sheepishly "No reason why I should have a cloudburst in mine!"

Tubby's expression depicted loyal indignation. Hartnell didn't intend to stand any nonsense from the controller, either. "Quite right what he said! We're being dragged into this coal-hole affair—and we can't do a thing about it!"

They apparently decided we were incorrigible—or else someone with more understanding of human nature told the controller not to be so confoundedly formal.

"Radar screen shows your position dangerously near outer surface—"

"We could have told you that!" said Hartnell, rudely.

"Report whether area is likely to possess definite physical properties or whether phenomenon fits theoretical description of 'space warp'."

During our time we've come across cosmic maelstroms and other unpleasant manifestations in galactical wildernesses—but never the legendary "space warp," where according to old travellers' stories trapped ships plunge completely beyond known dimensions. I stared again at the dead-black screen and wished he hadn't mentioned this matter.

"No data whatever," said Hartnell. His eyes held a strange expression I'd never seen before, and his lean, brown face might have been carved from granite. There's only one thing—"

The brief pause seemed to last through all eternity. "Make your report," said the controller, unemotionally.

"The three of us in this ship have had a pretty good run together through the years. We've been in tight corners before and managed to get out of them. We'll do our best to get out of this one—only don't bother sending any rescue squads till we can let you know more about the situation. No sense in throwing lives away

needlessly—”

He put into words what all of us realised very well in our hearts.

Another voice—obviously of someone in special authority who had been listening—cut in. “Good luck!” it said.

That was all. Yet we knew instinctively what they had decided. Unless they heard from us within reasonable time, Old Growler would content herself by examining the eighty-thousand mile patch of dark mystery from a distance, resuming the journey homewards—minus three of her company.

“Thanks,” replied Hartnell. “We’ll call again with definite information when—”

Then we “hit.” The Little Coalsack was gaseous, all right. In fact, none of us could have known that the ship entered the vast accumulation of inky vapour save for vague flickerings caused by electronic friction against the ship’s nose and reflected in the visi-screen. Radio communication ceased instantly and completely; all the meter-needles stopped their senseless wavering and slammed themselves over to “Zero.” Tiny purple sparks, built up inside the vessel by outside potentials, crept along all metal edges.

Totally unaware of our speed—the mysterious control had certainly applied a definite amount of braking, in addition to directional force—we possessed no means of knowing through what thickness of cloud we passed. I still don’t like recalling the horrific shock when that visi-screen lit up again—not vividly, because the radiance by no means equalled normal daylight—and we saw what lay suspended in a great, spherical vault of dim opalescence.



# 3

## *Triangle "on the beam"*

TO all intents and purposes we might have passed right through that bizarre, lightless barrier and emerged into some place bounded by a faintly lustrous sky. In reality, of course, the great, spherical thing floating across the universe was hollow—a "balloon" with a gaseous envelope, dead black outside but mysteriously lit on the interior.

Yet other breath-taking factors entered into this manifestation. Centrally suspended inside the eighty-thousand mile globe of vapour and rotated by some unknown force swung three reddish-brown planetoids linked by purplish beams forming a fantastic triangle.

"Now what in Betelguese is that?" I demanded.

Hartnell took no notice. "The meters! Look—they're working again!"

Tubby, quite understandably, said nothing.

"Hold tight!" yelled Hartnell. "I'm going to swing her round! We don't want to hit that gadget—"

Apparently satisfied with its work, the uncanny control which had hauled us inside the "coalsack" vanished. We had entered at a tangent—could it be that someone else also didn't care to have the scout ship

collide with the "gadget" hanging there?—and it wasn't difficult to make a couple of circular braking turns.

"Just like a goldfish in a bowl!" said Hartnell, bitterly. "Wonder what'd happen if I tried to shoot outside again—"

"Don't!" I said, hurriedly. "The beam might not treat us so gently next time."

Tubby made sounds of disgust. "Anybody who wants to stay in here is welcome! If the engines are working again I'm ready to leave any time!" He paused, still staring. "But what is it? Look at those purple rods—you could almost swear they're holding the three chunks of rock in their orbits."

"If you ask me," said Hartnell, slowly, "they do!"

For some reason I've never got the hang of calculating deflection speeds and directions. Admittedly, the triangle appeared to rotate leisurely, but how much of this apparent motion was inherent and how much due to our own speed I couldn't say.

I left the others to work out navigational and observational details while I took a closer look through the telescopic screens. Irregularities in the rough, brown rock showed up with startling clearness, yet no sign of vegetation was detectable. At a guess, each planetoid measured about two thousand miles in diameter—approximately the size of Earth's moon—and the three were strung equi-distant at about sixty or seventy thousand. Those tenuous, purplish beams sprang from either end of a long, low, humped building—black against the reddish rock, like some huge slug lying in a pool of blood—erected at what might be called the "north pole" of each globe. Otherwise there was nothing—no particularly prominent conformation of terrain, no growing plants, no streams, no living thing perched upon that disheartening, desolate surface. Surrounding sky reflected itself empty and featureless as a fog-bank.

But just then, turning the screen control slowly and carefully to make certain nothing of importance escaped



my scrutiny, I saw it! Our ship in its orbit brought my line of vision creeping slowly beyond the rounded top of a building. About two miles farther on lay the denitely-recognisable outlines of a space lifeboat!

The others looked round from their instruments with incredulous expressions. "You mean somebody's got here before us?" demanded Hartnell, outrageously. "They've—they've no right—"

I jerked a thumb towards the screen. "You can see the boat. I won't guarantee whether anybody's down there with it!"

"But somebody must have flown it in!"

"A lifeboat!" breathed Tubby. "Either of you recognise what type? I mean, the sort of ship it might have come from?"

"Only passenger liners carry this particular model as a rule—"

Hartnell rubbed his chin doubtfully. "I suppose it really exists? Not a mirage or—or hallucination?"

We stared. "Why should it be?"

"Any creatures clever enough to pull our ship inside this place—whatever it is—and then leave us to our own devices might provide an imitation lifeboat as—er—bait—"

Bait? I felt my scalp crawling slowly. The idea seemed devilishly plausible.

"Nothing's happened since we came through that black barrier, has it?" he went on, grimly. "Why get us inside and then do nothing else?"

I shrugged. "Maybe they know we'll have to land sooner or later and they want us to drop in a position that suits 'em." On the screen that third planetoid slowly fell away beneath us. I wondered whether, after all, we might not try Hartnell's idea and charge the barrier from inside.

"For my part," said Tubby, slowly, "I'd sooner take their hint and land. I'm not the right build to be slung round the cabin like I was before." He touched

his sore nose gingerly.

"That's right," agreed Hartnell, blandly. "No reason to come all this way and then clear off without seeing everything."

"Perhaps," I said, ominously, "we'll see a bit too much!"

They looked at me curiously. "You psychic or something, Pop?"

We weren't to know until much later how right I was.

The planetoid came round again with surprising quickness. Hartnell, at the control desk once more, swung the ship into position for landing. I was glad to see him paying more attention to his work for once. Truth to tell, he made an excellent job, lowering the vessel into nothingness with strong but smooth deceleration so that it seemed to wait, poised, until a rocky platform slid underneath at the psychological moment for her descender-struts to rest upon. She settled into the heart of a great, fiery flower and made contact with scarcely a jar. The flaming blossom faded. We had arrived. In the dim, horrible light we could see the lifeboat's fuselage glinting faintly little more than a mile distant.

Hartnell gave a sigh of satisfaction. "Well, we made it!"

There was still a good deal to do, however—air tests, gravity checks and the rest of the routine. We found precious little air but a reasonably amount of gravity. Hartnell spoke wisely of centrifugal force generated by the way in which that triangle of globes rotated. He was probably right.

"Better get the atmosphere suits on," I suggested, "if we're going visiting."

Climbing down to the rock, we stood looking at the purple beams striking upwards and outwards above our heads like great bars of reddish-blue steel, although I could have sworn that the dully-glowing, pearl-gray



cloud which formed that strange artificial sky—now around us like a huge, milky, inverted basin—was visible through their substance. The remaining two planetoids hung like brownish moons in this unholy firmament.

No sound reached our ears across the desolate landscape except boots crunching the loose scree—not even a dull, half-heard drone of machinery from the black, humped buildings which presumably maintained the beams in position. No movement was noticeable within our range of vision, although it extended so far that the curvature of the small world's horizon was easily visible.

Hartnell craned his neck to stare again at the beams. "Nice piece of cosmic engineering, eh, Pop?"

"I'd be happier if I knew what it was all in aid of."

As we neared the lifeboat it became evident that she had landed heavily. Two steering fins at the foot of the bright, cigar-shaped fuselage were badly crumpled.

Hartnell eyed this damage regretfully and "tut-tutted" in a pained manner, for all the world like a professional pilot regretting an amateur's slipshod work.

"Not so bad as all that," I said. "Anyhow, he got down in one piece—"

I bit my tongue so painfully with sudden surprise and chagrin that I couldn't speak for a few minutes. The ship wasn't "bait," after all. And, as previously remarked, if she'd been flown in there must be survivors!

"One, at least," said Hartnell, with a neat piece of mind-reading. "Wonder where he's hiding—"

"In the ship, if he's got any sense."

Then Tubby grabbed my arm so sharply that my tongue nearly suffered again. "Look! Up at that visiport!"

"What? I don't see anything—"

Hartnell was standing there, his lower jaw dropping ludicrously. I nudged him with my elbow. "Did you?"

"I—I—" His jaw wobbled a moment longer before words came and at the same moment he turned bulging eyes towards me. "Yes!"

The round, alloy-rimmed port-hole blankly reflected that horrible, featureless sky.

"What was it?" I demanded, with rising alarm. "What was it?"

They both stared expectantly for a moment longer, then set off at a clumsy run—hampered as they were by the suits—to cover the remaining hundred yards between us and the ship.

I followed them, panting and cursing. What was it the two young fools had seen but refused to tell me about?

They were well ahead of me climbing the ladder towards the lower entry port, and I still struggled with narrow rungs halfway up when pressure hissed in the air-lock. "Wait for me!" I called.

Arriving beside them panting while the outer door closed and the second stage of the air-lock operated, I added "Why all the rush? Whatever's in there won't go away—"

They grinned so broadly that my heart sank. "I don't suppose so," said Hartnell. Whereupon they looked at one another and laughed aloud.

A green light over the door announced the "all clear" for entering central sections of the ship. They bounced out of the air-lock like children rushing into a room on Christmas morning. I followed more slowly. I speeded up, though, on catching a glimpse over their shoulders of what waited in the main cabin.

Two good-looking but thoroughly frightened girls—one a blonde, the other a redhead—stood clasping each other, not knowing whether to be relieved or alarmed. Each wore the neat, tight-fitting uniform of space-ship stewardesses, and in happier circumstances I'd have been quite ready to agree that they were definite ornaments to their profession. The tall blonde wore her heavy,



golden hair in close coils; the redhead—slightly shorter, but with more cleanly-chiselled features which in happier moments might have borne quite a pert and saucy look—boasted a close-cut style that looked like a helmet of burnished copper.

“Well, hello!” said young Hartnell, admiringly. I half expected him to follow this remark with a long, low whistle, but either he’d remembered his manners for once or something in the girls’ tragic, haunted expressions dissuaded him. “Glad to see us?”

“Is—is this what you noticed through the port-hole?” I stuttered. No wonder they hurried!

Tubby started to speak, then closed his mouth hurriedly. We all realised in the same moment that it was no occasion for light-hearted badinage. These girls had obviously undergone a prolonged and highly-unnerving experience, because stewardesses aren’t chosen from the easily-hysterical types. I don’t suppose, though, that the selection board anticipated any candidate for the job having to face this sort of experience. Fear swam in their wide eyes, and each pair of red lips trembled slightly. For that matter, I didn’t feel so very courageous myself.

“Not much use just standing around gazing at one another, is it?” asked Hartnell, cheerfully. “Although I won’t deny that the scenery at the moment would take a lot of beating—”

The blonde girl loosed her companion’s hand and took a hesitant step forward. “So—so they got you, after all! We—we hoped—they wouldn’t—”

The words dropped one by one into a little pool of horror. I noticed she had to force herself to speak, as though her throat might have become stiff through choking back fear for a long time.

The cold prickles crept once more along my spine. They? What was it one of us had said about the life-boat serving as bait?

Hartnell slipped back the helmet of his atmosphere

suit and drew a deep breath. "That's better. Plenty of air in this ship, by the way?"

The red-head spoke for the first time. "Oh, yes—food and water, too." Her tone indicated, rather bitterly, that there were other important things in life besides being able to breathe, eat and drink. Freedom, perhaps?

"How long have you been here?" I asked. "What ship did you come from? Who's responsible for the fantastic set-up—" I waved a hand to indicate exactly what I meant—"out there?"

Hartnell swung his long legs across a chair and laughed. "One thing at once, Pop. Let's get acquainted first."

At last both girls seemed to be emerging from the grip of that unspeakable anxiety. The blonde's name, apparently, was Valerie Collins, the red-head's Louise Southam. They began to move about the cabin, arranging chairs and bringing out flasks of hot coffee. All the time they kept glancing uneasily towards a door in the left-hand bulkhead.

Tubby leaned back in his chair and sipped luxuriously. "The touch of a woman's hand about the place makes matters cosier, doesn't it?"

Valerie Collins managed to smile. "Won't they allow stewardesses in your ship? Funny sort of craft that would be!"

"Not aboard Inter-X vessels," I said, grimly. "The worlds they drop us on are no places for girls."

"Inter-X?" They repeated the phrase in chorus and with strange inflection, regarding each other curiously. Then they turned to us again with expressions of new hope. "So they didn't actually catch you, after all! You must have come here deliberately!" I sensed undertones of dawning optimism mingled with misgiving. What was it all about? Who were "they?"

"About half and half," said Hartnell, grinning. "We started off all right, but towards the end of the job was taken out of our hands!"

"Yet you wanted to come here?"



He had to think this over. "I suppose so—"

Louise swept back an auburn strand that fell rebelliously over her white forehead and at the same time made a gesture of despair. "Why—for heavens sake?" She turned upon me a pair of eyes like hazel-hued search-lights.

I shrugged. "It's our job to poke our noses in out-of-the-way places—"

Tubby grinned. "And there haven't been many more out-of-the-way than this! We often wonder ourselves whether we're in our right minds—but there it is!"

"And now," said Hartnell, "tell us how you two got here."

I leaned forward to put my coffee cup back and immediately froze there with one arm still stretched across the table edge. Everyone must have noticed, for conversation died instantly and that peculiar tension strained itself through the atmosphere again like piano wire. Obviously, the reason must have been observed also. In a voice I hardly recognised as my own, I said "Who's the other cup for?" Six had originally been set upon the ornamental metal tray. Only five were needed.

The two girls, sitting bright-eyed with fear, did not speak. I could have sworn that danger walked outside the cabin.

"Oh," said Hartnell, genially. "I can tell you that! It's for the fellow hiding behind the door!"

Now how in Procyon did he know?

In a louder voice, he called "Don't be bashful, my friend! Come and join us!"

Hartnell always tells me one of my weaknesses is an ability to see the other fellow's point of view too easily. It wasn't difficult, though, for anyone to imagine the thoughts passing through that man's mind when the verbal bombshell dropped. He had three possible lines of action (i) to pretend he wasn't there and tiptoe away to hide elsewhere (ii) to slink inside reddened to the

ears with embarrassment (iii) to slam open the door and try to carry off the situation with bluster. Our chap chose the last-named technique.

He stamped his way across the cabin to stand confronting us with clenched fists and breathing hard through wide-flared nostrils—a great, muscular hulk of a man, swarthy and blue-black haired, who knitted heavy eyebrows in a ferocious scowl.

I wanted to leap up and ask him furiously what the hell he thought he was doing, but Hartnell continued to loll unperturbed in his chair and I took my cue from him.

“Who are you lot?” demanded the man. “What d’you want—skulking round here?”

“You’re just saying that to make conversation,” mocked young Hartnell. “You heard quite well who we are. More to the point is: who are you?”

“Don’t try getting funny! Sooner you realise who’s running affairs the better you’ll get on!” He glowered, dangerously.

I couldn’t stay silent any longer. “If you want to play rough don’t forget there are three of us!”

The man laughed contemptuously, showing strong, square, yellowish teeth. “It don’t matter if you’d got thirty-three!” He waved a hand. “I’m working for them—and they won’t frighten easy!” He glanced briefly towards Valerie Collins. “Give me some of that coffee! Look lively now!” I could tell by her expression she wished it were laced with alpha-strychnine. I wondered how much she and the other girl had had to put up with from this uncouth specimen.

He drank noisily and dropped the cup back on the tray with a clatter. “Oh, yes—they’ll back me up, all right!”

“They?” Again the trickle of icy water traced quick, shivery lines along my backbone. “Who?”

He guffawed. “You’ll learn!” Initial embarrassment of his unmasking quickly ebbed, leaving him ripe



for a spell of gloating. "Oh, yes—Marco de Brassey knows which side his bread's buttered!"

Hartnell still hadn't moved in the chair. "I take it that you're Marco de Brassey?"

The man nodded and snapped his teeth with a vicious little click. "That's right!" His eyes travelled with slow insolence from one to the other of our trio, coming to rest at Tubby. "How about you, fatty? You're not saying much—"

Tubby glared. "I'm thinking a lot, though!"

As a person of humanitarian conscience, I wondered whether to warn de Brassey that he tampered with something nearly as dangerous as nuclear fission. Hartnell was obviously biding his time, though, for tactical purposes, so I merely sat there and simmered.

"Which ship did you come from?" inquired Hartnell.

De Brassey stretched out a hairy, hamlike hand to grab a chair, settling himself at a distance which precluded any surprise jump. In any case, we couldn't jump far, encumbered as we were by the atmosphere suits. "Oh, an old tramp called the Argo Star. There was a bit of trouble—" He broke off to show his teeth in a deaths-head grin at the two girls. "Wasn't there?"

Louise spoke up for both of them. She spoke very curtly, too. "You should know!"

He related the story without remorse. Apparently, the Argo Star, scraping up cargoes here and there along the fringes of explored space—much farther out, indeed, than she had any right to go—chugged carefully along a three-month leg of her journey with a mixed load and a dozen passengers. Then, without warning and for no obvious reason, a starboard steering engine blew out.

"The whole stern part of the ship started to get hot," said de Brassey. "You could see radio-activity sparkling along the deck-plates. I didn't wait, I can tell you! I got in the lifeboat where these women

were. I slammed the air-lock and made the blonde take off!" He grinned more nastily than ever. "Didn't I?"

For the first time Valerie Collins showed an emotion other than fear. Her face became a pale oval of fury and her eyes chips of sapphire. "You beast!" she hissed. "There was time to get six passengers aboard—"

"That's a matter of opinion!" he said, loudly. Did he shout to subdue the girl's accusation—or to still the gnawings of conscience? "I say we were lucky to save our own skins—"

"You shut that air-lock in their faces!" said Louise, in a low voice. "I saw them—through a port-hole! It was horrible—horrible!" The accusation came in a whisper. "You're a murderer, Marco! A murderer—"

De Brassey bared his teeth again. "I noticed you two were in the lifeboat first—"

Valerie made a helpless little gesture and all the fire of indignation died from her eyes. "I suppose it's no good saying we were acting on orders—that I was rated as the emergency pilot—"

"You?" said Hartnell, in surprise. "You landed this lifeboat here?"

She nodded, and the corners of her lips twisted in a rueful smile. "Not very good, was it? I damaged a couple of steering fins—"

"Considering everything," admitted Hartnell, all memory of his previous condemnation gone, "you did very well to get down in one piece."

De Brassey laughed unpleasantly. "When you've finished throwing bouquets about you might like to hear the rest—"

We learned then something about the plight of inexperienced crews in space—the puzzlement and doubts concerning navigation; the impossibility of using specialised instrumental aids for charting paths between the stars; the feeling of helplessness and panic when a world towards which a ship is guided drifts farther and farther out of reach.



With growing doubts about fuel supplies, they had seen a black speck against the starry background and managed to recognise it as the nearest object to their ship. We had little difficulty in imagining with what dismay they found too late how this object consisted of opaque vapour instead of solid silicon upon which the ship might come to rest.

Yet from nearly two thousand miles' distance those powerful, numbing, intangible force-beams had reached out irresistibly to seize the little vessel and drag it inside that preposterous, gaseous "goldfish bowl" with its rotating triangle of red-brown worlds.

"So we got here," said de Brassey, "but that wasn't the half of it! They were waiting for us when we landed!"

I caught my breath. Once again that sinister pronoun—"they."

There was a small, tense pause.

"Come on, come on!" said Hartnell, harshly. "Don't keep us in suspense!"

He'd played into de Brassey's hands, of course. The man was toying with us, cat-and-mouse fashion.

"Oh, yes," he said, with aggravating slowness, "they were there, all right!"

Louise Southam shivered. "They're horrible—uncanny—"

De Brassey laughed, meaningly. "They're clever—really clever. As soon as I realised what the set-up was I knew the best thing to do—"

I couldn't keep quiet any longer. "Who are they, then?" I demanded. "Where are they from—and what's the idea of this weird arrangement?"

He came out with it at last, every word slicing at our raw nerves like broken glass. "They're the vanguard of their kind in this part of the universe. If the lay-out suits them they intend to take over!" He stood up and flexed his muscles. "Their ideas and machinery are thousands of years beyond anything we've got!

When it's time for the showdown there won't be any doubt which way matters will go. I've told you—I know which side my bread's buttered. I'm helping 'em any way I can—" He threw back his great head and bellowed with uneasy laughter. "I shouldn't wonder if I get an overlordship or something as a reward! Marco de Brassey, Overlord of Zenna II—how's that sound?"

A moment's shocked silence ensued.

"Pretty chronic," said young Hartnell, truthfully. "I'll believe this nonsense about the super-species or whatever they are when I see 'em."

De Brassey laughed again—a roar of sound containing no genuine amusement. "You won't have long to wait! They're on their land transports already! Come and have a look!"

The low, humped building from which those two purplish beams angled themselves into the sky bulked ominously against the artificial firmament. Two long, flat, enclosed cars—presumably on a type of caterpillar track—had emerged, moving smoothly and swiftly towards where the vessels rested.

"Taken 'em long enough to get started," grunted Tubby.

"You poor fool!" said de Brassey, savagely. "Don't you suppose they knew you'd go straight across and have a look at this ship? Why d'you think I stopped here with these two silly girls—except to find out exactly who you were and keep you here?"

We stared from the visi-port as though hypnotised. It was that same round window upon the outer world from which Louise and Valerie had observed our earlier approach. Now we, in turn, looked down to see mysterious and terrifying beings following in our footsteps.

De Brassey couldn't resist further gloating. Speaking over our shoulders while we watched the black, beetle-like cars coming nearer, he said, softly "They call themselves 'The Great Ones.' They've travelled



from beyond the big nebula in Andromeda—900,000 light years away! Think of that, now!”

I thought about it and feared for one long, dreadful second my brain was giving way beneath the realisation. Marco de Brassey might well be a renegade, traitor and lots of other unpleasant things, including a liar—but he could never have invented circumstances such as these.

Because we had heard of the Great Ones from Andromeda on two previous occasions. We had seen specimens of their handiwork which had survived countless milleniums. Now we were to come face to face with such fabulous creatures.

Oh, yes, we knew about the Great Ones, all right—and, knowing, I trembled.

# 4 *The great God of Calculus*

**F**AINT sounds of softly sliding metal reached our ears from below. The Great Ones had arrived.

Hartnell levered himself from the chair in which he reclined during the encounter with de Brassey and grinned at our little group. "Might as well show a bit of respect, I suppose—"

I looked at the girls. Their pale, attractive faces now formed frozen masks of terror. De Brassey's features reflected a fixed, vengeful smile. I don't know what my own expression betrayed, yet I admitted to feeling my hair stand on end while we waited. All the time a little nagging voice of sheer awe kept whispering coldly in my brain "Think what you might see . . . think that you might see . . ."

Enduring similar suspense, Tubby must have known what passed through my mind. "At least, Pop," he said, comfortingly, "they won't be as great as all that—otherwise they couldn't get in the door!"

Five pairs of eyes fixed themselves on the smooth metal entrance from the air-lock. Five pairs of lungs held their breath in expectation.



Thus, in dreadful silence, we waited.

The door was swung open quickly but without arrogance. There before us—crowded together in the air-lock—stood an assembly of the Great Ones.

Great in mind, knowledge and achievement they might well be—about that we should learn later—but they were most definitely not great in stature. Not only, as Tubby had hinted, did they find it easy enough to enter through a normal-sized door—two might well have done so at the same time, one standing on the other's shoulders.

And, again, the term "shoulders" was only figurative, for the large brain-case sloped gently down to a greyish, hide-covered body of almost fragile build, and from the point where, in human beings, arms joined the trunk there sprouted a series of short, black, sinewy tentacles. As they moved into the cabin, I saw how four powerful muscular stumps acted as legs, enabling them to progress in an upright position with a smooth, gliding motion far less clumsy than walking upon many-jointed limbs.

The most noticeable—and, indeed, alarming—feature of the Great Ones' physical make-up consisted of two large, glowing, purple eyes fronting the brain-case. I could have sworn their colour exactly matched the hue of those three peculiar beams which shone across the sky outside.

An insane desire to giggle swept over me as these fantastic dwarfs approached solemnly in line behind one who was indisputably their leader. Then I caught sight of a peculiar box affair which two in the rear of the procession lifted in their conjoined tentacles and placed on the centre table. It was the ultimate in paradox—an unknown device from some far-off galaxy additional absurdity forced me to smother a grin. Then I caught sight of some ornamental carving along the

sides of the peculiar cabinet and all laughter died from my soul.

In that same second, also, every doubt faded. These were the Great Ones from beyond Andromeda, all right! The carved design—there was nothing particularly outrageous or striking about it, save that the style remained unknown throughout explored systems—corresponded exactly to decorations upon the oracle, Mankton, whom we had destroyed on Fellik many years ago.

Two sharp intakes of breath showed that Hartnell and Tubby had also noticed this similarity. A darted, sideways glance showed them both staring with bulging eyes. De Brassey and the girls took no especial notice of the cabinet; therefore I deduced they had seen it before and that it represented no particularly lethal or terrifying apparatus, whatever the object's purpose might prove to be.

The Great One who had led his squad into the ship paused before us. In strict, methodical rotation, his purple eyes travelled from one to the other of us—examining, probing and inspecting. By the time he'd finished I felt limp and absolutely turned inside out. I didn't doubt that if he wished this creature could reconstruct a photographic representation accurate even to the number of hairs in each of our eyebrows. I felt just as helpless as a water-bug under a microscope—and a good deal more embarrassed.

Tubby was first to throw off this dazed feeling. He loosed a deep breath, puffing out his plump cheeks, and said "Well, they've certainly got Personality and Perception—with a capital 'P' in each case!"

Hartnell, not taking his eyes from the squat semi-circle of greyish Great Ones before him, nodded slowly. "You can be quite definite now that we're on record with them."

Troubled by conscience—also by that terrifying, silent examination—I nudged him unobtrusively. "What are we going to do about Mankton and the menagerie we



broke up on Antro? Confess and hope for the best? Or do you think they know about it already?"

Across the way de Brassey was obviously straining his ears to make out what we were saying. I took good care that he couldn't.

Once the horrible scrutiny was concluded, two minor Great Ones adjusted strange controls at the side of the cabinet. A flap was released, revealing a large, black aperture of almost circular shape. Again I stared, because this, too, resembled something I had seen before on Fellik—one terminal of a broadcasting system operated by sound alone. No coils, valves or resistances—merely a collection of dark, funnel-shaped affairs at desired points.

"You remember, don't you?" said Hartnell, excitedly. "They had those things all over the place on Fellik. They said the Great Ones had shown them the idea. There was that girl—what was her name?"

"Jaras?"

"That's right! She broadcast that terrific violin recital into the gadget—"

Louise broke into the conversation, trying to make a joke with trembling lips that refused to smile. "Valerie's quite a good violin player—do you believe the old proverb that music soothes the savage beast?"

I glanced at her reassuringly and tried to answer in the same spirit. "Are the Great Ones really savage?"

The blonde girl looked up. "My style might make them that way—" It was a bravely attempted joke. "Studying music helps to pass the time on a long trip, though. Louise paints pictures. Some of her landscapes are really very good—" She was talking with quick urgency, obviously intent upon diverting her mind from that group of grotesque dwarfs around us.

"So," said Hartnell, "these crazy things think they can conquer the universe?" He drew a deep breath. "Well, I've seen plenty of weird species in my time, but—"

Valerie spoke again, her voice taut with warning. "Careful—they understand what you're saying!"

His brow corrugated in bewildered amazement and his mouth opened ready for speech. The words never came. Everything else was struck from our minds by what happened next. A high-pitched, fluting voice, like the piping treble of a child, sounded from the loud-speaker—in English! The shrill, horrible syllables chirped out with utter, soulless simplicity, mingled with a confused echo of the original sounds which the machine was translating. It was the same subsequently, when we utilised this device for purposes of replying—a queer impression that two people were talking at once, as English sentences became simultaneously converted into the twittering language understood by the Great Ones.

"Greetings," said the reedy voice from the box, with no particular inflection of courtesy, like diplomatic phrases mouthed by an infant who possessed no inkling of their meaning. "He who looks up at you is Kem-lokko, emissary of Na-grokk, leader of the Great Ones in the farther galaxies. There is nothing to fear if you obey in such matters as are required of you."

"Oh, isn't there!" growled Hartnell.

I dug my elbow into his ribs. Here, undoubtedly, was the identical technique that assisted in the operation of the oracle Mankton—unknown principles of sound which enabled all listeners, whatever their origin, to hear pronouncements in their own tongue.

I quietened him, hurriedly, hating to think how the translator mechanism might mishandle peculiarly English colloquialisms.

"Greetings, Kem-lokko," I returned, with a dignity and lack of enthusiasm that I hoped were efficiently transmitted. "The three who stand before you have journeyed to many worlds, yet on none have they been subjected to abduction or told that there are those whom they must obey—"

He seemed surprised at being answered back.



"Perhaps," he piped, "that is because you have encountered none of superior scientific knowledge and resource to yourselves." Any other creature might understandably have displayed emotion—anger, maybe, or sardonic humour. Such undertones were completely absent. Nor, unfortunately, were they necessary. Without moving a tentacle or blinking an eye, Kem-lokko had made a plain statement of undoubted fact. Being forced to admit its truth didn't make me feel any happier.

"We understand," he went on, "that your species is the most advanced in this area of space. State whether such information is true or false."

I glared at de Brassey. "Did he tell you that?"

"You must answer." No emotional emphasis or similar nonsense; just a shrill, straightforward command. I resented it just as much as if I'd been ordered about by a child of six.

I stuck my chin out and looked down at him. "We decline to do so until reasons for your presence in this galaxy are given."

I could have been mistaken, but I thought his eyes flickered with surprise. A henchman stretched up a tentacle to switch off the translator, but not before a few phrases of their disquiet reached us. "Unheard of . . . defiance by lower orders . . . without precedence . . . obedience is essential . . ." They weren't, perhaps, actually dumbfounded, but definitely found themselves at a loss.

"Nice work, Pop," said Hartnell, approvingly. "What are the chirruping little horrors up to now?"

I had a pretty shrewd idea. Turning to the girls, I asked "Did you answer any of their questions?"

Valerie glanced across to de Brassey defiantly. "No—I didn't! Neither did Louise! But him—" Her expression of contempt was eloquent. Then I saw that frightened look creep into her eyes again and she added tremulously "I don't know how long I can hold out, though! They terrify me—"

"Serves you right!" snarled de Brassey. "Why don't you use what little sense you've got and—"

"Shut up!" hissed Louise. "Shut up—before I spit in your eye!"

He ground his big, yellow teeth with rage. "I'll—I'll see that you're sorry—both of you—just wait—"

Hartnell spoke, with a dangerous edge to his voice. "You heard what the lady said! Shut up!"

Suddenly we fell silent. Purple eyes stared unblinkingly upwards from the undersized group of Great Ones. Their dome-shaped heads rose scarcely above the table top. They had secretly switched on the translator and were eavesdropping on our wrangling.

Into the hush, Hartnell said, admiringly "Cunning little so-and-so's!"

"We do not understand the last phrase of your sentence," said Kem-lokko, gravely, "although we appreciate the obvious compliment." In other circumstances it would have been funny; just now I didn't feel like laughing. "Obedience is essential," he went on, emphatically. "Without obedience society would relapse into chaos. Is this fact clear to you?"

"I didn't see any harm in philosophical discussion. "That is truly spoken," I admitted.

"Such deductions we know by the term, 'logic'."

I wasn't going to be beaten. "We, too, recognise this quality."

He seemed pleasantly surprised. Apparently the backward boys weren't quite so stupid, after all.

"Why, then, do you withhold obedience? We are enemies of chaos; our lives and society are ordered by logical action. From logic springs the great science of mathematics, by which all things are made known and by which we may learn the purpose of the universe. Order must prevail; therefore obedience is essential if order is to be raised out of confusion. Without obedience nothing can be factual; without facts it is impossible to exercise the art of logic."



He got the message across, all right. Indeed, he made his argument sound so persuasive I had a hard job preventing myself surrendering there and then.

"From what world does your race spring?"

"From the planet Earth, in the system of Sol." Such information couldn't do much damage. For several centuries now Earth had been a "museum" planet—a place of cultivated beauty and the formal seat of galactical government—and her sons had spread so far afield that independent centres of administration for various star systems had sprung up many light years distant.

The little group of Great Ones—like a cluster of grotesque, upended eggs—muttered together again. Some expert among them was being cross-examined. This memory-man knew his job, too. His mental card-index must have been a model of that orderly arrangement which the Great Ones admired so much. He took a gliding step forward and bobbed to Kem-lokko in salutation. He spoke but one word. "Mankton." It was quite enough.

"Oh, sweet Sirius!" groaned Hartnell. "Now the fat's in the fire!"

I didn't say anything. I remembered an archaic proverb from the writings of Earth, the truth of which has been demonstrated again and again through the centuries. "Be sure your sins will find you out!"

Kem-lokko confronted us again. "How come you then here, so far from Earth? Why have you not observed the guidance of our oracle, Mankton, whom we placed on your world long ago to guide your species in its evolution? Without obedience there must be anarchy and chaos—" he emphasised again this creed of the Great Ones "why did you not obey him?"

I wondered what to say.

"Go on, Pop!" urged Hartnell. "Tell him!"

"He won't like it, you know!" I turned my troubled gaze upon him, seeking inspiration.

He didnt seem to grasp the point of my objection. He just looked back and said "Who cares what he likes?"

I gulped. "Very well." I didn't relish Kem-lokko's reaction, even though the Great Ones weren't particularly demonstrative.

"Mankton is no more!" I said. "We have destroyed him!"

They showed emotion then, all right. "Destroyed?" Kem-lokko's incredulous echo, coupled with murmurings among the other astounded creatures, "scattered raised eyebrows across the cabin floor," to use one of young Hartnell's more imaginative descriptions.

"A defiant species," pronounced Kem-lokko. "Obviously, they are quite ignorant of the necessity 'or obedience." A murmuring whisper of agreement rose from the fantastic group behind him. "Determined, of course. Mass suicide on such a scale must have needed considerable resolution."

He was reflecting upon the same factor which had caused us trouble at the time. Mankton, you remember, was nothing less than an elaborate question-and-answer machine, similar to many others the Great Ones were said to have installed on promising planets throughout the universe, designed to be worshipped by species rising from evolution's morass into primitive savagery. Answers to suitable queries in any language had been cunningly contrived to guide a race's development—up to a certain point but no farther. For instance, mention of space travel brought Mankton literally to the boil with righteous horror. Somehow, we invariably thought of Mankton as "him." In reality the apparatus comprised a huge, half-spherical bowl of transparent material suspended between four metal pillars rising from a massive malachite plinth. Ornamentation upon these arms was identical with the carving I'd recognised with such cold horror on the translator box. Moreover, Mankton perceived emanations so sensitively that any-



one touching the machine with hostile intent immediately received an electrical charge equivalent to several thousand volts. This, I gathered, led to the "mass suicide" presumption. Did he think men had rushed at the oracle one by one until the fantastic, million-year-capacity batteries ran down?

"How many of your misguided people paid the penalty for such sacrilege?" demanded Kem-lokko.

"None. The three whom you see now confronted Mankton upon another world whence he had been taken when cataclysm threatened Earth. There—alone—we destroyed him utterly!"

There was a moment of silence. The Great Ones must have thought the translator cabinet had gone crazy. They went into another huddle.

Hartnell chuckled. "Nice work again, Pop! You've got 'em worried!"

They couldn't have been nearly so worried as I was.

"Is that right?" asked Valerie, anxiously. "I mean, did you really smash one of their oracles?"

Louise said "I hope so! If we don't find the guts to hit back at these awful little things they'll turn everybody into their slaves—"

She looked at de Brassey with distaste, but he only bared his teeth again and said "You'll learn! And before very long, either! Hit back at 'em? Wait till you see the machines they've got—"

She merely stared a moment longer, then turned away. I saw a dull flush of anger rise in the renegade's sallow cheeks.

It seemed as though our presence helped the girls to throw off their paralysis of terror. I didn't feel able to claim much credit personally; in fact, I felt almost as scared as the two of them had looked when we first entered the cabin.

Meanwhile, the Great Ones had reached a decision.

"This matter is too grave for us to deal with here," chirruped Kem-lokko, at last. "It shall be taken to Na-

grokk himself for judgment. Come—all of you! Prepare yourselves to exist for a short time in airless conditions.”

He meant us to fix the atmosphere suits. There didn't seem much else to do save what the Great Ones so frequently urged upon us—obey.

We trooped into the air-lock without delay, the formidable dwarfs carrying with them the translator cabinet. They had no protective covering, and we learned later how they possessed the ability to survive for quite long periods without oxygen and in temperatures well down towards absolute zero of minus 273 degrees Centigrade. Probably, as the incorrigible Hartnell speculated, they “stored up air and warmth like camels store food and water.” Compared with other proficiencies of these fabulous midgets—such as travelling 900,000 or more light-years into incredible depths of the universe—such things would be simple.

Surprisingly enough, among our memories of various tight corners there is always some ludicrous recollection that claims prominence. This time it was the exceptional discomfort of travelling in the Great Ones' caterpillar tractor—a vehicle built to accommodate beings of less than half our physical height. By the time we had travelled fifteen minutes and arrived outside one of the huge, black, humped buildings I felt so cramped I could hardly move.

Fortunately, internal galleries at our destination proved rather more roomy, and we must have presented a queer sight trooping along—ourselves, wearing the stout, serviceable Inter-X atmosphere suits; de Brassey and the girls in rather lighter outfits which had been aboard the lifeboat; and the undersized Great Ones. Not knowing what might be needed in the way of feminine fripperies, Valerie and Louise carried sizable travelling valises.

We didn't get much of a chance to see the building just then. They thrust us into a small, horrifying lift



which simply dropped like a plummet for nearly thirty seconds, the gates opening to reveal a corridor where plain, blank walls of metal impregnated with unknown radiant material filled the place with a subdued, eerie glow.

"Utilitarian, isn't it?" observed Tubby. "They don't go in much for decorations—not even that funny pattern of carvings."

But the characteristic ornamentation—it possessed recurring convolutions and involutions of design which simply could not be mistaken—returned in full measure upon two large doors which confronted us at the foot of an alarmingly steep ramp and which opened to reveal what was undoubtedly some variety of temple.

In the precise centre of an exactly circular cavern rose a tall, smooth pyramid of bright metal. Perched on top was a huge, skeletal globe containing so confusing a jumble of symbolic geometrical representations that my eyes actually hurt. A welter of converging lines and curves within the sphere must have presented every conceivable geometric proposition and theorem. Before tears blurred my strained vision I detected interlocking cones, triangular formations, parallel-pipedes of multiple alternative structure, spheres, octagons, pentagonal frustums, ovoids and impossible quadrants. I hadn't the faintest idea of its purpose.

"Regard!" squeaked Kem-Iokko, obviously expecting us to be impressed. "Here before you stands the great God of Calculus! Behold his wonders—and worship!"

Somebody had to say something, and I supposed it was me. "Our eyes are not able to understand such complications," I admitted.

"That may well be so." He didn't seem particularly surprised, after all. "Yet in Calculus resides the fount of all knowledge. He it is whose symbols and angles present keys to the universe—the properties of irrefutable logic, of computation, reckoning and, ultimately,

revelation. With mathematics all things are possible. Once your little minds have grasped this truth, then will your feet be placed upon the road towards genuine knowledge."

He made a sign and we were hustled out again, apparently on record as hopeless numskulls whose confused brains failed to perceive even elementary truths.

So far as I was concerned personally, they probably had good reason. I've always been a hopeless duffer at mathematics, and I've often marvelled at some particularly ingenious piece of calculation—after the procedure had been painfully explained. Moreover, everyone knew about such magnificent demonstrations of practical mathematical genius as astronomers who discovered the presence of planets before such globes had actually been observed; of the existence of radio waves being proved before physicists produced them; of atomic engineers who calculated with extreme accuracy the stresses, exhaust radiation and jet-muzzle thrust of a space-ship's motor before even a single combustion chamber had been cast. Then, too, we had exponents of "pure" mathematics—such as the immortal Einstein—whose reckonings disdained any symbols so simple as figures and angles but concerned themselves with logical conclusions from abstract qualities. If humble Man progressed thus far in some three thousand years, what appalling achievements might the Great Ones command?

I dragged myself from these reflections to gaze once more a smooth, bright corridor walls. Save for the soft, slurring sounds of our boots all remained silent. De Brassey had spoken of machines beneath the great humped roof visible from the planetoid's surface. Was it really possible for contraptions of immense size and complication to operate with such uncanny quietness? And—most disturbing thought of all—what product did they turn out?



Then, immediately in front of us, materialised an opening in the corridor wall. We were thrust unexpectedly inside and a sliding door closed noiselessly behind us.

While I stared round at the furniture—familiar in shape and size but peculiar in construction, so that it had obviously been speedily manufactured after the time when the Great Ones became acquainted with humans, Hartnell tried to detect where the door fitted in the unadorned expanse of shining metal. Not even a hair-line was visible.

He turned round, shrugging in baffled manner, then suddenly stiffened. "Where's de Brassey?"

I stared with bewilderment. "I—I could have sworn I saw him ahead of us—"

"Well there's only five of us now—"

We could have wished for a bit more head room in our prison cell. However, lying on couches enabled us to avoid scraping our helmets against the ceiling and there we rested, speculating upon the next move.

"Might as well get some sleep," suggested Hartnell. "Not much else we can do till they come to see us again."

I fidgeted uneasily. "What's de Brassey up to?"

"Who knows? He's a nasty piece of work—"

I nodded, grimly. "He's already made up his mind what's going to happen when these Great Ones really start operations."

Tubby grinned, in rather sickly fashion. "Anybody got ideas how we could stop 'em?"

Somehow, I wished he hadn't introduced this train of thought, although I suppose the matter was never very far from our minds. Reading the girls' expressions, I knew they felt they'd maintain a particularly calm demeanour. "Pity we didn't bring a book to read—"

"Why," said Louise, "I've got some in my case. There's an emergency library in all lifeboats, you know—just to give survivors something to do through the

weeks while they're waiting to be rescued." She smiled, with sudden inspiration. "Or Valerie could play to us—"

Hartnell sat up in surprise. "Don't tell us she's got that violin tucked away?"

I'm not particularly musical, so while the tuning-up process went on I turned pages of the books. One of the nicest contained many plates of famous pictures in their genuine colours; there were also a couple of volumes of fiction and some interesting biographies. I don't think either Tubby or Hartnell understands violin-playing really well—except the variety produced by dance orchestras in Z-bars, but it's legitimate to close the eyes while listening to music, so I couldn't tell whether they were actually enjoying the melodies or catching forty winks.

Then it became borne upon me that if those two aggravating young devils slept they were missing a treat. Even my untutored ear could detect in this pretty, fair-haired girl a violinist of especial talent; in fact, I'd been forced to listen at times to professional musicians who weren't half so good.

And, indeed, after nearly half-an-hour it became apparent that they were really listening, for when Valerie finally lowered the bow and those sweet, singing sounds ceased to resound soothingly through the small chamber, they opened their eyes simultaneously and slapped their gloves in vigorous applause.

"Well!" said Hartnell, softly. "Isn't that something?"

"It certainly is!" I agreed.

So, of course, we had to ask the girl how long she'd been playing and was it very difficult and who had been her tutors. Not until de Brassey thrust his head round the edge of the noiselessly-sliding door did I realise that nearly an hour of captivity had passed. He leered at us, showing those awful, vicious teeth again.

"What can we do for you, my yellow-fanged



friend?" inquired Hartnell, with deliberate hostility.

The man's lips stretched wider in his snarl. "Not what can you do for me—what I can do for you!"

Hartnell raised his eyebrows in an infuriating manner. "Don't say those egg-headed Great Ones want to bargain with us?"

De Brassey shook his head. "Oh, no—nothing like that!" The vengeful expression which crept over his unpleasant face made the girls cringe. "Not a bargain—an ultimatum! If you don't co-operate and tell 'em all they want to know, one of you's booked for a special torture chamber they're building right now!"

# 5

## *Ordeal by rainbow*

INFURIATED, Tubby and I, being nearest the door, made a rush. Metal slammed home, missing my fingers by inches, and de Brassey had gone. We stood there gazing at each other in wild surmise and choking back—on account of the girls—such suitable profanity as came to mind.

Hartnell had pulled himself from the couch too late to join in our vengeful dash. "Now I wonder just what that hairy devil's up to," he said, softly. "Why go to the trouble of warning us? Or did he want to gloat?"

Valerie, violin and bow still in hand, said "Perhaps he's only trying to frighten us—"

Summoning a faint smile, Louise—seeming palest among us by reason of the creamy complexion natural to red-heads—chimed in "He's certainly done that! Anyway, so far as I'm concerned—"

"No, I mean that it's just something he's invented and the Great Ones don't really intend to hurt us—"

Personally, I considered this nothing less than wishful thinking, but there wasn't any point in saying so.



I had little doubt by this time—from what the Great Ones themselves admitted and from what we could guess—that a campaign of complete ruthlessness was in hand. The three strange planets, screened from possible observation by that black, opaque cloud and protected by mysterious force-beams, undoubtedly provided some kind of artificial base where preparations might be made for a paralysing swoop upon our own portion of space at some future date. Kem-lokko himself had told us that here was the vanguard; somewhere in the depths of space lurked a larger force of Great Ones who would invest the planetary systems of the dozen or so stars which Man had so laboriously colonised, adding them to whatever enormous empires they already ruled across the universe. Judging by what we had seen of the Great Ones' achievements, mankind's resistance to the conquerors would be both brief and pitiful. The precise reason why they desired our few worlds remained a mystery.

Then the metal partition slid open again. For a split second we thought it might be de Brassey shoving his head into the little room to make further horrific threats, but we were wrong. A group of Great Ones beckoned us forth.

I looked at Hartnell. He shrugged. There didn't seem much point in resistance, so we ducked through the doorway into the corridor once more.

This time they led us in a different direction, away from the Temple of Calculus, although we traversed more ramps and descended in more lifts until it became obvious, as Tubby rather facetiously remarked, that this great, humped building resembled an iceberg insofar as nine-tenths of its content rested below the surface.

Now, for the first time, we heard faint whirring, sliding sounds of powerful and complicated machinery, although nothing was to be seen. Maybe workshops and laboratories were situated behind invisible doors upon either side of the corridors.

Then at length we paused. A partition opened silently to reveal a place crammed with fantastic control boards that rose in bank after bank with small, tiered footwalks between them where, at certain strategic points, a Great One was stationed. Yet in the centre of that room stood an apparatus so sinister and of such forbidding appearance that all thought of studying the wonders around us fled from our minds.

It was a contraption which must have been built very quickly, for the white-covered table possessed sufficient size to accommodate a normal man and fetters of white metal lay in positions suitable for clamping round wrists and ankles. At head and foot of this table rose two slender, curved electrodes, with straight, T-shaped pieces at their bowed ends. A group of mechanics were putting finishing touches to this fearsome contrivance, working immensely fast with all tentacles at once.

Kem-lokko emerged from somewhere, followed by two subordinates carrying the translator box, and confronted us.

"Our leader, Na-grokk," he piped, wasting no time on courteous preliminaries, "holds it necessitous that you reveal immediately all knowledge concerning your race's achievements and the conditions under which you hold planets in this portion of space. Many thousands of your species will die in useless resistance unless the Great Ones devise a plan for swift, bloodless subjection. Surely it is logical that you wish to save their lives?"

"Why don't you go and see for yourselves?" jeered Hartnell.

Because our circular flying machines—of quite different form from your own tubular, elongated vessels—might be observed, thereby revealing our intentions prematurely." That seemed straightforward enough.

"What if we don't tell you the truth?"

Kem-lokko refused to rise to the bait, even if he recognised it as such. "Calculations based on false premises would be fatal, of course. That is why Na-



grokk emphasises the importance of your volunteering this information fully and of your own free will."

I took up the cue. If nothing else, a little temporising might delay the proceedings on that awful-looking operating table. "If, as you said earlier, mathematics provide the key to all circumstances, it should be possible to know these things by calculation—"

I wondered for a moment whether he might take this as blasphemy against the great god Calculus, but he answered calmly enough. "True, this could be done. Yet so great is the task and so short our time for preparation that we must rid ourselves of unnecessary labours. Your minds hold this knowledge; you will impart it to us."

"But if we mislead you—or fail to possess full details of the data you require?"

"Foundation for planning is better than nothing. It will not prove beyond our ingenuity to make alternative plans whereby such gaps may be bridged."

Unfortunately, from our brief acquaintance with the Great Ones, I could see that easily enough. Their schemes would obviously be based upon certain mathematical laws. After all, natural physical laws are employed in our civilisation. Why, then, could not psychical laws be defined and used similarly to provide not engineering blueprints but plans of action? For where there is a sound basis it becomes merely a matter of logic to extend such laws a step farther, then another step and then another, until at last the pyramid of knowledge is constructed. But if so-called laws possessed no genuine basis because of false values—?

"You will not speak falsely," said Kem-lokko, almost as though he had read my mind. The piping little voice might well have been a miniature trumpet of doom.

I drew a deep breath. "We will not speak at all! Get your information from de Brassey! None of us here intends to betray our own species!"

Hartnell and Tubby joined in a murmur of agreement. I cast a sideways glance at the girls. They were frightened but resolute, despite the fact that the confounded table held their gaze.

In a completely indifferent manner, Kem-lokko gestured towards the group of subordinates, who had now finished their work. One by one they seized our left hands, ripped off the gloves and clipped round the bared wrists a flexible contact with wires leading to some sort of meter. They commenced to make calculations from figures shown on dials, displaying the results to their undersized leader.

Hardly before I realised what was happening, Kem-lokko raised a tentacle in my direction. The Great Ones must have been immensely strong, for three of them immediately swept me off my feet without apparent effort, laid me on the table and snapped the manacles fast. A good thing, too, in a way, because otherwise, as realisation dawned that I was first victim for the tortures de Brassey had foretold, I'd have flopped out with the hollow feeling that suddenly developed in my stomach and drained all the strength from my legs.

Six or seven of the Great Ones stood around the low table, staring with expressionless, purple eyes. I heard Valerie's little cry of distress, instantly choked back, sound over the inter-com. She couldn't have felt sorrier for me than I felt for myself.

Then Kem-lokko signalled towards a control panel. A couple of lights changed colour, whereupon I could have sworn that a hidden generator or some similar apparatus whined softly on a rising note.

He bent over me as I lay on the white cover, staring towards the metal roof. "Your obstinacy will avail you naught. We have learned how certain matters are distasteful to your species—"

"From de Brassey, no doubt?" I intended to be defiant, but the words came in a kind of croak from my dry throat.



"—And how you are subject to nerve sensations known as pain. Also that certain spectacles are loathsome and horrifying to you. Such matters will now be inflicted upon you and your companions until the information we require is forthcoming." He seemed unemotional and merciless, like a doctor deliberately putting a patient in agony so that the pain might guide his diagnoses. A job had to be done, and he intended to do it, coldly and efficiently. Such reflections, though, weren't particularly comforting. I began to stream with clammy sweat from every pore.

"Go on, then!" I said, harshly. "I'm not talking! It won't take long to kill me—and then you'll never learn anything!"

Kem-lokko gazed down stolidly. "You will not be killed," he piped. The chirruping syllables again reminded me of a small child mechanically reciting a half-learnt recitation. "We have noted the amount of pain you are able to endure."

I didn't say anything else. I just gritted my teeth and drew back parched lips in a snarl.

First indications of anything happening came with a gradually-materialising glow from the electrode at the end of the table near my feet. It grew into a large, vibrating ball of bright red ionisation which eventually floated freely in the air and moved slowly towards the other electrode above my head. Although unable to see its exact destination because of the atmosphere suit's helmet, I felt certain that this bright globe discharged itself there. Immediately a similar sphere—this time bright orange—emerged and vanished along the same path. Then came, in quicker succession, globes of yellow, green, blue and indigo. The red materialised again, then the yellow. Faster and faster they moved, flashing and reflecting in a scintillating arc along my body. Faster, ever faster, until individual colours faded before a growing white brilliance that burned itself into my retina. I remembered thinking how mingling

of rainbow hues must of necessity produce whiteness, and then—in the very moment that the coruscations reached their climax—the light went out, leaving red and green patterns swirling madly upon a background darkened by reaction.

“What’s happening, Pop?” Hartnell’s anxious voice came over the inter-com. “What are they doing?”

“I don’t know. Haven’t felt a thing yet.”

I lay there, unable to move arms or legs an inch, looking into the darkness. Gradually vision returned, but in any case I could see only myself lying there on the table, with the slender electrodes sprouting near my feet. Apart from looking straight upwards into the dimness of the roof, that is, and such a pastime didn’t seem very profitable.

Then a party approached from somewhere beyond my resting place—forms wearing white robes and masks across the lower portions of their faces, with instruments in steaming trays. One of them picked up a bright, wickedly sharp knife and made a deep incision into my leg, halfway between knee and thigh.

I yelled aloud and strained wildly at the manacles. The pain alone sufficed for that, but next instant, when I knew instinctively what they intended to do, I shrieked again—this time with panic. They were going to cut my leg off!

The knife went in for a second time, slowly slicing through flesh, nerves and veins on the underside. It cut with deliberate, drawnout motions, while I slobbered and raved, praying that I might faint with that excruciating agony and thereby end it. In a sobbing misery of torment I thought I could endure no more. Then one of them produced a saw, driving deeply into the bone for an eternity during which I ceased to be human and thrashed like an insane creature composed of naught save lacerated nerves and raw, quivering flesh. With my last shreds of consciousness I told myself “Die! Die—and get this over!” I saw them lift my severed



leg and throw it on the floor. Then I did pass out.

My eyes opened again to meet Kem-lokko's expressionless gaze.

"You devils!" I whispered, hoarsely. "You unspeakable devils! What have yon done?"

"Are you prepared to give information?"

I knew that my days with Inter-X were finished, even if I survived. Nothing mattered any more save to end everything before pain returned to my mutilated body, now mercifully numb. So far as I was concerned, life was over.

But wait a moment. Throughout colonised worlds there were billions of people for whom it had just begun. Among them I was only one—a weak, tortured, insignificant member of the human race with power to bring untold pain and slavery upon them all if, in my agony, I spoke. Moreover, I knew that both Hartnell and Tubby were both tougher specimens than myself—perhaps that was why the Great Ones chose me, hoping to save time?—and provided I withstood the torment they would most certainly do so. There was hope? Well, the Great Ones had done this horrible thing to me—they might as well finish me off.

"No!" I whispered. And again "No!"

"Only twenty-seven per cent of your endurance has so far been tested," said Kem-lokko. "Come—let reason prevail before matters go too far!"

Twenty-seven per cent? And they intended to apply the whole hundred per cent? For one dreadful moment my resolution wavered. I snapped my teeth so violently together they might well have snapped off at gum level. "Get on with it!" I grated.

He was entirely pitiless. "You have merely yourself to blame."

Four of the Great Ones came up to the table with baskets full of squirming things which they emptied upon me, higgledy-piggledy. There were the puff-adders and scorpions of Earth; mutated Haman-lizards whose

inch-long, needle-like teeth it is impossible to extract from flesh; wriggling giant hook-worms from Khamsa, which burrow inside living bodies and travel with horrible writhing along veins, drinking blood as they progress; the frightful, three-headed polloy of Meppon II, whose envenomed bite causes immediate bloating, followed by utter decay within four minutes. All these creatures swarmed across my defenceless body, obsessed by one urge—to sink fangs and poisonous stings in the substance of my face. Both hands gripped by the manacles, I was utterly defenceless. I tried to close my eyes, but sheer terror and fascinated loathing kept them open. Every creeping thing that had jerked me to sweating wakefulness from dark nightmares was represented there—only this time they were real! Rough, icy-cold scale slithered across my skin, reptilian eyes stared into mine from a range of inches as a hissing cobra drew back to strike; a thousand excruciating bites and stings burnt my swelling flesh and crept like liquid fire through every artery. I writhed and retched, feeling the poison petrify every organ of my body into solid, frozen rock.

The first convulsion strained my backbone into an arch of agony—again and again—great, wrenching jerks which racked and griped indescribably. I hadn't even sufficient sense to know that the end must now be approaching. I was conscious only of suffering and shameful loathing for the method of my death. Then I knew only pain—pain in tearing, heaving, unbearable spasms.

"Speak!" came the voice of Kem-lokko. "Speak—before it is too late!"

"No!" I wailed. "No!" The words came automatically. If I'd been able to think, I'd have surrendered there and then.

Into my delirium of pain moved a strange vision. A man—perhaps de Brassey?—holding before him a rod with glowing, double prongs about four inches



apart. He pushed it near my face, scorching the skin. Dimly, I made out the cap and collar-insignia of a Spaceways Crime Patrol official. Where had de Brassey obtained a uniform like that? He raised the white-hot prong and drove its two points simultaneously into my eyes. The greatest blast of agony so far came with a horror of spurting steam . . . my brain seethed and boiled inside the skull . . .

# 6

## *Three new angles on Na-grokk*

**B**EYOND the darkness someone was screaming "Stop! Stop!" It must have been me. There are things beyond the power of flesh and blood to endure. The voice was high-pitched, shrieking and tearing at my drumming ears.

The cry came again. "Stop!" Maybe one of the girls—crying out that the torture must end.

"To Na-grokk! A new factor has arisen! They must go before Na-grokk immediately!"

Not much good so far as I was concerned. How could I—blind, possessing only one leg, with a dozen assorted deadly poisons working in my blood—survive being carried even a dozen yards? Within a matter of minutes my earthly span would have ended. At least, I'd had a good run and got around the universe, seeing strange and wonderful things on many worlds, far more than many of my fellows. Moreover, upon such trips there had been the inestimable comradeship of Hartnell and Tubby—

I felt myself being lifted up, the fetters in some way falling loose.



"All right," said Hartnell's voice. "All right, Pop. Hold up—we've got you safely now—"

"Sorry," I mumbled, inarticulately, through swollen, bitten lips. "Sorry I made an exhibition of myself—I just couldn't stand it—"

"Eh? What exhibition?" I supposed that, in his way, he tried to be consoling.

"Yelling out like that—I tried not to—"

He seemed puzzled. "You never made a sound—except to say 'No' to Kem-lokko! You weren't on the table more than ten seconds—"

I opened my eyes. I could see! Hartnell and Tubby gripped me by either arm; curious purple eyes of the Great Ones stared impersonally; Valerie and Louise hovered in the background, trying to understand. Slowly and deliberately, I stamped both feet on the ground, one after the other. My leg was still there.

Relief swept over me torrentially, followed instantly by a wave of nausea. All strength ebbed from my trembling knees and except for the restraining hands I would have slumped into a heap on the floor.

"Tell me," said Kem-lokko, as though nothing had happened, "is it true that the peculiar hallucinations we induced in your mind are unpleasant for human species?"

Unpleasant? That was one way of describing them! But hallucinations—artificially induced? Reaction from memory set my body quivering anew. They'd seemed real enough to me!

"Yes," I said. "Definitely unpleasant!" I could have lied, yet some vague mental warning persuaded me that it might prove at some later date an unnecessary complication. Indeed, the Great Ones could decide in future to substitute actuality for hallucination, and that would be a good deal more unpleasant for some poor soul.

"Come!" piped another Great One from behind our little group. "Na-grokk waits!"

For the first few minutes I had to be helped along, steps dragging and chin sunk inside my helmet, but soon strength began to return and I described as accurately as possible what had happened under the influence of the hypnotic machine.

"The devils!" breathed Valerie. "How could they?"

Hartnell listened to it all with the interest of a psychoanalyst probing a patient's dreams. "Space police? You're sure you didn't mistake the badge?"

I shook my head. "Definitely."

He nodded, as though enlightened in some mysterious manner. I couldn't see it at all.

"It must have been awful," said Louise, sympathetically. Her eyes asked a question that was also in my own mind. She tried to put it into words. "But—but these Great Ones—they're so different from human beings—how did they know about the details? I mean—the hospital surgeons' smocks and masks?"

"Or that most people have a horror of creeping things?" wondered Valerie.

I couldn't help them. The whole affair was a bit too morbidly psychological for me—the central theme of human terror, touching upon such unsavoury aspects as surgical operations, mutilation, snakes, fire and blindness.

"And, of course," said Hartnell, thoughtfully, "the policeman."

"But what's he got to do with it?"

We didn't get the answer until some time later. Again we approached doors decorated with the Great Ones' single, characteristic pattern of ornamentation, seeing them open automatically when we were still ten paces distant.

The translator box was once more hurried to our side. "The throne room of Na-grokk," announced Kem-lokko, in a subdued, twittering whisper.

He might have saved himself the trouble. Once our eyes saw beyond the doors into that huge chamber



there was no mistaking its importance. Moreover, at the far end of the hall, perched upon a broad, shining plinth in obvious stateliness, stood three immobile figures of Great Ones watching our arrival.

"Ceremonial stuff, eh?" asked Hartnell, disgustedly. "You'd think the vanguard of an inter-planetary invasion could occupy its time better, wouldn't you?"

Centre of the three figures proved of rather larger stature than normal, yet he was certainly less than four feet in height. An aura of powerful, dominant personality hovered around, unconsciously keeping our eyes fixed upon the small group, which still did not twitch a tentacle as we moved in procession across the vast, deserted floor.

We stood in easy attitudes before the throne, the six purple eyes of its occupants on a level with our own. From their own particular plane, a couple of feet lower, Kem-lokko and others stared respectfully upwards.

And then I saw something so completely ludicrous and out of place in such bizarre, unearthly surroundings that I almost burst out laughing. At the very feet of those creatures capable of travelling to unheard-of depths of space—who were to all intents and purposes immortal, who could build artificial planetary systems and whose scientific achievement eclipsed everything that human research could hope to discover during the next millenium or more—rested—a violin!

"Why," exclaimed Valerie. "That's mine! They've fetched it from the room!"

The central figure upon the plinth spoke. "Is this the instrument?" His voice came from the black aperture of the translator cabinet with precisely the same piping, reedy accents that distinguished others among the Great Ones. "Let it be operated."

"They—they actually want me to play for them?" Her eyes were wide with puzzled wonder. "But the suit—how can I?"

Kem-lokko, efficient as ever, had matters in hand.

"The atmosphere in this chamber is suitable for you. Have no fear in uncovering your hands and face, if that is necessary." He himself handed over the violin, and I saw Valerie shudder as she lifted it from his tentacles. Then she looked helplessly at Hartnell and asked "What do I play?"

Tubby grasped the point of these proceedings quicker than the rest of us. "Remember what you played when they locked us in first? Something pretty much the same, I should think."

Then, while the blonde girl stood before the throne and sent sweet, singing melodies of Earth soaring into the vast, vaulted roof, light of understanding began to dawn. These fabulous creatures from beyond Andromeda, whose knowledge of the physics of sound had produced such marvels as Mankton, the translator box and a system of broadcasting without radio, had met in a simple violin something they did not fully understand!

I never knew the title of the piece Valerie played. It was a brisk composition—some might even say "showy"—with lots of flashing arpeggios and double-bowed harmonies, and a catchy little central theme which set feet tapping.

What the Great Ones made of it we didn't learn till later. All remained entirely motionless during the performance, and the ring of glowing, purple eyes provided no clue to emotion, approving or otherwise. Only, when Valerie lowered her bow did they stir, making slight, sighing sounds.

"Remarkable," said the taller figure, after a long pause. "This technique of pitch and intervals on an eight-toned scale is unique. Were these sounds the same as those heard when the humans remained alone?"

"Not identical," admitted Kem-lokko. "The differences were, however, subtle and unexplainable without demonstration. If it is so desired, I will send for the recording which was taken earlier while all work ceased



and machines were silenced."

What had we stumbled upon? Was this right what I heard—that the huge, complicated activity of the Great Ones' base had paused while an Earth girl's violin playing was broadcast secretly from our cell?

Louise puckered her red lips and whistled softly. "A pretty good compliment, eh?"

I wondered. While we awaited the recording, I asked Kem-lokko "By what means is Na-grokk chosen as leader of the vanguard? His abnormal stature?"

"Indeed, no." His eerie, reedy voice held peculiar intonation. "He alone is but one—all three together comprise Na-grokk!"

It needed a moment for this information to sink in.

"Well, there's a fine state of affairs!" exclaimed Hartnell. "What names do they have separately?"

Kem-lokko ignored such frivolous comment on a serious topic. "In our leader, as in other matters, we observe the sacred significance of the figure three. Who can deny its vital importance in the scheme of things? Take, for instance, the three sides and three angles of every triangle—" at that very moment we were rotating upon one of three planetoids describing such a pattern—"the three dimensions of physical shape or the meaning of triple factors in mathematics."

"I'm not very good at sums," admitted Tubby, "but it seems to me that three's an awkward figure to divide by. Recurring decimals and all that sort of thing—"

Kem-lokko did everything but sneer openly on learning that our system of calculation was based upon ten. "For," he said, "how is it possible to divide such a number evenly save by five and two?"

The Great Ones, it appeared, based their mathematics upon a unit which by our standards was twelve—bringing in two new digits that were untranslatable—and finding that even factors and easily-handled fractions could be obtained from the figures two, three, four, six, eight and nine. I remembered dimly reading about

an ancient race on Earth who, in times before decimals became universally adopted, had a mensuration system of "twelve inches to one foot" and a monetary arrangement of "twelve pennies to one shilling." Were these people actually wiser than they knew at the time? And what inspiration led them to adopt the magic principle of twelve?

Then the recordings of Valerie's violin solos were borne in, taking my attention from other matters.

"They've got it, eh?" murmured Hartnell. "Hidden microphones in that room where they shoved us! I hope they recorded, as well, some of the things I said about 'em."

Once more the sweet harmonies resounded across the empty throne-room, and at the end we applauded—not only to show appreciation but to baffle the Great Ones.

Valerie smiled with some embarrassment. "My playing's not as good as all that—"

"Believe me," said Hartnell, fervently, "you don't know just how good it is! Especially in present circumstances!"

He had a problem on his mind, all right. He'd noticed a point which had escaped the rest of us.

"Sonic vibrations of normal pattern," reported Kemlokko. "They contain nothing in themselves which cannot be computed and mechanically reconstructed." He paused, and for the first time exhibited a flicker of emotion. He was puzzled, as his next squeaky words revealed. "These sounds possess certain overtones and undertones which belong not to particular notes themselves but to certain others in proximity of the melodic pattern. They are not harmonics in the sense we recognise them. The laboratory reports that reconstruction of the sounds is possible individually—yet the overall effect cannot be obtained."

"Then it is impossible for music of this undoubtedly outstanding quality to be fabricated?" asked Na-grokk.



"At the moment—yes."

There was a pause.

Then Na-grokk put his finger on the hub of the situation. "Is this likely to affect in any way the work of preparation in which we are now engaged?"

"It is not," answered Kem-lokko.

"Then the matter shall be shelved for consideration later. Announce that normal activities shall proceed." He turned his attention to our little party—and paid the compliment of addressing us as creatures of intelligence. "Hear me, O people of this little universe in which we now sojourn. So far you have withheld co-operation. We consider this foolish—yet in our wisdom we understand your loyalty. One of your company has even resisted persuasive-hallucination—" I shivered in recollection and didn't particularly admire this clinical description of the process to which I'd been subjected—"to as much as sixty-four per cent of his maximum resistance." (I was glad they hadn't increased it beyond that.) "Since, therefore, such tactics have not proved wholly satisfactory, our methods and our scientific apparatus shall be demonstrated, so that you may recognise the hopelessness of continued resistance and help to effect the swift domination of all worlds under your colonisation, thereby avoiding the loss of many lives."

Where had I heard this same argument before? Of course—from the traitor, de Brassey. Where was he now, I wondered.

Then Na-grokk—all three of him—turned their backs upon us simultaneously and we realised the audience was over.

"Come," piped Kem-lokko, "we will commence the tour."

It proved an experience that was appalling, astounding and completely bewildering in its sheer achievement. The interior of that particular planetoid—presumably, also, the remaining two which swung at the end of the shimmering purple beams—must have been honey-

combed with galleries that in turn were crammed with fantastic, automatic machines, although admittedly we saw little of their products. Strictly speaking, we didn't actually see a great deal of the machines themselves, either, yet the enormous control boards which ranged through cavern after cavern sufficed to take our breath away.

There was, for instance, the Construction Unit—a huge arrangement of keys—row after row, tier after tier—with master-buttons, dials and small control levers.

Most of the keys were in “bunches”—that is to say, anything up to a dozen further keys branched from the stem of the first, and appended to these in turn were still more keys, some of them so tiny that the only means of operation—so far as we were concerned—consisted in careful insertion of a finger-nail. A colour-code presumably divided these keys into functional sections.

“Here are the controls for electro-magnetic apparatus,” said Kem-lokko. For the first time his large, blank eyes reflected a flicker of emotion—faint but definite. “Much of our work in this respect will need revision when we have occupied your universe and obtained iron.”

A shudder of understanding raised itself in my mind. Iron?

“All this trouble to—to get iron?” stuttered Tubby. “But—but that’s ridiculous! There’s plenty of iron—”

“In your galaxy, perhaps,” admitted Kem-lokko. “Not elsewhere.”

I drew a deep breath. “If that’s all you need, we can provide iron! The Inter-galactical Government’d be pleased to give whole planets of solid iron for a tenth of the wonders known to the Great Ones! Why embark on a campaign of conquest, spreading hate, hostility and conflict, for what may be obtained peaceably?”



"Because that is not our way. Puny creatures such as yourselves would endeavour to bargain, to lay down conditions, to exercise greed." I thought I sensed another sneer. "We have found it best not to bargain—but to take!"

Hartnell observed the same implication and returned it with interest. "Surely the Great Ones could continue to manage without iron, having done so for untold milleniums?"

Kem-lokko produced the answer promptly. "With the aid of mathematics, all things are possible." I was getting a little tired of hearing this formula intoned so solemnly. I'd have been glad to think of just one thing that mathematics couldn't do. "Admittedly, we are able to continue our work without this precious element, yet it makes considerable difficulties. Now these many problems are within range of being solved. See, for instance, the production of an electro-solenoid—our only means of providing a magnetic core within the winding consists of an ampoule of radon or similar gas. The method serves, yet it is far from satisfactory for our precise requirements."

He then proceeded by way of demonstration to make a solenoid with the machine. Striking various coloured keys, we discovered, laid down the size of framework, core and winding; another section fixed the gauge and insulation of wire; yet a third the method of assembly. Once this pattern had been determined, he depressed a handle, whereupon the neatest little solenoid coil imaginable—not more than half-an-inch in length and barely a sixteenth in diameter—popped from a slot on the desk.

Kem-lokko fixed his eyes commandingly upon Tubby. "Now you, the plump one, shall manufacture a similar solenoid." Maybe he didn't care for Hartnell's answering back. Perhaps he didn't choose me because I might be resentful to co-operate after that horrible ten seconds on the operating table.

Tubby—quite understandably—couldn't remember which particular key controlled the construction size, and all of us nearly jumped out of our suits when he grabbed the ejector-handle and a great roll of what looked like one-inch armoured transmission cable slammed itself down in front of him with an appalling crash.

With silent contempt, our guide moved about fifty yards along the gallery and indicated the Assembly Unit. He gestured towards another Great One hovering nearby, whereupon this individual temporarily took over the role of lecturer. He produced an immensely thin sheet of metal upon which I could distinguish certain shapes and symbols. The operator squatted upon a stand in front of the panel and commenced to press keys rapidly with all his tentacles, one after the other.

"This," explained Kem-lokko, "is what happens to components after their manufacture in the previous section of the machine."

Upon a viewing screen—which lit up to show an empty platform—we saw a bedplate fall into position. Then two large, geared rollers affixed themselves, followed by a series of square metal cabinets which Kem-lokko assured us were power units. Side plates miraculously came afterwards, together with peculiar tracks and various small impedimenta.

I recognised the thing as being one of the vehicles that these dwarfed, egg-headed geniuses used for travelling between the humped building and the lifeboat. This machine had assembled it—in little more than five minutes! Then the vehicle rolled silently away, leaving the platform bare.

A tentacle tapped my shoulder, making me jump. "You," said Kem-lokko. "You try to make a similar vehicle."

I crouched on the stool affair and tried to emulate



the demonstrator. Having only two hands, key-pressing proved a slower and more hesitant business, but to my reluctant delight I saw components dropping neatly into position. I made one serious mistake—which the lecturer promptly rectified by operating an eraser key—and completed the vehicle in eight minutes.

Hartnell drew a deep breath. "Now if that really happened—and we're not just looking at a motion picture on that screen—they've got something!"

"Elementary," said Kem-lokko. "Electronically-controlled construction engines have engaged our attention for many years. It is merely a question of building up by mathematical computation and arrangement. Now, may I suggest you make another vehicle?"

I seized the metal-sheet plan—which indicated by simple codes which keys to depress—and began again. The vehicle materialised this time in little more than six minutes.

"That was unnecessary," said the demonstrator. "See?" He tapped a master-key once—and the construction unit began to operate of its own accord. The fourth caterpillar car rolled off the platform in about four minutes—four minutes during which I felt my face growing redder and redder with embarrassment. If I'd had any sense I might have known that once the assembly unit had been "tooled up" for the job mass production could be child's play.

Kem-lokko let the lesson sink well in before leading us farther along the enormous control room. He waved a tentacle. "Power Transmission section. You have observed the tractor beams holding the three planetoids of our base in position?" Who could help it? "Power impulses travelling along an electronic path keep these struts firm and accurately in line. The same power intake operates our workshops."

It made Tubby raise his eyebrows. "Practically

the same as power by radio, eh?"

"That is true. For how, in the most simple and elementary form, does electricity pass along a wire? By activating component electrons in order that a bridge may be formed, over which a flow takes place. By producing a radio beam and activating its electrons, a bridge across ether is similarly formed. Input of power at one end of this bridge naturally causes an output at the other. The most difficult aspect of this work is moulding a neutronium lens of sufficient capacity to absorb power in quantity from the beam."

Another vision-screen lit up at the operator's command. It showed a section of star-lit sky.

"Is—is this genuine?" I stammered, foolishly.

"Certainly it is genuine." His considerable intelligence picked out the cause of my puzzlement. "Our own apparatus, of course, has the power of piercing the protective screen around this installation. Look again—and you will recognise constellations."

Brightest of the diamond specks—sight of which brought incredible nostalgia, for I wondered whether we might ever gaze upon them again with our naked eyes—proved to be a white dwarf star some fifteen degrees from the centre of the constellation of Virgo.

An operator commenced to tap keys. A faint, purplish beam shot out across the screen—but this time no artificial planetoid halted its progress. It carried across the wide, cold emptiness until its farther end faded against the dark velvet of space. And then—then a rough, grey piece of stone glowed in the grip of that beam, suddenly beginning to travel along the purplish, intangible path at enormous speed.

The vision-screen focus followed in its wake, maintaining an object-size of approximately six feet across. For a time much of the starry background remained obscured by perspective, and had it not been for the



slow, deliberate circling of constellations round the screen's perimeter we might have been unaware that the ore for a neutronium lens was hurtling outwards—at a rate far, far greater even than the speed of light—towards that dazzling dwarf star.

“Neutronium—a substance in which electronic particles are so closely packed that virtually no emptiness remains between them,” explained Kem-lokko. “That is the theoretical condition. So far, even we have failed to achieve it physically. The nearest approach, however, will shortly materialise. The electronic concentration is necessary in order that the lens may absorb sufficient electrons to produce the amount of power we require from the bridging beams.”

“I don't know how the others felt—especially the girls—but personally I began to wilt. I'd heard about neutronium before—the impossible ultimate of material substances. In atoms of most normal elements the electrons rotate around their central clusters of protons very much in the proportion of planets and suns, with comparatively enormous distances between them. But suppose these electrons to be jammed closely against the protons in a substance that comprised, to all intents and purposes, solid particles with extremely small orbits? Perhaps it's enough if I quote a scientist of the past who worked out that a piece of neutronium the size of a matchbox would weigh fully six hundred tons!

“The difficulty,” admitted Kem-lokko, “lies in obtaining sufficient heat and pressure whereby this extremely dense material may be moulded. It is solved by employing the conditions inside a dwarf white star.” By the way he said it, they might have been merely putting on a kettle to boil.

“Oh, sweet Sirius!” groaned Tubby. I knew he began to feel as despondent as myself about any method of defying these Great Ones—but wasn't that just what Na-grokk wanted?

Gradually the rim of that white dwarf star peeped beyond the hunk of hurtling ore. Control levers slowed its progress perceptibly, while dark filters built themselves automatically in layers across the screen to protect eyes from the immense glare. Just as the sun's corona is visible in times of eclipse, so we saw great streamers of flaming gases hurtling hundreds of miles into space from the raging cosmic furnace into which we ourselves might have been plunging dizzily. Then the entire screen sprang into bright light, save where a central blob indicated the lens-material.

Now pressures began to build up in front, due to increasing resistance near the solid centre of the star, and progress became slower. The operator watched affairs continuously, guiding his job by two curved levers to which he clung. Temperature must have been somewhere near 200,000 degrees Centigrade; compression millions of tons per square inch more than I cared to imagine.

It was impossible to see the beam, of course, against the blinding brilliance which forced its way through a layer of filters fully a foot thick by this time. Yet the dim, almost transparent outline of the lens gradually formed and was measured to an infinite degree of accuracy. Satisfied, the operator swiftly snapped off row after row of keys.

"Finished?" I asked.

"Not yet," said Kem-lokko, rather pityingly. "For if the substance of that star—which is of less density than neutronium—suffices to mould the lens, the lens itself must perforce be lighter still. But heed—here is the final stage."

I wondered how even the Great Ones might succeed in compressing the lens beyond present limits.

They did so by the simple expedient of cooling. So quickly that I failed to realise what was happening,



that pale blob of material found itself snatched from the depths of a white-hot star and poised in space—in a temperature (or rather lack of temperature) less than  $-270$  degrees Centigrade! Unimaginable tensions and pressures must instantly have materialised in that tortured plate of solid electrons as every molecule of heat became instantly dissipated.

"I don't see," said Tubby, "why it's being held just there. After all, space is as cold in one part as another. Why not start bringing it in and save time?"

Every question we asked seemed to demonstrate the ignorance of human minds. Kem-lokko must have been pleased.

"Because," he said, patiently, "we must wait until stresses have adjusted themselves. Premature drag against its mass by the retractor-beam might cause disintegration."

When the operator brought it in—pulling the lens close to the vision screen that we might all see the results of his handiwork—there remained a curved, yard-wide plate not more than a centimetre in thickness. It shone white as a giant snowflake, for its components were so thickly packed that even electrons in the wave formation of light could not be absorbed and were completely reflected. Then another beam seized the lens and placed it on the bare, desolate surface of the planetoid at a point not far from the wall of the humped building.

"Come," said Kem-lokko, as though the operation was of no great note. "There is much more to be seen."

No doubt there was, but we were all tired and washed out.

"I could do with a drink," said Tubby. "Something to eat, as well. How about you girls?"

Kem-lokko, overhearing, extended hospitality. "We

are near the Atomic Conversion Unit. Therein shall all your desires be granted, for we already know of the curious substances necessary for human nourishment."

"More of de Brassey's work, I suppose," said Hartnell, but our guide took no notice.

Control boards extended through another gallery with impressive monotony. "Here," we were told, "are the machines which build other substances from any given material by interchange of atomic particles—"

"Ever tried making iron?" asked Hartnell, blandly.

Theoretically, I knew a bit about this, but I wasn't going to show my ignorance again. Tubby, however, barged in cheerfully. "Ah," he said, knowingly. "Controlled nuclear fission—"

"Fission is wasteful—criminally wasteful," said Kem-lokko, severely. "For thousands of years we have employed atomic fusion, and the power which is a by-product from the operations serves all our apparatus."

What I'd heard about fusion—as opposed to the better-known fission—concerned, basically, the hydrogen atom, with its official weight, in the chemist's tables, of 1.08. Four hydrogen atoms, when fused, provide one helium atom. Yet the atomic weight of a helium atom is only 4.30; the remaining .02 dissipates itself during fusion. Such an amount might seem minute of itself, yet in the Dark Ages of the twentieth century Man had employed this method to make a hydrogen-fusion bomb capable of destroying a continent.

Needless to say, the Great Ones had taken the principle of fusion far beyond anything Man had devised. Elements became transmuted with incredible simplicity—boron from nitrogen, oxygen from sodium, magnesium from silicon—and entirely new ones constructed, building them from electrons as simply as a mason builds a wall with stones. Except—as young



Hartnell had taunted them—the precious iron for which they had sought through incredible depths of space and had now located here in our own system. And which, moreover, they intended to take, regardless of prior claims. Nor, so far as I could see, did mankind or our allied species possess any means of preventing them.

Fluorescent tubes flickered frighteningly in a darkened control room packed with bare electrodes and test apparatus. There were the inevitable screens and endless tiers of control panels. Coloured signal lights winked incomprehensively and gauge-needles gently oscillated.

“You shall be served with a meal such as suits you,” announced Kem-lokko. He turned to me with a certain grim humour. “Here is the container-unit. Build yourself such vessels as are necessary.”

After assembling a caterpillar tractor, this was easy. The operation proved to need only half-a-dozen or so touches on buttons—and there in the vision-screen materialised a neatly fashioned drinking cup. Not intending to be caught again, I set the repeater going and moved an ejector lever. Five cups emerged from a slot on to the desk before me.

“Looks like the gadget they make their test-tubes and things with,” said Harntell. “Let me have a try.”

I knew he’d been dying to do this all along, so I made way. Anything in the nature of an elaborate mechanical toy exercises peculiar fascination for him.

After a couple of very lopsided plates and another that for some reason had tried to tie itself into a knot, we soon possessed sufficient crockery.

We weren’t allowed to operate another machine farther along the line, but the official controller produced under Kem-lokko’s direction an assortment of shapeless eatables among which were recognisable slabs

of meat fibres and quantities of fruit pulp. They had rather a metallic taste, but went down well enough, even though Louise wondered whether the stuff was made from anything more appetising than manganese.

While we ate, under the curious stares of operators, Hartnell whispered "Get us out of here as soon as you can, Pop! I've got an idea!" He cast a hurried look over his shoulder, but the translator box stood several yards away.

Then Kem-lokko filled our cups with a peculiar, colourless liquid that for a moment I thought might be water, until the odour stung my nostrils.

Hartnell took a sip and made a wry face. "Now I'm sure they got their ideas from de Brasseÿ! This stuff's meant to be whisky!"

"You do not care for this beverage?" inquired Kem-lokko. "Some trouble was taken to match it exactly with your companion's description. He announced himself as gratified with the product."

Rather stiffly, I said we neither cared for our "companion" nor his drinking tastes. We were very tired, I went on, and wished to sleep. We had had an exhausting day—especially myself, as he well knew.

"That is true, of course. Your companion, also, has times when his body needs rest for as long as several hours. Come—I will escort you back to your room. In any case, the tour cannot be contemplated during the present period of activity."

Eventually we found ourselves back in the chamber containing those very comfortable couches. I lowered myself gratefully into springy depths.

Young Hartnell grinned. "Bit more comfortable than that operating table, eh, Pop?"

I started to say just what I thought of him, when



I saw the girls sitting there and bit back words I would have regretted using. Instead, I asked "What did you mean about having an idea?" Not one of your usual hare-brained schemes, I hope—?"

He yawned and lay back. "Tell you later—"

"In any case, we're locked in, so we can't do much."

He waved a hand airily. "Oh, I've attended to that!"

# 7

## *Plot and counter-plot*

**D**URING the years Tubby and I have travelled with young Hartnell we have learned his weakness for hugging a mystery to himself. I don't suppose for one moment there's any actual malice or real annoyance intended—it's just that he likes to gloat over his secrets for a little while.

We knew, therefore, that only frustration would result from any attempt to cross-examine him about the locked door, so we stretched out to get what rest we could. Who knew how short a while might elapse before Kem-lokko's return to take us on further wanderings?

"He seemed quite sympathetic and all that," remarked Hartnell. "Not a single squawk of dissuasion when we wanted to take time off—"

Louise put into words what I was thinking. "Perhaps he thought we'd seen enough to persuade us and wanted impressions to sink in—"

"Exactly! Or, maybe, to drive some sort of wedge into our united front." He chuckled. "Anybody feel like going over to the enemy?"



I didn't consider it a laughing matter. "Of course they don't," I said, stuffily. "The main point to my mind is this—we've let those egg-headed horrors take the initiative so far. When are we actually going to start doing something about warning our folks?"

Tubby emerged from sombre brooding. "How long?" he asked. "That's the question, isn't it? How long before these Great Ones are ready to begin operations?" He paused. "Anyway, there's no means of getting a warning out." A dreadful feeling of helplessness swept over me. Tubby had always been very much of a realist. His despondency appeared justified this time.

Silence lasted so long I wondered if everybody else had dropped off to sleep.

"There's de Brassey," said Louise, at last, with a nervous tremor in her tone. "What about him?"

"Ah, yes!" said Hartnell, as though he'd only just remembered. "De Brassey! Now it wouldn't surprise me if he doesn't shove his ugly head through that door before long—"

"He's probably got in front of an amplifier at the moment," I warned him, sourly, "hearing what you're saying about him."

"Well—we'll see what happens."

His off-hand manner didn't deceive me for a moment. I was convinced young Hartnell had hatched some deep-laid plan. I'd seen the symptoms before.

Quiet fell again upon the little room. This time it persisted. Soft, hidden light—mysterious source of all illumination in these subterranean regions—flooded the place with restful radiance. I began to doze fitfully. In more homely surroundings I might well have dropped into deep sleep, but with reminders of the Great Ones' presence all round and with still vivid memories of what they'd done to me on that operating table, I felt nervous and unsettled.

Probably half an hour elapsed before the door slid

silently aside—not much, merely sufficient for de Brassey's lowering features to peer furtively through the aperture. Seeing that we apparently slept, he came right into the room and the door closed behind him.

Tiptoeing towards the girls' couches he stood for some time looking down at them. Then he moved towards Tubby. With infinite care and a facility which demonstrated clearly that he had carried out such nefarious jobs before, de Brassey examined one by one the articles in Tubby's side satchel. He was looking for something—a definite object; had he sought merely items of use to anyone marooned in a planetoid wilderness he might well have taken the lot. Once Tubby turned and snorted in his sleep while the man examined outside pockets of his suit. De Brassey quickly dodged out of sight at the head of the couch and waited, breathing silently through open mouth and his eyes continually roaming the silent room in case others among us stirred.

After what seemed an unconsciously long time he moved across to me. The strain of remaining motionless while those questing hands moved featherlight through my pockets was pretty grim, and when I couldn't stand it any longer I eased myself and grumbled slightly, as though still sleeping. Whatever it was that he sought, I hadn't got it.

Hartnell's suit next received attention. At this moment I might well have grabbed him, yet curiosity concerning his errand stayed my hand. In any case, perhaps his mission held no selfish aim but was being carried out at the behest of the Great Ones.

It was while de Brassey's hairy fingers groped inside the satchel that something happened which made him leap snarling to one side, momentarily scared out of his wits. He caught sight of Hartnell's face. The eyes were wide open now—regarding him steadily.

"Finding everything you want?" inquired Hartnell, sourly.



De Brassey dropped the satchel. It made a subdued, plopping sound on the floor of that hushed, tense room. I tried to imagine the desperate thoughts racing through the man's mind.

Then he showed his teeth again in that characteristic, half-animal grimace. "Not yet—but I'll have it before I leave—"

Hartnell laughed deep in his throat and entirely without humour. "You . . . won't . . . find . . . it . . ."

The slowly-spoken words held some import for de Brassey. I could tell that by his flicker of expression—a fierce, hunted look passing quickly across his ugly features. He licked lips grown suddenly dry with alarm.

"Anyway," asked Hartnell, "what's it matter—out here?"

The man squared his burly shoulders with an effort. "Right enough—" His muscular frame swelled again with confidence. "Nobody can do anything to me—not here—"

"Say that over to yourself a few times," taunted Hartnell. "You'll get a lot of comfort, I don't doubt!"

The entire business had me baffled. Hartnell and de Brassey seemed to have reached some sort of understanding, judging by this verbal fencing, yet for the moment I failed to grasp its significance.

Then de Brassey's expression changed yet again, realising that this very admission had betrayed him.

"So they're really looking for you, after all," challenged Hartnell, softly. "Didn't you believe what you overheard behind the door in the lifeboat—that we're only a humble Inter-X party?"

"Anybody in my position can't be too careful—"

"You're a fool. Aren't we all prisoners here? Haven't you had a close look at our ship yet? Didn't you see the Inter-X number on her?"

De Brassey's breath hissed inwards. "Then—?"

"You couldn't rest, could you? A guilty conscience made you give the game away!" He laughed, but on an

easier note. "Still, as we said—what's the matter?" There was a short, reflective pause. "Look here, de Brassey, never mind that for the moment—I've been wanting to talk to you—"

Through slitted lids I saw the renegade's shifty eyes flash in hopeful surprise. Hartnell sat up cautiously. "Are all the others still asleep?"

I snapped my eyes shut, waiting until he had made a tour of the couches—until he had bent over my motionless form and his heavy breathing had died away again. Satisfied with his scrutiny, he returned to Hartnell and they commenced conspiratorial mutterings in so low a tone that I could scarcely hear.

"Listen," said Hartnell, "I've been thinking things over. What guarantees have these Great Ones given about the rewards they promise? If they're satisfactory I might consider going over to their side—"

De Brassey's counter-question came suspiciously. "What's made you change your mind?"

"Two or three things—but one more than most." He gave a slight, convincing shudder and must have jerked his thumb. "I've seen those machines back there—that rainbow-torture gadget—I've had a first-hand account of what it does to a man—"

De Brassey cackled softly. I risked opening one eye, just in time to see Hartnell lean forward confidentially. "I've got to be certain. How do we know the Great Ones won't kill us off when they've learnt all we can tell 'em?"

"They can't kill everybody, can they? Who's going to run the planets they take over? They've got to have somebody to pass on their orders—act as local administrators and all that." He paused, licking fleshy lips. "They won't let us down. Get in with me—on the ground floor, as they used to say." It was the voice of the tempter. "Once they've allotted you territory you could have anything there that you wanted—anything!" He licked his lips again. "How about the others—these



girls, for instance? What do they think?"

Hartnell made sounds of disgust. "Them? They've got outdated ideas about loyalty and all that. They won't shift their ideas. There's some plan for trying a getaway—"

"Huh?" De Brassey's surprise was ludicrous. "Getaway? How can they?"

"Have you seen those machines? There's one that uses a force-beam or something—it gets through the barrier. We saw 'em push a chunk of stone through—we could see the stars, too. Where a piece of stone can go—a ship can go!"

"You've got it all worked out, haven't you?" The man's voice assumed a suspicious, uneasy intonation.

"They have!" amended Hartnell, quickly. "They have—me, I'm not so sure. Anyhow, if it's going to be nice and easy for us after the Great Ones take over, as you say it is—I don't particularly want to go." He appended a sentence with peculiar implications. "Any more than you do! And you've got a pretty good reason for staying under cover, haven't you?"

De Brassey changed the subject hurriedly. "What about fuel? Did they know the Great Ones emptied tanks in both ships? They won't get far without fuel."

Hartnell's voice sank again. "The Great Ones made a mistake in tactics! They let 'em see how the conversion unit operates. That can make fuel, can't it? Any sort of fuel they want—"

De Brassey's lips pursed in a whistle. "Artful, eh?" He reflected, briefly. "It might work, at that—"

"They think so. Now I'll tell you what we'll do. Let 'em get on with trying to escape, see? The nearer they get to doing it, the more the Great Ones'll be pleased with us when we tell 'em!"

De Brassey emitted that awful chuckle again. "You're a cunning so-and-so, all right!" His voice sank again. "Here—you don't think they'll really get away?"

"Not if we tell Kem-lokko what's happening. Where is he now, by the way?"

"They're all there in the temple." He became confidential and loquacious. "They don't have rest or sleep as we know it. They break off every ten hours, though, to get what they call inspiration from old Calculus." He guffawed. "Doing their sums, I call it—"

"Shut up!" grated Hartnell. "We're being overheard! Remember?"

"Not now! I'm the one who had the regular job of listening. The Great Ones only came along now and again—"

"Oh." Hartnell seemed mollified and more at ease. I wondered why he couldn't see the double-crossing gleam in the renegade's eye. "That's all right, then. Now don't you forget to tell 'em I'm on their side—" His voice assumed an anxious inflection. "You'll do that, won't you?"

"Eh? Oh, yes—sure, I'll do that!" De Brassey cast another glance round the room. "I think one of 'em's stirring—I'd better be off." He moved to the door surprisingly swiftly and silently for a man of his bulk.

"Just a minute," said Hartnell. "Why not get yourself in here with us? Two can find out better what's going on."

"Hm. Maybe that's an idea. I'll see what I can do."

He pressed on the door simultaneously with all eight fingers and it slid aside. He winked knowingly at Hartnell in farewell and bared yellow fangs in the travesty of a smile.

If nothing else came of the interview, at least we knew now how to open the door. With this comforting reflection, I closed my eyes and slept.



## II

We awoke to find Kem-lokko and Co. at our bedside.

"Attend, O humans!" he intoned through the inevitable translator box. "You are bidden to witness further achievements of the Great Ones. Behold!"

Two subordinates carried in a small cabinet somewhat similar to the translator machine. They paused and adjusted various controls, while we stood around expectantly. Then the room became filled with the music of a violin.

"Why," said Valerie, in surprise. "That's my recording!"

"No," corrected Kem-lokko. "It is the creation of the Great Ones! Listen!"

To the best of my recollection, their handiwork was a perfect copy. I knew that for many years the production of synthetic orchestrations had been possible for our own scientists by several methods. For instance, sound vibrations could be translated into lines of varying thickness and spacing upon a translucent film which operated a photoelectric amplifier. A certain section of vibration patterns represented a certain note. Thus it became possible to inscribe upon film vibrations capable of reproducing notes which had come from no musical instrument—moreover, notes of mathematically accurate pitch. Now the Great Ones had done far more than this—they had reproduced not only notes of true pitch and timbre, but actually modelled the mood and "feeling" of the piece as Valerie had played it.

"We have indeed duplicated the performance," said Kem-lokko. "Perfectly in every respect."

"It's true!" exclaimed Valerie. "It really is my playing!"

Just then I caught sight of Hartnell's face. It bore an expression that filled me with foreboding.

When the recording finished and Kem-lokko stood by as though waiting for compliments, he stepped for-

ward in a way that showed my fears to be justified.

"We acknowledge the cleverness of the Great Ones," he said. "And now—let us hear another melody, similarly played!"

Kem-lokko stood transfixed. "Another?" His voice was shrill, even apprehensive.

"Another!" demanded Hartnell, firmly. "With all the nuances and interpretation of the first!"

There was a silence so intense that I held my breath. I began to see the reason for his challenge, yet at the same time trembled at his temerity. The hush was broken by Valerie's gasp of understanding.

"We have no other prepared," said Kem-lokko. "Yet where one has been achieved, the science of mathematics can proceed on that basis to complete the formula for another." I think he sensed our unspoken disbelief. "Na-grokk himself shall be consulted! The sacred machines in the Temple of Calculus—never used save on occasions of utmost importance—shall be employed to solve the problem! You will quickly find your limited accomplishments eclipsed. Not lightly are we known across the universe as the Great Ones."

His sneer was unworthy of such a reputation. Obviously, to use Tubby's phrase, they were "rattled." Moreover, Na-grokk had said the problem would be shelved, but apparently the challenge was too provocative to ignore.

The party went out with obvious displeasure and concern, taking with them the translator box and record player.

"You've done it now!" said Louise, her hazel eyes flashing with mingled alarm and amusement. "I don't know what—but you've done it!"

Hartnell grinned. "I have, haven't I?" The grin faded. "Look here—it's my bet there's a general assembly in the temple. We'll go and get busy on the converter machines while the egg-heads are away."



I stood there dumbfounded, my mouth opening and closing but no sound issuing. What madness was this? Surely he hadn't been serious when he told de Brassey that tale? And in any case, what was the use of following a plan which the renegade had undoubtedly betrayed? I just didn't see the sense of it.

"But we can't get out," protested Valerie.

"Oh, yes, we can." Hartnell placed all his fingers in position on the door and pressed. It opened. The corridor was deserted.

Hartnell's guess must have been correct. We saw no moving thing during an apprehensive trip along the galleries. All of us remembered the way quite well, yet every second I expected the swift grip of a tentacle or the harsh squeak of outraged challenge.

"Think you can work those gadgets again, Pop?" asked Hartnell.

I shook my head. "I doubt it—even if we get inside the place."

Nevertheless, we did. I saw again the serried tiers of keys and control panels. "I've got no pattern," I complained. "I'll probably blow the things up—and ourselves with 'em!"

"Don't be so confoundedly helpless, Pop. I know human beings only have limited accomplishments, according to Kem-lokko, but try that screen and beam business again."

I licked dry lips. Crouching on the undersized stool, I tapped the first three or four keys very gingerly. The screen showed a star-strewn sky, the beam shot out, and along it—kept miraculously in focus—sped another chunk of grey ore.

Aghast, I said "Look here—I don't want to make neutronium lenses!"

"What we'll do with the thing when we get it, I don't know," confessed Hartnell, "but if you can't short-circuit the beam I'm afraid you'll have to."

"But what's the idea?" I wailed.

And while I hung desperately to the controls, seeing again the circling constellations, young Hartnell actually had the coldblooded nerve to admit that he only wanted the force-beam to be manipulated somewhere immediately outside the building. "Just to pick up something," he went on. "You'll have to watch out when the beam brings that lens in—that's the important moment. Last time I saw seven tanks on the screen near where the thing was dropped. I want 'em taken to the far side of the lifeboat—"

"Is that all?" I gasped.

"In any case, I don't know what you're sweating about! Hasn't this machine got a repeater key, like the one that builds caterpillar cars?"

For the second time I reddened with embarrassment. I was so furious I couldn't have cared if the entire place exploded. "Maybe the pattern's been set differently since we were here," I said, gruffly. "I'd better see this through."

And see it through I did. Right into the very heart of that dazzling white dwarf we travelled, seeing the lens fade before its corruscating brilliance to a pale, transparent shadow. I shaped it—whether accurately or not I never cared—and pulled it out to cool in the frigid depths of space. Then I brought it back to this astounding miniature cosmos which the Great Ones had constructed and hidden behind the screen of black vapour.

Fortunately I found a means of slowing the progress of the lens before it landed. The beam swung wildly, almost out of control for several seconds, but the grip never loosed and while we followed its fantastic, whirling path across the desolate landscape the screen brought us maddeningly brief glimpses of store sections.

"There!" said Hartnell, suddenly. "Those tanks!



"They're fuel from the lifeboat!" For a moment I thought that in his excitement he might snatch the control bars from my hands. "Go on—grab 'em!"

More by luck than judgment, I grabbed 'em. Where the lens rolled I didn't know. Perhaps its very weight drove it so deeply into the rock that it was lost for ever. At least, we never saw it again.

"Careful now—and quickly! Take 'em over to the far side! There it is! Look out! Don't shove the whole ship over!"

In spite of all this "back-seat driving," I dumped the tanks in the spot he indicated. How he hoped to get them inside the lifeboat I couldn't tell.

"Now then," he went on, "let's push along to that place where Kem-lokko served us that awful food. I want to make some emergency supplies and one or two other gadgets."

I found myself sweating copiously—not only from fear of discovery but because of a dreadful feeling that each key of the fantastic machine I depressed might set alarm bells clanging all over the place or cause damaging explosions. As it was, everything went fairly well. I say "fairly well" because a lot of the work was trial and error.

Hartnell's aim was to accumulate sufficient fuel to take one of the ships back to our own part of space, as well as stores of food and water to last fully six months. The food side of the operation didn't prove difficult, since the pattern remained in the machine, although I shuddered at the thought of living for weeks on end on synthetic meat and fruit pulp. We had a slight accident trying to fill water tanks, and the first three came out slopping over with some thick, dark-green fluid which smelt abominably and which Hartnell said was horribly radio-active.

"Keep that beam alive, Pop," said Hartnell, urgently "Don't lose it—or you'll have to take another neutronium lens on its journey!"

Thus warned, I handled the controls with infinite care, although I put our chances at less than a thousand to one.

"Look," I said, "how are you going to get the stuff inside?"

He tut-tutted, in a pained way. "Why do you think I've gone to all the trouble of putting the stores into cylindrical tanks? What's to prevent us pushing 'em through a visi-port with that beam?"

I thought about this for a moment. "Only the fact that I'm not so clever as Kem-lokko's operator. I might drive 'em right through the other side—"

"How can you talk like that?" he demanded, in disgust. "You—a full-grown man—letting yourself be beaten by an egg-headed little so-and-so—"

In the end I managed to dissuade him. "Anyhow, someone's got to break out the loading hoses to get the fuel on board, so why not take the stores in at the same time?" I had misgivings, but I didn't mention them

All right, then," he said, reluctantly. "I suppose we'll have to dump the stuff and hope the Great Ones don't notice it."

We were only just in time, too. Hartnell had some other scheme involving the Construction Unit, and while Tubby performed mysterious business with those solenoid-producing keys, I started to shift the remaining stores to a point near the fuel tanks, where they were shielded as much as possible from casual view by the tail-fin landing gear.

Guided by an image on the viewing screen, I manipulated the beam carefully. The two ships stood



in clear observation—the small, slightly battered life-boat from the Argo Star and our own larger, more squat and powerful vehicle. Around them spread the ragged, desolate rocks of the planetoid landscape—still bare and inhospitable. Such intense concentration was needed for the work in hand that I nearly missed seeing the bright speck which materialised suddenly in the top left-hand corner of the screen—a tiny, shining thing moving alongside the purple beam that linked the worlds.

“Hey!” I said. “Come and look at this!”

The glistening image resolved itself into a circle. It was travelling with immense swiftness and had more than passed the half-way mark of its journey before understanding came. “It’s a ship!” I cried. “A ship—bringing more of ’em from the other world!”

“Come on!” said Tubby. “Swing that handling-beam somewhere safe, and let’s get out of here!”

Hurrying the girls before us, we made tracks towards our lodging. The local contingent of the Great Ones apparently remained in conference with their sacred image of Calculus, trying to play the violin by mathematics. At least, we again saw none during a frantic dash along the corridors from that amazing machine room.

Breathless and shaken, we reached the little apartment. As I watched the door slide quickly into position, mingled reaction and relief left me trembling. “What d’you think they’re coming here for?”

Hartnell shrugged. “Bringing their great minds to bear on the problem, I suppose.” His manner was strangely offhand. More than ever I became convinced he struggled with some vital problem.

Then the door opened to reveal Kem-lokko once more, complete with escort holding the inevitable translator box. The machine didn’t have a great deal of

work to do on this particular trip. Kem-lokko's piping little voice uttered one word. "Come."

Tubby heaved himself off the couch with a sigh. "Here we go again."

I didn't say anything just then. A horrible premonition was borne upon me that events in the immediate future held an awful significance—for ourselves as individuals and for the entire human race.



# 8

## *Formula for fine arts*

**W**HEN we entered the Temple of Calculus again, I don't think any of us doubted that there, in the serried ranks before those figures on the triple throne, we gazed upon the entire vanguard of the Great Ones. The scene was so outlandish—row upon row of immobile, hairless domes between which we passed like wading through a sea of huge, grotesque eggs. Any laughter—hysterical and humourless though it might have been—died in my throat when I saw what lay beyond the strange image of Calculus and the place where Na-grokk stood.

In a vast, adjoining hall which earlier had been screened from our sight, fully five hundred Great Ones hunched themselves in attitudes of horrifying humility before control boards even more impressive and complicated than the industrial arrangement at which we had tried our hands. These must, we realised, be the sacred calculating machines—capable of solving all problems. In weird unison, to a peculiar, incomprehensible chanting, they swayed from side to side. The slow, heaving rhythm appeared in some way obscene, and despite the unhurried solemnity of the occasion we

detected undercurrents of haste—almost despairing haste—as though sacrilegious impatience was held in check only with difficulty. And then I realised from the general atmosphere how unprecedented crisis must have arisen in the affairs of the Great Ones. I knew, too, that our lives hung by a thread.

Staring all the time at those swaying figures working the calculating machines, we moved quietly to a point near the throne.

Valerie was first among us to make a sound. "I—I'm frightened!" Her little, whimpering cry made me turn suddenly, seeing her eyes as wide, blue pools of alarm behind the helmet facepiece.

"Steady!" I said, encouragingly. "Steady!" I didn't feel very much that way myself.

The entire temple seemed filled with terrific concentration. Na-grokk's triple figure turned leftwards, gazing towards that titanic encounter raging at the control boards. A lot of effort seemed to be going into the proceedings; I didn't know what it was in aid of or what results they were achieving.

At last the tension eased with a tumultuous sighing. Little ripples and eddies became evident in the sea of bald domes as the Great Ones stirred, while here and there we caught flashes from purple eyes. Those performing rites at the machines sat back limply, watching lights flicker with bewildering rapidity.

This pause in the proceedings enabled them to pay a little attention to us. Now we noticed for the first time that two groups stood on either side of the throne and from their especial interest I gathered that here we saw leaders of parties who had come from the other worlds of the artificial system.

One of them spoke, in the same thin, reedy treble as Kem-lokko. "Which is the hairy one who is prepared to co-operate with us?"

He meant de Brassey, and at that very moment



another group of Great Ones brought him in, swaggering as he walked with powerful, arrogant strides between the clustering dwarfs. He saw us and showed his yellow teeth again, saying "What's all the excitement in aid of?"

Valerie and Louise turned away from him again—a gesture of contempt which brought a dangerous light to his hot, dark eyes.

"Another has also agreed," announced Kem-lokko. "The tall one whom they call Hartnell!"

Only then did I realise that none of the others knew about de Brassey's furtive visit to our room or the spurious bargain which had been made there. I saw their expressions suddenly freeze into masks of horror and consternation; I heard their gasps of startled disbelief. It was pretty cruel on them. Any explanation I tried to make now would be seized upon by that confounded translator box and made intelligible to the Great Ones also, besides giving the game away to de Brassey. The shock must have been brutal, but what could I say?

Tubby's eyes bulged almost as though on stalks, and his plump jaw dropped ludicrously. He nudged me. "What in Betelguese does he mean?"

"Search me!"

He looked at me in a peculiar way. "You two have hatched this up between you—"

"Nonsense!" I said, quickly. "Shut up!"

"Is this right?" asked Louise, in a strained voice. "I'd never have believed it of Hartnell—"

"Nor me," I said. I hoped I sounded convincing.

Hartnell's gaze was upon me, suspicious and threatening. In a hard voice he demanded "Were you skulking there awake all the time?" He didn't go into details about the time and place, but I knew very well what he meant.

"Yes!" I said, between my teeth. "But till now I didn't believe it!" I let my voice sink to a low, appeal-

ing whisper. "You don't mean it, do you? You wouldn't be like him?" I jerked my thumb at de Brassey with marked contempt. "Nobody from Inter-X can chuck their conscience on one side—"

He stuck his chin out. "Let's have some realism in the situation. You've seen what we're up against—" he waved a hand "—those terrific machines and all that—even this set-up of the three planetoids. We can't hope to keep up resistance any length of time against the odds they're bringing against us—"

"You've changed your ideas pretty quickly—"

"I've come to my senses, that's all—"

Na-grokk didn't allow this apparently futile argument to continue. "Two have agreed to obey, then? That is good. It provides a more solid basis from which to calculate. Immediately this present ceremony is concluded, the sacred machines shall be employed upon reckoning the probabilities. That is a holy directive; the Chief Executive shall engage himself therewith."

Kem-lokko gave a brisk, bobbing bow of acknowledgment, and the three upon the throne bent themselves in reply.

What precisely was the power of these fantastic mathematical machines? Whether they worked upon the same principles as our own electronic calculators I hadn't the faintest idea, yet I perceived a clearer glimpse of what these Great-Ones meant when they insisted that to mathematics all things were possible. Suppose, as a basis, some particular course of action indicated itself. Dividing and sub-dividing to an enormously complicated pattern from this one supposition were practically endless opportunities. What single brain might sort out the most promising?

The situation possessed similarity with those very early calculating machines which succeeded in playing chess. At each position the apparatus worked out all possible moves and counter-moves to the end of the



game as it then stood, selecting the piece which nearest fitted a winning mathematical target. Move by move this process was repeated, the machine forcing an opponent into a narrowing trap until at last so few pieces remained on the board that chances could be summed up by the human brain after merely a glance. (Incidentally, I never remembered hearing what happened when machine played machine.)

Now the Great Ones had adapted this system to real-life problems—problems which must be immensely more complicated by reason of the many additional factors involved. Yet the basic theme remained comparatively simple, despite the untold billions of alternatives that must be computed.

I remembered how electronic calculators had always proved objects of wonder to the uninitiated all through the centuries. In reality these machines merely performed the childish task of adding one and one. After all, take such an exercise as multiplying, say, 405,166 by 28,462. Add one and one together sufficiently often and eventually they make up 405,166. Now arrange, by means of various devices, that the machine shall repeat this action 28,462 times—and the number indicated at the end of this process is the answer. Performed by human beings, the method would prove long and tedious; electronic systems, however, work so incredibly quickly that if such a simple test were fed into a modern calculator it would contemptuously spit out the product in less than a ten-thousandth of a second.

“Obedience—that is the essence!” declaimed Nagrokk. “Fundamental facts are necessary, otherwise calculation becomes unnecessarily involved and less precise.”

I looked at the others. Four of us—the girls, Tubby and myself—had unconsciously moved away from Hartnell and de Brassey. It seemed in that moment as though we feared to contaminate ourselves by close proximity

with two who were ready to betray their fellow-creatures on a hundred different worlds.

Tubby's plump, white face showed assorted emotions of puzzlement, grief and sheer rage. Didn't he, I wondered, have even one single suspicion that Hartnell was playing some deep game? Then, for a long, dark moment, my own heart sank, for I realised that I, too, had no absolute guarantee. Perhaps, after all, he and de Brassey were right in choosing the line of least resistance and going over to the other side in the face of such formidable opposition. Was his preparation of stores and fuel for the lifeboat merely a ruse to deceive us?

Fortunately, I had no time in which to pursue these melancholy reflections, for a sudden stir at the far end of the temple brought an immediate atmosphere of tense expectation.

That unholy chanting broke out again deep in the recesses of the huge hall, and weird gongs sounded with eerie rhythm. A dreadful hush lay heavy upon the bizarre assembly, and we held our breath in frightened surmise.

The great calculating machines now rested dark and silent, with operators sitting motionless before the controls. In the dim light I looked again at the representation of Calculus, with its tangle of bewildering curves and angles. The thing looked powerful, soulless and brooding—somehow, in a horrible, evil manner—alive—watching.

Slowly there glided into view a long procession of Great Ones carrying oddly-fashioned wands and beating queer instruments that emitted a hollow, booming sound. They circled Calculus to the accompaniment of much obeisance and ceremony, then wound along a predetermined path round the hall to congregate near Na-grokk's throne.

"What are they doing?" demanded Valerie, in an



almost hysterical whisper. "What are they doing?"

I didn't know. I kept my mouth shut so that I might not betray my own feelings by croaking an answer from parched vocal chords. My knees didn't feel at all steady, and a clammy sweat of apprehension oozed from every pore.

A group of Great Ones centrally situated in the procession bore yet another of the strange, boxlike containers similar to those we had seen before. This, with considerable dedication, they lowered into position before the throne.

Kem-lokko took charge. He spoke aloud—but whether as part of the official procedure or in order to enlighten human members of the audience I couldn't say.

"Hear, all men!" he intoned, in that uncanny treble. "The Council of Na-grokk has investigated the phenomenon of sound made available to all personnel by means of the station broadcasting system during Period of Activity No. 27. This phenomenon has been investigated by the Choirs of Calculus—" quite a picturesque description, I thought, of the gangs who operated the giant computers—"and reduced to mathematical formula. Such action was taken in the interests of research, since this particular sound pattern had not previously been noted, and also as proof of our religious belief that all things are possible under the creed of Calculus. This last we have done to convert those present here—" he waved a contemptuous tentacle in our direction—"to the belief that nothing within their own power lies outside our own."

A murmuring of assent and approval rose to the high roof.

"In itself," continued Kem-lokko, "the achievement is small, if not actually futile. It consists of arranging a series of vibrations in an eight-toned scale so that unusual and admittedly pleasing sound patterns are produced. In order that memory may be refreshed, the

first recording shall be repeated."

Once again there came to our ears from the box before the throne those sweet, singing strings, the bobbing, jiggling melody and the bright arpeggios. While it played there was no other sound in the hall.

"And now—the composition arranged by manipulation of mathematical formulae in accordance with laws derived from the original. It is scientifically accurate in pitch and timing; timbres and emphasis are perfect; supertonics, harmonisations and rhythm have been brought to consummate effect." He broke off and drew himself up impressively to a full height of three feet. We didn't feel like laughing. We were all far too frightened about what we might hear in this mathematically perfect music.

Sounds issued once more from that uncanny box—sounds of a violin which had been played by no human hand. Tune and rhythm were in exactly the same mood as Valerie's melody—arpeggios flashed and glittered in decoration around the central musical theme, harmonies were precise and accurate.

It was awful. The notes, the chords, the tone—all were dead, mechanical. As Tubby said afterwards, a hand from the tomb rested on those bright, rhythmic melodies. The nearest parallel I can draw is comparison between a first-class concert soloist and an automatic piano—each playing the same tune, each striking the same notes with consummate accuracy, yet obtaining different results.

The last string vibrated into stillness.

The hush which remained hung so thickly that it lay like clammy, invisible cobwebs upon us, stifling and horrible. No doubt remained but that the Great Ones perceived the difference quite as easily and dramatically as ourselves. For us it was a grimly humorous vindication; for them it was little short of utter humiliation.

"Why didn't they have the sense to try it out before-



hand?" asked Louise, gleefully. "Then they wouldn't have made fools of themselves!"

I supposed they merely had to take results from the big batteries of calculators as gospel. I didn't feel like laughing. I looked at Hartnell. His face remained impassive. De Brassey, on the other hand, seemed thunderstruck.

Nagrokk made no bones about matters, however. "Some acolyte of Calculus is guilty of sacrilegious negligence. Let the calculations be repeated from the very beginning—"

I don't know what suddenly possessed me in that moment of grotesque anti-climax. I stepped forward right up to the throne so that my face remained on a level with Na-grokk's, and looked steadily into those blazing purple eyes.

"No!" I said, loudly, trying to ignore the frantic beating of my heart. "The answer would remain the same! Here is a task lying even beyond the power of Calculus himself!"

Uproar hammered and shrieked at my ears. Cries of unimaginable rage and indignation rose upon all sides—high-pitched, screeching protests against unnameable blasphemy. I heard Tubby's urgent voice yelling "For the sake of sweet Sirius! Shut up, Pop! Shut up—they'll tear us to pieces!"

"What's it matter?" I shouted, savagely. "Can't they face the truth? Great Ones!" I spat the words with all the scorn I could concentrate. "Too great in their own estimation to admit when they're wrong!"

Silence slammed down as though some immense door suddenly shut off that shrill cacophony of fury. My closing words bellowed eerily through the hall, setting echoes booming in far, mysterious recesses.

I became aware of Na-grokk holding up three tentacles in a commanding gesture, so that all the outlandish throng fell silent before the magic sign.

He spoke coldly but without definite malice. "Hear me, O gross creatures of Earth! You have made accusation against matters which we hold sacred, transgressing in a manner such as have never before been known! Indeed, so unforgivable and unheard of is your offence that no punishment sufficient for its expiation is listed in our annals." His tone became indescribably stern. "Yet be certain we shall devise such punishment unless argument is immediately forthcoming to justify your words. We are logical, but we are just. Therefore I say unto you—speak!"

I licked dry lips. Little sounds of alarmed concern from Valerie and Louise didn't do much to bolster my spirits. My knees trembled so violently I had difficulty in standing still.

"O Na-grokk!" I began, trying not to sound too hoarse and fearful. "Our minds may seem negligible besides those of the Great Ones who have entered our universe to take by superior force that to which they hold no rightful claim. Nevertheless, certain matters which we, in our turn, understand may be unknown to you—"

This statement called forth a lot more indignant twittering, but I stood firm.

"All people present have observed this violin," I went on, "and witnessed its operation. It was an instrument of similar construction which destroyed the image, Mankton, placed upon Earth in the hope that our species might be moulded into willing subjects for easy domination upon your return. Well," I said, grimly, "you have returned—but the races of Earth will not prove compliant!"

Working upon a long-known principle by which wine glasses have often been broken as a sort of pleasant parlour-trick, we had amplified a high-pitched violin note through inter-com circuits, thereby creating such



stresses within Mankton's great crystal bowl that it shattered to pieces.

I waited for some reaction of astonishment. It did not come.

"Mankton was constructed a great time ago," said Na-grokk, softly. "Since then we, too, have advanced our science and our knowledge. You will not find his counterparts of today susceptible to resonant frequencies!"

A dreadful sickness of disappointment descended upon me. At least, they ought to have proved sufficiently surprised for Mankton to serve as a diversion. Instead, I'd been abruptly ordered back to the point.

I drew a deep breath and did my best. "The sounds known as music cannot be created in full quality by mathematics or logical argument. There is a certain point at which a machine, weighing probabilities, finds itself unable to exercise judgment. So long as a mathematical chain of argument persists, the machine is capable of following it—also of comparing conclusions reached at certain points of many mathematical chains."

I hoped I was making myself clear. It was a frightful subject to explain, and the incessant simultaneous gabble from the translator box as it interpreted for the Great Ones didn't help.

"If, however, any chain is broken the machine is incapable of bridging the gap—as is the human mind—by bringing in separate, outside factors." I groped for a concrete illustration. "The music, for instance. Given an accurate series of notes, what factor may guide a machine concerning which of them is to receive the emphasis necessary to imbue the sounds with spiritual life? For I tell you, Na-grokk, that two musicians of our species may play the same series of notes and yet produce different effects, each excellent in its own way—"

"In that case," said Na-grokk, swiftly, "where may sense or order be found—if the same formula reacts

differently? Truly, it indicates chaos."

"A machine may add together qualities and factors that are already known or may be inferred by the law of averages and other probabilities—but it cannot create."

I enlarged upon this, and they listened in such complete, utter silence I daren't even hope my words were having much effect, even if they were understood.

"Create?" asked Na-grokk. "What is that? Surely, if anything exists it must be built of components. Once these components are arranged in a definite pattern the shape is obvious."

"The music is one example. You would require another?"

A peculiar, half-heard gasp tittered among those goggling multitudes.

Na-grokk leaned forward. "There are—other matters? Others which you claim lie beyond the realm of Calculus?"

Some hidden inspiration prompted a cosmic bluff. Or was it bluff? So much at stake—apart from our own lives—that I daren't hurry matters. This situation was no mere performance to impress some semi-hostile crowd of half-ignorant natives on a new planet we were exploring, although that was a position I'd been in several times before. All round us were grouped several thousand intellects of greater achievement than any our own portion of space recognised, and only sheer luck had brought us the opportunity of dropping sudden doubt in their minds. I tried to comfort myself with the thought that, if we achieved nothing else, we had at least gained time for the human race. Perhaps, also, Old Growler remained somewhere beyond the strange, vaporous screen, waiting. Or, if not that and we had been given up as lost, she even now spread the alarm concerning a peculiar manifestation in space which should receive attention.



I walked across to Louise, failing in the tenseness of that moment to get satisfaction from the alacrity with which Kem-lokko dived out of my path. "In your satchel—those pictures you painted—"

She stared. "You mean—my landscapes?"

I seized one of the small rectangles and thrust it towards Na-grokk. To give him his due he didn't flinch a whisker. "Observe! What representation lies upon this surface?"

He held it before him in four tentacles, allowing his co-chiefs to gaze at it also. For benefit of the assembled crowds, he announced: "We observe a likeness to a portion of landscape upon a planet bearing green vegetation of both high and low growth."

That was something, at least. "Clear your intellect of speculation concerning the location or resources of such a planet," I begged. "Consider whether contemplation of such a vista, to creatures inhabiting vegetation-growing worlds, would be pleasurable."

The three of them stood there looking, even putting their heads first on one side, then on the other—like a trio of solemn, undersized art critics.

Na-grokk at last announced the verdict. "Indeed, even to our minds, it must be a planet of reasonable comfort, with pleasant pastures and cool lakes."

I held out my hand for the painting. "No such view exists," I said, "except in the imagination of its creator."

The fact didn't sink in at first.

"A more accurate representation," said Na-grokk, "could be obtained by any dozen methods of photography, which possess definite mathematical bases—"

I repeated myself more loudly. "The scene does not exist materially—only in imagination!"

Three pairs of purple eyes flickered with appalled comprehension, and another dreadful, intense silence ensued.

Greatly daring, I punched home the lesson. "Can

mathematics paint a picture?" I asked, softly. "Any more than they can interpret a piece of music?"

Then events moved so swiftly that only a confused recollection exists of how Na-grokk suddenly ordered "Take them away!" and we were hustled swiftly out of the temple and along the corridor once more to our prison room.

I heard Tubby gasping "Nice work, Pop! Oh, very nice work! You've really got 'em worried now—"

There was only one thing to say—and I said it. "Not half so worried as they've got me!"



# 9

## *Escape—to disaster*

I TOTTERED across to my couch, sat down, tipped back the helmet and buried my moist face in my hands. Reaction set me trembling and sweating in every limb; for a period during which time ceased to have any meaning I squatted there oblivious to everything save misery.

At length I looked up and saw Valerie staring across with eyes glazed by anxiety. Tubby, intercepting the glances, said "Cheer up! We've put the cat among the pigeons very nicely!" Louise joined in the general effort to smile. I don't know which of us made the worst job.

Only at that moment did I become aware that Hartnell was not among those present. The Great Ones must have whisked him away somewhere with de Brassey.

"What's the young fool's game?" I demanded, irritably.

"Isn't it obvious?" said Louise. "He's seen there's not much hope of fighting these—these little horrors, so he's gone over to their side—"

"I won't believe that!" I shouted. "Hartnell's not the kind to bother about saving his own skin!" I laughed on a trembling, hysterical note. "Why—we've

been in tighter corners than this and he's never flinched an eyebrow—"

"He said he'd changed his mind, didn't he?" cried Valerie, passionately. "Everybody heard him! He's made some sort of bargain with de Brassey and the rest of us don't matter! I—I despise him—"

The situation developed into a very painful and miserable scene that ended only when I stretched out deliberately on my couch and refused to prolong the discussion. There was a lot I couldn't understand about Hartnell's attitude. Had he, perhaps, really joined the Great Ones and de Brassey? Little, crawling maggots of doubt writhed in my brain. I just didn't know what to think. I lay there feeling utterly sick and dejected. None of us even bothered to take off the atmosphere suits. They weren't at all necessary, yet in some way we derived a feeling of security from their enclosing material.

I didn't even hear the door slide open. First realisation of Kem-lokko's presence was when his piping, reedy treble sounded from that damnable translator box. "All creatures of Earth are instructed to listen! Na-grokk and the Council of the Great Ones deliver herewith an ultimatum!"

This abrupt preamble—so ominous and formidable in its wording—made me sit up with a start. Half-a-dozen other egg-heads stood around Kem-lokko in a semi-circle. Obviously, swift developments had taken place within the past few minutes.

"First," said our visitor, "there shall be read for your enlightenment an analysis prepared by the machines in our shrine of Calculus. Examine yourselves well and test its truth dispassionately. It states that the human mind, at its most alert, produces intellectual vibrations of only mediocre quality, and that the brain substance is far too fragile for adequate absorption of powerful influences necessary to achieve a full standard of learning. Thought processes are, in the main, chaotic and unordered; there is a pronounced, inherent wilfulness which automatically rebels at obedience. The only strong trait is a misguided loyalty to its own kind. The



human personality is uncertain; the character unpredictable. Variations among individuals are so wide as to defy classification. For these reasons, few are likely to provide reliable instruments of purpose."

He lowered the sheet of peculiar metal foil from which he was reading and regarded us sombrely.

"I gather," said Tubby, sarcastically, "they don't think much of us. Come to that," he added, thoughtfully, "I don't think much of them, either."

"Insolence and deliberate defiance of authority are other regrettable qualities," continued Kem-lokko, coldly. "This unreliability obliges us to take extreme measures. We require a solemn undertaking of implicit obedience, in order that the sacred machines may devise a more complete strategy for our colonisation project. Without such an undertaking, the calculations involved become unduly intricate and prolonged." His eyes travelled slowly from one to another of us, and I saw first Valerie, then Louise, then Tubby quiver uncontrollably for a moment beneath that uncanny scrutiny. When he looked at me I, too, shuddered.

I gulped. "And—if we refuse to give such an—an undertaking?"

We hung upon his squeaky, unemotional words. "Great as is our repugnance against taking even the humblest form of life, your elimination will become essential. We cannot delay operations, therefore unruly elements must be cast aside in order that a coherent plan may form."

So matters had come to this! We might have expected it, I suppose, except that our minds had been so full of recent events and our little triumph of music and art. Yet the icy, matter-of-fact manner of its announcement provided a shock.

"Great Ones!" I said, bitterly. "Even the despised human beings respect intelligent life—"

"Silence!" ordered Kem-lokko. "What is your choice?"

"We don't seem to have much," remarked Tubby, dolefully.

What sort of life were we and other races likely to

lead beneath the thrall of the Great Ones? Did they intend, perhaps, mass evacuation of planets? Were lesser creatures to work in serfdom in the iron-ore fields?

I mentioned these points in passing and found them seized upon as a sign of weakening.

"Your mind exaggerates," said Kem-lokko, quickly, in a more cordial tone. "To all intents and purposes life upon your planets will continue as before. The majority of subjects will never even see a Great One in person. You must remember that this is not the first time we have occupied systems. Always must law prevail, for without law there is chaos."

I couldn't resist the gibe. "Your law—or ours?"

"Your laws, naturally, so far as they comply with our requirements. Statutes and customs will be scrupulously preserved, both before and after the period of readjustment. Justice and order will continue to be carried out as before, without exception. No rewards earned under any particular system before our arrival will be lost; no criminal will escape his just deserts." He made it all sound most attractive.

We had but one further question. "How long before we must decide?"

"Approximately three hours of your time." He tapped the metal foil sheet meaningly with a spare tentacle. "Think well, O people of Earth! Think well—then choose!"

Probably the most telling insult so far came from Louise. She stood there watching the Great Ones file through the doorway, and as Kem-lokko turned to make his customary formal bow of farewell she asked "Can't your sacred calculating machines give you the answer in advance?"

His purple eyes betrayed no emotion, but I'll bet the taunt stung. Remorselessly, the shining door slid shut.

Tubby chuckled. "Good girl!"

"I—I'm sorry—I just don't know what made me say it. Now they'll be more angry than ever—"

"Look here," I said. "We'll go crazy if we keep on discussing this business. How about getting an hour



or so's sleep?"

I felt tired and exhausted, needing rest despite the fate which undoubtedly awaited us. However, it seemed that no peace was to be found in that small, metal-walled chamber beneath the surface of the planetoid, for next moment the door opened again to admit—Hartnell.

He didn't move far into the room. He beckoned urgently. "Come on—quickly!"

Valerie's eyes sparkled dangerously. "What do you want now? Haven't you done enough?"

He grinned. "Sorry. No time to argue. Get moving—while there's still time!"

"We've got three hours—thanks to you!" said Tubby, bitterly.

Hartnell's smile faded. "Would they have left you alone here if they thought you knew how to walk out?"

"Anyway," chimed in Louise, "where can we go?"

Right away from the Great Ones—if you're quick!"

My heart leaped. "You don't mean it!"

"Blazing Betelguese! Do you want me to draw a diagram?" This seemed more like the old, trusted Hartnell we used to know. "How do you think I've been spending my time? Sitting around thumb-twiddling? Come on, I tell you! I've got the ship loaded up, ready to take off!"

We didn't wait any longer. I could have cried and cursed and wept with joy simultaneously. Why in the name of Altair hadn't we seen that the young fool's pretended defection was merely some deep-laid, hare-brained plot?

"They'll see us, surely!" panted Louise, as we ran despite the awkward drag of atmosphere suits.

"Not while they're busy with old Calculus again," said Hartnell. "That affair of your painting's shaken 'em off their four little feet! Time's precious for 'em, but they're giving the machines one complete run-through to see if they really can get a formula for landscapes—"

"Are you sure you remember the way out?" I gasped. "I thought we went—"

"Not the way we came in. I've found another.

Besides, it's on the far side of the control room and we can take a preliminary peep through the screens there and see whether everything's safe outside—"

A sudden, awful thought snapped into my mind. "What about de Brassey? If he finds we're gone he'll raise the alarm straightaway!"

We swung sharply round a corner of the deserted passage and went stumbling down a steep ramp.

Hartnell chuckled. "I thought about that! I locked him in!"

Once more we gazed along the tiers of complicated keys, screens and panels, standing dark and lifeless. The huge hall was empty, save for ourselves. Every member of the Great Ones' vanguard—without exception—had been summoned again to those fantastic ceremonies in the Temple of Calculus.

"Opportunity, eh?" asked Tubby, gleefully.

I was rather more cautious. "How about that ray-beam? They dragged us inside with it—they might drag us back."

"Not if they're still busy with their little sums—"

We trotted energetically to a visi-screen which Hartnell indicated. "This is the best job for outside observation."

"Got it all worked out, haven't you?" asked Tubby, admiringly.

Altogether, a more optimistic atmosphere prevailed and the girls began to smile again with hopeful animation.

The planetoid's desolate landscape spread itself once more before our gaze. There were the two ships—our own and the lifeboat from the Argo Star. Not far distant rested the queer, circular vessels of the Great Ones, and Hartnell put into words a secret thought which had just that moment come into my own mind. "It'd be fun, wouldn't it," he said, thoughtfully, "to take one of those back to headquarters. Can't you imagine how the greybeards' eyes'd pop?"

"Don't get too reckless," I said, cautiously. "I'll be happy enough to find ourselves on the outside of our own ship."



"Hm. Suppose you're right." He seemed vaguely disappointed. "Maybe we wouldn't be able to handle it, anyway."

"Let's get going, then," said Tubby, with a touch of impatience. "It'd be just like you two to keep us talking here till the Great Ones come back—"

The phrase died in his throat. He couldn't utter another word but merely stood there—pointing with a gloved finger.

Soundlessly, high in the roof, a great red light winked continually on and off like an evil, betraying eye.

"It's an alarm!" whispered Valerie. "They know we're here!"

Our glances darted all ways, seeking escape.

"Where's this way out?" I asked. "Or would we do better to get back where they left us?"

All five of us poised in a split-second of indecision.

A faint slithering sound of approaching Great Ones coincided with Hartnell's desperately hissed instructions. "Dive under the benches! There—where they sit to operate the controls! We'll be shielded except from a deliberate search."

"But if they know we're here—"

"Don't argue, Pop! Duck down for your life!"

I ducked.

Four Great Ones entered the control room with swift, purposeful efficiency, apparently relieved from sacred ceremonies to attend to this emergency. Between supporting rails beneath the operators' positions, I saw them halt and stare slowly round the enormous hall. I lay there panting, thankful that the helmet cut off from them the sound of my harsh breathing.

Panic-stricken, I suddenly thought of the screen, then experienced blessed relief at seeing that somebody had switched it off.

The little party of Great Ones halted before the screen on the far side of the hall from me. Once more it became illuminated, showing again the assembly of ships.

Next moment, before my wondering eyes, orange

fire spurted from the lower launching jets of the nearest vessel, growing swiftly white-hot where concentrated by the engine tubes and billowing around its regulating fins in red clouds. Fine, blasted rock rose on the perimeter of the conflagration and swept across the bare, scorched ground. It was Old Growler's scout vessel, in which we had travelled to this awful place—and somebody was taking her up!

But who? Or what? There was really no reason why I shouldn't have asked these questions over the intercom, but horrible fascination kept me dumb.

Able in imagination to hear the thunder of her lovely engines, I saw the ship throb and tremble against the power which sought to lift her from the ground. Slowly she began to rise, whereupon the great petals of flame bursting around her base became elongated into streamers of atomic hydrogen forcing her at ever-greater speed into the dim, white radiance of that artificial firmament. Still the huge, purple beams locked themselves rigidly against the three planetoids of the cosmic triangle. Steered at an acute angle away from the nearest beam, the vessel gathered speed.

Then, next instant, I knew! It was de Brassey—trying to escape! And apparently making a good job of it, unless these dwarfed, grey-domed creatures exercised some of their uncanny power. I didn't bother particularly about any precise reason for de Brassey wanting to get away—I only knew that he'd used the means by which we ourselves hoped to travel. In fact, he'd double-crossed us again.

The Great Ones, standing there looking up at the screen, made no move.

De Brassey must have been using an almost paralysing degree of acceleration. In his place I'd certainly have done the same.

Swiftly the long, silver ship, tipped with rose-pink flame, aimed herself towards the opaqueness overhead. Ten seconds more and she would have been free—tearing once more through star-filled space and leaving that eighty-thousand mile patch of dark, sinister vapour behind which plans were being hatched for the conquest



of the universe.

A tentacle snaked out towards a control button. That was all.

But on the devilish screen, now showing a tilted image as radar-focus aimed its invisible eye sharply upwards, another purple beam snapped into operation. The beam lasted merely a split second—yet it sufficed. One instant the ship was there, nearing the perimeter of the false key—next moment she had vanished in one awful, eye-searing belch of white flame.

Appalled gasps over the inter-com showed that others had seen as well as myself. I lay there quivering, hardly daring to breathe.

The group of Great Ones looked a moment longer at that representation of blank, pale vapour. Making no sound, showing no emotion, they turned and marched away.

We gave them plenty of time in which to get clear of the place.

Tubby was first to speak. He gave a sort of sigh and said "Well, that's the end of de Brassey—" He'd apparently sized up the situation, too.

"It could easily have been the end of us," I said, soberly. "If we'd gone aboard—"

I crawled from my cramped hiding place, seeking once more the big, red alarm signal. It remained dark. Apparently the gadget didn't concern anyone wandering unauthorised round the control room.

Valerie remarked, in a subdued little voice, "I suppose it's an awful thing to say—but I'm not sorry—he deserved what happened—"

"At least," said Louise, "he never knew what hit him. It won't be the same with us, unless—" Both girls' faces were pale, strained ovals behind the face-pieces. I don't suppose my own features looked any too healthy.

Hartnell's voice had an edge. "It served him right! Not so much for what he tried to do to us and the rest of the human race—but to those poor devils in the Argo Star. I knew what was in his mind—and I didn't bother to stop him!"

We all stared. "You knew? But—but—"

"In any case," I added, still puzzled, "just why did he want to get away?"

"Tell you later. Before we start holding inquests, we ought to get back to our own quarters. Maybe they'll pop in to see if we're still there—"

We followed this eminently sensible advice, although frankly I never thought we'd succeed in negotiating those corridors unnoticed for the second—or was it the third?—time.

Thanks, however, to that rigid, unholy worship of the calculating machines—with all Great Ones summoned to their shrine either to witness or to take part in the ceremonies—we came safely back. I never dreamed I'd actually be glad to see the door slide shut and enclose us once more in that small, metal-walled room. Moreover, unless they trusted solely to the listening-in apparatus and heard us talking, none bothered to confirm that we remained within our prison.

Yet it didn't seem as though we'd made much progress. We were still captives—still due very soon to choose between dying or betraying our own species. I sank my head dejectedly upon my hands.

"Cheer up, Pop," said Hartnell. "Things aren't as bad as all that!"

I wondered how bad they'd need to be before he lost his traditional optimism. He was wearing what Tubby describes as his "tight corner" grin. If never fully appropriate before, it certainly was now.

"While we're waiting," said Louise, thoughtfully, "somebody might do a little explaining—"

The rest of us looked round expectantly. She was staring at young Hartnell with a peculiar expression.

"That's right," agreed Tubby. "If our useful careers are due to end, we might as well know what it's all about."

Hartnell cleared his throat. "It's a long story—"

I hoped the narrative wouldn't prove too lengthy. The sands were running out quickly.

"Sorry if I gave anybody a bad turn by getting friendly with de Brassey," he began, "but one thing stuck



out a mile ever since we got here—”

Very many things had done that. I wondered which particular one he meant.

“Once he’d announced his intention of helping ’em, the Great Ones let de Brassey wander round pretty much as he liked. It struck me that if I could do the same I might employ the time usefully.”

Valerie’s mouth dropped into a round “O” of astonishment at this typical Hartnell under-statement. Tubby and I were used to it, of course. Risking his neck with the Great Ones and playing a double game with a murderous desperado like de Brassey could well be described in more forceful terms.

“But why did he want to get away?” I asked.

Hartnell’s smile faded and his features set as hard as granite. He spoke through tight lips. “Because the long arm of justice had reached out to him—even here!”

Justice? Why must the young fool speak in creepy, melodramatic riddles?

Four pairs of puzzled eyes, regarding him unwinkingly, brought Hartnell back to more normal demeanour. “Remember how Kem-lokko came to this very room and delivered his ultimatum? That was when—”

“Impossible!” I said. “You weren’t here! How could either of you know what they said to us?”

Then, in the same moment, I knew enlightenment. The hidden microphones! And listening at the other end, while we were allowed our extra three hours of life, were—Hartnell and de Brassey!

“Frankly,” said Hartnell, pulling a grimace of distaste at the recollection, “it was horrible. I never believed I’d ever see such an expression on a man’s face. After all he’d done and all the wild dreams of power that raged in his twisted mind, past sins were catching up with him. The Great Ones said that existing laws would still be observed on all worlds they might occupy. He knew they didn’t lie. He had to find some way of escaping both his fellow-creatures and these conquering beings from outer space—perhaps with other outlaws on some distant moon. He acted true to type. He’d found out about the stores and fuel we’d got ready for the ship.

He grabbed the opportunity for himself—he didn't care what happened to us." Hartnell's face grew grimmer. "I let him go." He stared round at us—in a manner of challenge rather than any appeal for confirmation that he had acted rightly. "There wasn't much doubt about the Great Ones having set a guard. I became both judge and executioner. I didn't raise a finger or utter a word of warning—and I felt pretty certain what would happen to him."

There was a long, long silence.

At last I said, in a barely audible voice, "How did you know it was—justice?"

He held my stare solemnly. "You yourself ought to have known—"

I made a helpless little gesture. "Past sins? Those people on the *Argo Star*?"

Hartnell shook his head. "Before that—a murder he'd committed somewhere else. He escaped paying the penalty—"

"He confessed?"

"No—no—"

"But we'd never even seen or heard of him before we got here—"

"Remember, Pop, that time they had you on the operating table?" I wondered if I'd ever forget. "The phantoms of surgeons, instruments, reptiles, white-hot prongs? And a figure in the uniform of a Spaceways Crime Patrol?"

Tubby screwed up a baffled face. "Spaceways? Why, they only go out after murderers, don't they?"

"But," I said, bewildered, "de Brassey didn't see it! I saw it!"

"How do you think the Great Ones discovered situations that human beings fear? Somehow they read de Brassey's mind—probing deep into his conscious and subconscious to find material for their hypnotic machine. De Brassey feared the same things as most people—poisonous creeping creatures, burning, blinding and cutting." The room grew so taut with suspense I could have screamed. "And he feared, also—the police! That was why he crept in here at the first opportunity and



started to search our belongings while he thought we were asleep. He wanted to make certain none of us carried a Spaceways Crime Patrol badge."

Understanding burst upon my reeling senses. "Then—then the Great Ones thought that I, too, would fear a patrolman—"

"It was the only item in the whole, dreadful catalogue they threw at you that didn't make sense. That's how I knew de Brassey must be an escaped murderer! He was ready to betray his own species, their governments, their achievements and their future—yet in the end he also betrayed himself!"

# 10

## *The battle of the beams*

WE sat for a long time in that little room, each member of the party alone with his or her thoughts despite the presence of the others. Hartnell broke the silence by rising briskly and slapping his gloved hands together as a call to business.

I looked up, raising my eyebrows. "What now?"

"Well," he said, rather pityingly, "we're not going to wait here calmly till they fetch us for the slaughter, are we?"

Helplessly, Tubby asked: "What else can we do?"

"They're still busy with their little sums. Trying to add up how many crochets in a violin or square the chiaroscuro of a picture. Besides, I didn't exactly waste my time while I was prowling around that control room—"

Neither Valerie nor Louise had seen young Hartnell in this particular mood before, and their faces began to reflect a growing hope. Tubby and I—more experienced in his little ways—found ourselves increasingly anxious. Once he adopted this brisk, breezy, let's-get-to-work demeanour anything might happen—and very often did.

"What are you up to?" I demanded, suspiciously.

Tubby glowered, too. "Yes. Exactly how did you occupy your time?"

Hartnell waved a hand airily. "Just making a few



preparations. How about popping along and seeing 'em—while we've got the chance?"

We asked ourselves again what we had to lose. The unspoken answer was such that no objection came when Hartnell slid back the door and peered cautiously into the corridor. "All clear—let's get moving."

While we walked along the mighty control room my eyes kept straying involuntarily towards the big red alarm signal in the roof. Hartnell, guessing my thoughts, grinned and said "Don't worry, Pop! Even if it lights up we're not going back this time!"

Eventually he led us to the exit he had discovered—behind a vast metal bulkhead, which he assured us formed part of an adjoining power house. "One of the beams starts from here—right overhead. I had a good look at it from close quarters. Like to take a peep?"

I said I'd rather be excused. "Anyhow, what's the idea of this trip? We can't get far away and they're bound to find us as soon as we shove our noses outside—"

"Don't forget the other ship—the lifeboat. I loaded her up with stores and fuel, too, just in case—"

"But we can't get it away," said Valerie, nervously.

"She means de Brassey," put in Louise, unnecessarily.

Hartnell chuckled. "I know what she means, all right. But he let the Great Ones catch him—"

Why, I wondered, wouldn't the Great Ones catch us?

"Because," said young Hartnell, mysteriously, "I'm going to arrange that they'll be otherwise engaged!"

Tubby thought about this for a moment, then shrugged. "Whatever we say, I suppose you'll go ahead with some mad plan or other."

Hartnell nodded brightly. "That's right."

Between ourselves and the desolate outside surface of the planetoid stood only the double metal doors of an air lock.

"We've got to work quickly," said Hartnell. "I'm prepared to bet the doors are wired to the alarm system. As soon as I open 'em the red light'll flash and the emergency squad'll come trotting along. Now listen—"

He dropped his voice to a low, urgent whisper—

not because there was any real need, but just by reason of the tenseness of that moment. A time for definite action had come upon us with surprising speed. Less than ten minutes ago we had sat in that little room wondering what the Great Ones had in store for us; now we were embarking upon some perilous purpose, the outcome of which I daren't even speculate. It was all summed up in Tubby's philosophical phrase. What could we lose? I only hoped that in some way we might inflict damage—even if only to small effect—upon these monstrously clever creatures who reached out their obscene tentacles to grasp our worlds. The bitter mockery of it all lay in the fact that they coveted merely iron—material treated almost with contempt through centuries of scientific research by reason of enormous quantities abounding upon every globe known to Man.

We moved quickly into the air lock.

Hartnell looked at the two girls. "When this door opens I want you to run as fast as you can to the ship—"

"The ship? But—but—"

His features assumed a tight smile. "Be good girls, now, and don't argue! There isn't time! Valerie—you brought the lifeboat here, didn't you? Think you can take it off?"

I saw her puzzled face grow blank with amazement. "Take off? Why—yes, I suppose so—"

"Never mind what happened to de Brassey. It won't happen to you. Get in the ship and stand by at the pilot's controls. When I give the word over the inter-com—fire the engines! If you're not quite sure about navigation, just aim for the main shipping lines and keep sending distress signals—somebody'll hear 'em. Right?"

"I still don't understand—"

"But you'll do it? Good, good!"

"What about you?" demanded Louise. "How are you going to get away?"

Hartnell grinned again. I didn't feel at all like smiling. "Oh, we'll manage. Now get ready to move quickly when I give the signal. Pop and Tubby—you come with me!"

He placed spread fingers in position. The metal



partition slid to one side and there before us lay solid, brown rock.

"Come on!" yelled Hartnell. "Run!"

I didn't even pause to think if that great, red, evil light had really started blinking. The girls made as fast a pace as possible towards the lifeboat, which rose like a tapering silver obelisk in the distance.

"Good luck!" I called over the inter-com.

None of us spoke again. We saved our breath for running. Every moment I expected some unpleasant kind of interception. I hadn't the faintest idea where Hartnell headed, or what he proposed to do if we got there. Overhead the other two worlds held their positions at points of that preposterous triangle, linked by the long, thin, purple pencils of force-beams.

About half-a-mile due south-west from the great, humped building we scrambled into a deep cleft of rock, finding there—to my considerable surprise—yet another sliding metal door. This, however, proved to be no power-operated gadget and would open only a small distance before it stuck fast. Hartnell and I got through fairly easily, but it was a struggle for Tubby.

"What in Betelguese is this place?" I demanded, gazing round a bright-walled cavern at rows of stacked containers covering one end and a strangely-complicated apparatus in the middle of the floor.

"Can't explain now, Pop," said Hartnell. "I found it when I was prowling round on the loose and thought it might come in handy."

Tubby was staring at some gadget on a shelf arrangement. "Isn't that a translator-box?"

"Oh, yes—a smaller job than the others. I pinched it from de Brassey. The Great Ones gave him it, apparently, in case he ever found himself in difficulties and there was no one around who knew him."

"And what's this thing here—the one with all the wires and switches and valves?"

He made impatient gestures. "You'll see soon enough! Shove your head outside and see if any alarms and excursions have started."

Because of Tubby's difficulty about getting through

the door—he always denies he's particularly plump, but admits to a "robust stature"—I performed this errand, hearing at the same time Hartnell's call to the girls. "How's it going?"

Valerie's breathless voice came over the inter-com. "Slowing down—a bit—not much—farther—"

Next moment I saw them—little, clumsy, doll-like figures stumbling and panting in desperation towards the ship. I glanced at the dark building whence we had come, seeing it loom blackly against the whitish sky. Nothing else moved across that depressing landscape.

"Not far now!" I called to them, encouragingly. No doubt they could appreciate this for themselves, but I thought a friendly word might spur their lagging steps. "Everything's quiet at this end."

It was, too—suspiciously quiet. Surely if the Great Ones knew of de Brassey's departure they would also be aware that we had left the building. Were they waiting, perhaps, until the ship actually took off? Was that little group again standing in the huge control hall, as we had secretly seen them earlier? Just standing there, seeing in the screen every move we made—watching—waiting—?

I went back into the strange underground chamber. "They're aboard," I reported. "I saw them closing the air-lock just now."

"Good." Hartnell crouched over the peculiar tangle of meaningless apparatus on the floor. He called the ship. "All set?"

Valerie's voice came through faintly. "Any time you give the word." Unselfish anxiety made itself known in her next words, and I mentally blessed her for the kind thought. "But what about you?" she cried. "You won't be able to get away—"

"That's all right. Tell 'em where we are when you contact a ship and they'll come and fetch us—"

A low, sinister hum sounded on a rising note from inside the machine.

"I wish I knew what you're doing?" I said, irritably.

The answer, spoken in calm, quiet, matter-of-fact tones, set my blood running cold and brought every hair



standing upright with a horrible prickle of apprehension. "I hope," said young Hartnell, "that I'm breaking up their confounded triangle!"

The sensation of icy fear drained away—to be replaced immediately by a hot flush that almost melted the bones of my legs like jelly. I had to press myself hard against the wall to avoid falling.

Obviously, Tubby was equally flabbergasted. "I've known you get some hare-brained ideas in your time," he said, disgustedly, "but this—" Words failed him.

"I don't actually know that it'll work yet," admitted Hartnell, with exceptional modesty, "but the idea came to me suddenly and I thought it worth trying—"

I drew a deep, deep breath. "Go on, then! Go on! Start the thing off!" This, maybe, was the end. Nevertheless, the three of us had had a pretty good run. We had joined the service with our eyes open and we couldn't complain if one day we were held to our bargain. Somehow, I didn't mind dying if this dreadful nest of Great Ones died with us.

"Oh, I've done that! Didn't you hear when I switched on?"

"The humming noise?"

"Yes. It needs a little time for the power to build up to full strength—"

There was a moment's silence. Then, in a small voice, I asked: "What's the idea?"

Apparently Hartnell received inspiration while prowling round the establishment during his period of freedom. "I looked at those beams and remembered what Kem-lokko had said—how they were really nothing but radio carrier waves, even though they transmitted power. I wondered what might happen if one of 'em broke, so to speak. Then the idea came to me—" he snapped his fingers by way of illustration "—just like that. So I got busy—"

"A darned sight too busy, I reckon!" grumbled Tubby. "If one of those beams goes we're likely to be slung from here to Ursa Major—just the same as when you swing a stone round your head on a piece of string and it flies loose."

I thought he'd summed up the matter quite neatly, but in that moment I had no time for pretty turns of phrase. "This isn't a stone!" I said, appalled. "It's an entire world!"

"You know," went on Hartnell, conversationally, "I had nearly half-an-hour alone in the control room. I found a visi-screen that showed me lots of things. Among 'em was this place, so I fitted it up as a hide-out."

The complicated gadget in the middle of the floor whined softly, then cut out. I waited for the universe to explode.

Valerie's anxious voice sounded in our helmets. "Is everything all right at your end?"

"Doing very nicely," said Hartnell, in an encouraging voice. "Everything under control. You might begin warming up the engine primers now—" He rose to his feet, looking anxious. "About another minute, I should think. Hope they don't spot what we're up to—not too soon, anyway." He gestured towards the door. "Let's go outside and watch the fun."

Fun? I didn't know what it was all about. I couldn't see how any means within our own puny ability might foil the schemes of the Great Ones. I wondered what chance we had—even if the girls escaped in the ship—of ever being rescued. Altogether, I felt in a pretty low state.

The three of us leaned against the side of that rough, rocky cleft, our helmets protruding above the parapet, and looked. Everywhere remained deserted and unchanged—no it didn't! The view had altered in two respects!

Minor change consisted of small, bright flames spurt-ing from the lifeboat's jet outlets. But more than this—where one great purple beam had previously soared above our heads towards its target on the distant planetoid there now gleamed two! Certainly, this second beam, running exactly parallel with the first, shone as a mere, pale shadow, yet it definitely existed.

I still didn't understand. Surely, two beams might distort the pattern of that balanced triangle—pushing it from equilateral shape to something more approaching



isosceles—yet to wreck this example of the Great Ones' cosmic engineering one of those three beams must surely be extinguished completely.

"I duplicated the beam arrangement," went on Hartnell, while I grew cold once more with the thought that he could calmly continue with explanations while we waited for a two-thousand mile world to fling itself loose. "Don't quite know how it works, but the power's fed into one of those neutronium lenses and spreads into a beam." He grinned faintly in my direction, but the strain was obviously telling upon him, too. "Sorry I couldn't use yours, Pop. I still don't know where you dropped it—"

"Look!" cried Tubby. "Look! It's brightening!"

Somewhere in the bowels of that building, down among the titanic power plants, the load was picking up.

"After I'd fixed the power lines without connecting 'em, I got this remote control affair ready—all set to plug in, as it were. Remember when it whined just now? That was the switch-on."

We stared again at the beams. Was it imagination, or did I actually begin to feel dizzy by reason of variation in the circling globe's speed?

Now the second beam rivalled the first in brightness. "Surely," I said, feeling weak at the knees, "they must know something's going on—"

"Too late now!" said Hartnell, with satisfaction. "If they shut my beam off suddenly it'll shake things loose the other way!"

Across those many miles of artificial sky strained a preposterous electrical tug-of-war. Quite a long time ago in the researches of mankind it had been discovered that radio beams directed closely together in the same direction refuse to remain parallel—rather in the way that similar poles of a magnet repel each other.

These radio beams of the Great Ones—carrying immense quantities of electricity instead of minute sound impulses—acted similarly. But they were linked one to the other through neutronium lenses on each of the three worlds, forming an intangible yet rigid circuit which controlled the entire installation. Once an intruder beam, drawing energy from that same enormous and

apparently inexhaustible source of power, forced the focus away from the lens, that triangular "circuit" would be interrupted. I didn't like to dwell on what might happen then.

"Valerie!" cried Hartnell, suddenly, "let her go! Take off!"

Probably more sensitive of perception than myself, he may have felt a split-second earlier the grating rumble which vibrated through the rock from depths of the planetoid. Certainly nothing visible indicated that the girls' ship must delay no longer in leaving the surface.

The feeling of strain communicated itself to the very atmosphere and penetrated our suits. I could have sworn the double beam flickered slightly.

Then a voice holding an understandable quiver of apprehension sounded over the inter-com. It was Louise. "She—she can't! She's fainted!"

"Oh, Betelguese!" groaned Tubby.

"Listen!" said Hartnell, urgently. "Listen! Don't lose your head. Get in the pilot's chair—quickly! See the row of red buttons—six of 'em? Pull down the master-handle. It's on the left—"

There was dead silence, during which I aged a hundred years.

"Yes," said Louise. "I've done that!"

It was more than I'd dared to have done in her place.

"Now press the first and second buttons," went on Hartnell. Don't be afraid—there's nothing to it—I've done it dozens of times—"

"I—I—"

"Go on!" I croaked. "What Valerie was ready to do you can do!"

Hartnell grinned and flicked his inter-com. switch so that the girl would not hear. "Good old Pop! Every time the psychologist!"

It worked, anyway. "I've pressed them both," said Louise, in a small, frightened voice. "What happens now?"

Tubby murmured something about her finding out very quickly.



"Press three and four! Don't wait—"

"Yes—yes—"

"Now the last two! Everything's all right—the automatic timers'll do the rest—"

The glow beneath the silvery ship brightened, and over the outside microphone came the thunder of take-off jets. Soon the lifeboat would head towards outside space once more—but would she, too, vanish in a coruscating flash against the Great Ones' invisible screen?

Now the huge beams flickered again—harmless as summer lightning they looked, yet each held the enormous power of a million thunderbolts.

"She's going!" shouted Hartnell. "She's going!"

"The ship or the beam?" I yelled.

"Both of 'em!"

The lifeboat sat in a flower of red flame. Blast from the engines threw up clouds of hot dust for a hundred yards around. The entire ship quivered visibly—and began to rise, steadily and more swiftly, upwards.

"Don't worry, Louise!" said Hartnell. "You're doing fine!"

Then it happened. The main beam—stronger than the intruder—thrust it aside. All three of us saw a slight but definite movement. It could have been no easily visible variation considering the great distances involved. We could not know whether the occurrence proved due to the Great Ones deliberately reinforcing their own beam with additional power or if some automatic balancing apparatus came into play—yet the main beam triumphed at last and in so doing brought about its own destruction.

The sideways movement pulled the beam from that vital area of focus on its neutronium lens. Titanic forces pulsing along the purple path struck the distant planetoid a glancing blow, bringing a brilliant glow of disintegration as surface rock flashed into nothingness. Then the beam flung itself farther—towards the dim, white radiance of the artificial sky. And as it touched the vaporous envelope that mysterious substance shone with a startling brightness which instantly began to spread. Next instant all the purple beams disappeared.

A great sickness and dizziness gripped us—giant, squeezing fingers of an unbearable malaise. I knew what it represented. Released from restraining forces, the planetoid upon which we stood had hurled itself free and soared loose towards the periphery of the gaseous globe, draining blood from our brains by vicious acceleration.

I saw the ship gaining speed. Louise's voice sounded vaguely over the inter-com. "Good luck, everybody—I'll tell them—when we get there—"

Through the dreadful nausea, I gasped "Good luck to you, too—" Then the ship swung sideways and upwards as our planetoid swept itself from beneath the vessel.

Large areas of the strange sky seemed stricken with a golden leprosy that spread irregularly in patches from where the beam had hit. Like some huge, pale curtain falling into holes, black areas swiftly appeared. The burning glow proved too bright by contrast for us to see them, yet in the depths of those dark patches we knew that honest-to-goodness stars shone.

Almost half that artificial sky had disappeared when the speeding lifeboat bore the girls safely beyond the Great Ones' influence. Roaring velocity sped us in an opposite direction towards the last, gold-dripping rags. The other two planetoids had vanished we knew not where.

Young Hartnell had one more remark to make as we sank together into tumultuous unconsciousness. I saw his face pale and ghastly in the last, fading light. Lips twisted stiffly in an attempted smile, he said "Stop the world, Pop—I want to get off!"



# 11

## *The ten bright caskets*

**T**HROUGH the dark-red mists a voice sounded—a shrill, twittering voice which, although its message seemed merely whispered, forced a way into my consciousness. I looked around at the dim-lit walls of that strange metal chamber embedded in the rock. Hartnell and Tubby propped themselves up beside me. Their eyes—horribly bloodshot and decorated with heavy, blue-black half-moons on lower lids—stared towards the little translator box. How I came to be inside the room I didn't know. My last recollection consisted of falling into a bottomless pit with thunder crashing all around me. My entire body was one vast ache.

The piping, reedy voice squeaked on. At first its disjointed phrases possessed no meaning, but after a time, as my bemused senses cleared somewhat, I grasped the purport. Another of the Great Ones' miracles with sound-physics was in operation. Kem-lokko in person addressed us through the translator cabinet.

“ . . . Therefore the principle of direct punishment shall not be invoked, since while it may be theoretically logical no practical, mathematical advantage is to be derived. Punishment obtained by the negative factor of inaction, however, falls into a different category, and we shall achieve justice accordingly . . . ”

I moved my aching head and winced. What was all this?

"Defiance of the ordered scheme of things, such as you have attempted, denotes a brutish and chaotic temperament," continued the voice. "Thus we have previously observed concerning the human race. If the specimens we have encountered are typical—our calculating machines shall be brought to bear on this probability in the near future—the strictest measures will be needed for complete subjection and will definitely be taken. Therefore do we pronounce you and your kind anathema—a thorn in the flesh of orderliness. We leave you to your fate with this announcement of intention—be sure that one day we will return!"

The voice ceased. The ensuing silence was like the tomb. It lasted a long, long time.

At length, I said faintly, "What was all that in aid of?"

Tubby's jaw had dropped in an expression of awe. "The egg-heads have given up! They've gone!"

I jumped up in astonishment. Next instant I wished I hadn't. I thought the top of my head had split off. "Say that again—slowly!"

"They've gone," said Hartnell, soberly. "We're not to be punished for the nuisance we've caused 'em—only marooned here. But they've gone! We've beaten 'em!"

Frankly, I didn't believe it. "But—but even if we did throw a spanner in the works they wouldn't give up as easily as that! Why, with their resources they could take over everything they wanted with practically no trouble—"

"Sleeping like a blue-eyed child, you missed what Kem-lokko said at the start. They've had word that another detachment near Orion's found even bigger and better iron deposits than we've got, so they're postponing the take-over in this part of the universe." He gave a small, cynical laugh. "At least, that's what they said!"



I stared. "But the Great Ones needn't tell lies to save their pride—"

Tubby shrugged. "They've never been used to opposition. Our little manoeuvres made 'em stop and think—especially that business of the violin and the painting—"

Could it be possible that these pursuits—so familiar to us yet so strange to the Great Ones because they complied with no mathematical formula—had really raised serious doubts in the minds of these fabulous beings? Perhaps, when coupled with Hartnell's audacity in using the Great Ones' own power plant to wreck their base, these factors had sown doubts about easy conquest. Might they not even have been secretly pleased to hear that the project could be abandoned?

"The first one who feels equal to the job might try contacting Old Growler or the girls' ship," suggested Hartnell. "No use staying on this godforsaken globe longer than we really have to."

Only soft hiss of static sounded in our helmets, however. We called patiently for more than half-an-hour before accepting that it was hopeless.

Outside all was in darkness, save for myriad tiny discs of the eternal stars. Arcturus hung brightly above the horizon, yet its light proved too dim to illuminate the desolate rocks.

I sent the brilliant beam of a beryllium torch slicing through the gloom towards where the huge, circular space ships had rested. No glimmer of reflection returned to our eyes. Later we found that everything had gone—the big, hump-roofed buildings, the galleries crammed with complicated machinery, the vast accumulation of vehicles and stores. We were alone on a frigid, airless hunk of rock trailing itself across the starry wastes. I knew a cold apprehension of despair. Would the girls soon locate a ship which might send a rescue party? How long might we survive without oxygen, food, water and heat?

"They've gone, all right," announced Hartnell, quite unnecessarily.

"And the farther the better," said Tubby.

"Meantime," I put in, "what are we going to do in this awful place?"

"Keeping warm's likely to be the main difficulty," admitted Hartnell. "Anyway, come and see what I've got lined up. There's quite a sizable place next door to the cave. I've got it stocked with plenty of stuff. Something else you ought to see, too—"

Light still filtered dimly into the underground chamber from the impregnated metal walls. Now I saw that behind a stack of food containers lay another metal **door giving access to a bare, roomy cavern fully eighty feet in length.** At the far end stood a peculiar, tilted, tubular arrangement which I thought for a moment might be a telescope, and around its base rested ten ovoid containers like shining metal eggs.

"I fixed these up with the Construction Unit," said young Hartnell, proudly. "Inside each of 'em's an elementary, battery-powered radio set that'll go on transmitting SOS till eternity—"

I said I hoped we wouldn't have to wait that long for help to arrive.

He laughed on a slightly hysterical note—not at my rather feeble joke but at a discovery he had made. "I tried to measure the capacity of the Great Ones' little storage cells. So far as I can see they hold enough juice to drive a full-sized liner to Aldebaran and back—"

I brought him down to more common place matters. "How long can we last here?"

"Oh, maybe three months, if we're careful." His mind was not really on this subject, though. "Now if we put a message inside and shove 'em out with that projector—"

Tubby looked at the "telescope." "So that's what it is?"

"Someone's bound to hear the transmissions on the distress frequency and pick the things up."

The idea struck me as being nothing short of



fantastic, but I didn't like to say so because he seemed so pleased with his elaborate toys. It indicated, also, that he entertained no particular optimism about the girls making a safe return to civilised regions. Or, I wondered, ourselves, either?

"Write the full story, Pop," he urged. "Hold nothing back."

Perhaps when young Hartnell sees this manuscript he won't prove too pleased at the way his injunction to candour has been obeyed. Nevertheless, it has helped me while away time which would otherwise have hung heavily and given me a valid excuse for not helping the others with a strenuous carrying and stacking of stores.

Fittingly enough, we are also using for this message a gadget that Hartnell "borrowed" from the Great Ones. After inscribing the remaining few lines upon the master tablet, I shall move a switch that operates some sort of automatic electronic engraver and produce ten copies for the ten egg-shaped caskets. When finished, these containers will be projected beyond the planetoid towards areas through which space ships are certain to travel. One, at least, is sure to be located by its unending radio signal and picked up to provide warning for the authorities concerning the dark menace which hangs over our system. The others, moving freely in a frictionless void, will travel onwards for eternity.

Now we know that the Great Ones, previously mentioned in ominous legend, are no figments of imagination. In their huge, circular ships they have travelled through the centuries across terrifying depths of space. Where they have gone now, no man knows. We are left with their few remaining relics around us and the sinister, echoing memory of Kem-lokko's final words: "Be sure that one day we will return!"

## EPILOGUE

### Reflection for Posterity

**K**EEPING an expressionless face, the captain of the Empress of Cassiopeia carefully laid down the final sheet of featherweight metal foil. He did not speak for a long time.

A diffident cough from the Duty Officer broke the silence. "Shall I send a message, sir—?"

The captain looked up sharply. "Have you ever heard any report about creatures called 'Great Ones'?"

"No, sir. Can't say I have."

"Neither have I." There was another pause. "You see what it means?"

The position seemed only too clear to both men, but the captain reflected aloud upon its import. "It means the two girls didn't succeed in reaching any ship that could relay a message to the authorities. It means, also, that we've picked up the first of those ten caskets. The others still carry on travelling somewhere through space—"

The Duty Officer, unable to help himself, committed a minor breach of discipline by interrupting his superior officer. "Then we'll be first to transmit the warning—"

The captain paced the cabin with long, reflective strides. "Artificial planetary systems, power beams, calculating machines which solve every riddle of the universe." He swung round and paced in the opposite direction. "Beings who've travelled a million light years or more across space—being baffled by violin-playing and picture-painting." He gave a short, barking laugh. "Ludicrous, isn't it. Or would be—if such frightening possibilities weren't involved."



"And some day, sir—according to this manuscript affair—they're coming back!" A thumb jerked in the general direction of the first-class passenger accommodation. "Wonder what sort of panic there'd be back there if they knew what we know—"

"They'd better not find out," said the captain, grimly. "Not till they're off my ship."

The Duty Officer coughed again. "At least, sir, oughtn't we to send a message about those Inter-X men? If they're marooned with only limited supplies of air and food another day might make all the difference—"

He wondered why the captain stared at him for so long—and with such fierce, tragic eyes. Then at last one of the flimsy metal-foil sheets was flipped across the polished table to where he sat.

"You can take your hat off at any time to Inter-X fellows—especially those three! Look at the date, man!" added the captain, harshly. "The poor devils sent off these caskets nearly two hundred years ago!"

## II

At dinner, that evening, the captain, resplendent in his best gold-braided uniform, sat facing Mrs. Van Hempson the Fifteenth along the length of a table at which were seated a dozen other prominent passengers. Soft music floated discreetly to this corner of the great, flower-filled restaurant, where incense from cigars and expensive perfumes added a benediction to the memory of good food. Conversation was quiet and, for the most part, distinguished.

". . . So pleased when we actually arrive," Mrs. Van Hempson was saying. "If it weren't for my few real friends here at this table I positively could not endure six whole months of a journey right out here across empty space where nothing ever happens . . . one gets so bored . . ."

The captain thought of Inter-X men who through the centuries had left their bodies on many scattered worlds, particularly of three who had used almost their last

precious hours in an attempt to warn Mankind of a peril which loomed in the outer spaceways. Perhaps still loomed there—dark, monstrous and menacing—above an unsuspecting civilisation.

“ . . . Nothing ever happens,” complained Mrs. Van Hempson, slowly peeling a grape with plump, white fingers. “Never has and never will . . .”

The captain looked at her a moment longer, then turned to talk with the lady on his left.

## THE END

(Copyright, 1953)

### **LET AN AFRICAN WITCH-DOCTOR CHANGE YOUR LUCK !**

*Control the Deviation from the Known Laws of Chance  
by Magical Influence*

**The most powerful Charm ever offered outside of  
AFRICA - The “TAGATI” STONE**

**Unusual ! Strange ! Awe-Inspiring !**

Found at the famous African Diamond Diggings and believed by the Natives to possess an irresistible power to bestow

**LUCK ! HEALTH ! FORTUNE ! SUCCESS ! POWER !**

The “TAGATI” Stone has had a genuine Zulu Witch-doctor cast his spell over it. Benefit now by his weird and mystic Powers

**HAVE YOUR “TAGATI” STONE SENT DIRECT FROM  
THE DARK CONTINENT**

Send crossed 5/- P.O. to cover postage and packing to—

**African Occult Trophy Co. Box 645, Pietermaritzburg,  
Union of South Africa.**

*This offer is not available to any persons resident in the  
continent of Africa*



# PANTHER

## Science-fiction Library

*The following titles, uniform with this volume  
and at the same price, are recommended to our  
readers :*

ANTRO, THE LIFE-GIVER

*by Jon. J. Deegan*

FROM WHAT FAR STAR?

*by Bryan Berry*

THE VENOM-SEEKERS

*by Bryan Berry*

THE WORLD BELOW

*by S. Fowler Wright*

ATOMS IN ACTION

*by Roy Sheldon*

THE STARS ARE OURS

*by H. K. Bulmer*

---

Published by

HAMILTONS





CHAD SAYS

WOT NO LUCK!



SILLY

Send 1/- for the History and a S.A.E. to Joan the Wad, 44, Joan's Cottage, Lanivet, Cornwall. Thousands say:—

## SHE HAS THE SECRET

In several million booklets you may have read extracts from testimonials received from as far back as 1930. We just take them at random. We possess more than TWELVE THOUSAND unsolicited testimonials, and we know from chance remarks that many who swear by Joan, never trouble to report to us. Having so many we can't possibly publish them all, nor can we constantly be changing our advertisements and we have been content to keep to those originally published, but such is the immense interest being displayed we thought we would depart from our rule in a small measure and just publish 6 or 7 of the huge number that came in during 1945. Remember similar testimonials have been coming in unceasingly since 1930.

### NEVER WITHOUT MONEY

"I received one of your Histories about three weeks ago and it has brought me luck. Before I received your book I was always without money, but now, thanks to you, I am never without money! (Mrs.) G. O., Glos. 8.10.45."

### INCREASE IN WAGES

"... already after one fortnight we have had luck. I won ... sum of £30 ... also have got a £1 per week increase in wages unexpected so Joan the Wad must be our lucky Star. So please send Jack O'Lantern to make the pair complete. (Mrs.) D. M., Kirkgate, Leeds. 19.11.45."

### LOST HIS JOAN—LOST HIS LUCK

"Please let me know how much to send for Joan the Wad and Jack O'Lantern. I had them both in 1931, but somehow lost them in hospital two years ago. I can honestly say that since losing them nothing has seemed to go right with me. I know what good luck Joan can bring by honest facts I have really experienced ... I certainly know that Joan the Wad is more than a lucky charm. (Mr.) E. E. S., Liphook, Hants. 10.11.45."

### HOMELESS

LOOKED FOR A HOUSE FOR FOUR YEARS—Got Joan, Got a House, Got a Job as well.

"... Believe it or not, things have taken an astonishing change for the better since the day I received Joan—more than I have dared hope for before. I am being discharged from Services, Oct. 22nd. My family are homeless and I couldn't take a job. But now I have been offered a job with a cottage and good wages, one of my favourite jobs, tractor driving. Please note I have been after a house for just on four years. G. S., Army Fire Service, Slough. 10.10.45."

### MARRIED A MILLIONAIRE

"... two of my friends have won £500 each since receiving your mascots and another has married an American millionaire. ... Please forward me one Joan the Wad and one Jack O'Lantern. C. E., Levenshulme. 3.11.45."

### BETTER JOB, MORE MONEY, LESS HOURS, IMPROVED HEALTH

"My dear Joan ... She has brought me continual good luck and her influence spreads to every sphere ... I have got a much better job ... greater wages ... less working hours ... and my health has greatly improved. I have always been a lonely kind of person, but ... a friend of the opposite sex, she is also lonely ... great opportunity for comradeship offered. So you see how the influence of Joan works. My pockets have always been full and I have had many wishes and desires fulfilled ... I would not part with Joan for her weight in gold, she is much too valuable in every way. Her powers extend all over the world, and she works unceasingly for the full benefit of her friends and adherents. She rides in my pocket day and night and never leaves me. ... D. H., Leeds, 9. 2.11.45."

All you have to do is to send a 1/- stamp (Savings Stamps accepted) and a stamped addressed envelope for the history to—

**44, JOAN'S COTTAGE, LANIVET, BODMIN**

For Canada and U.S.A. send 50 cents for History, or 2 Dollars for both History and Mascot.

For Australia, send 1s. 6d. for History, or 8s. 0d. for both History and Mascot.

# HOW MUCH OF YOUR WAGE PACKET



## ends in Smoke?

**CONQUER THE  
CRAVING EASILY**

**QUICKLY WITH THE**

**AID OF "APAL"**

One of the first effects of conquering the smoking habit is that you realise you have more money in your pocket to spend on more vital things. Next, you notice a marked improvement in your health. The remedy for the tobacco habit is in your hands. With the aid of "APAL"—the imitation cigarette which you never light—you can stop smoking immediately, because inside the "APAL" is a crystallised compound. When you draw on it you get a pleasant, cool taste on your palate that satisfies the desire and eliminates the craving for a smoke.

### READ WHAT USERS OF "APAL" SAY

Dear Sirs,

I am doing what I, and everyone who knows me, said I would never do, give up smoking. I have not had a cigarette since the first day it arrived.

M.S., Chingford.

Dear Sirs,

I am writing to say thank you for your APAL. It has worked wonders. After smoking 40 cigarettes a day, I have stopped smoking.

H.M., Dumfriesshire, Scotland

Dear Sirs,

It is a year ago last November that I torred smoking, with the aid of APAL: no cigarette has touched my lips since the day I received the APAL. I sleep better and have not had a cold since, and I am saving 24/6 every week.

G.A.S., Ossett, Yorks

Dear Sirs,

I am very pleased with my APAL. I have been much better in health since using it. It certainly takes away the longing for a smoke. Thanking you very much.

Mrs. C.A.H., Coventry

Dear Sirs,

Fifty cigarettes a day for over twenty years is pretty good going and nobody would have me believe that I could ever give it up. Your APAL arrived four and a half weeks ago and I am delighted to say that I have not smoked since.

F.F., Hertford.

Dear Sirs,

I bought an APAL from you nearly eighteen months ago, and it did for me all that you said it would. I have not smoked for seventeen months, and have no desire at all to do so.

G.H., Marham, Norfolk.

Send stamped, addressed envelope for full particulars, free advice and proof.

## HEALTH CULTURE ASSOCIATION

Room 19, 245 HIGH HOLBORN, LONDON, W.C.1