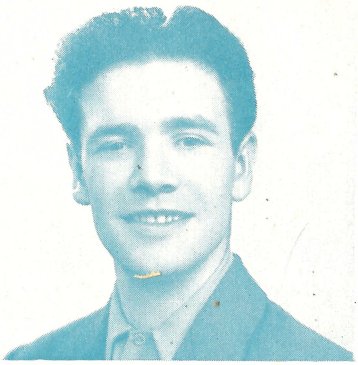
NINETEEN TWO SHILLINGS

NEW WORLDS

fiction of the future

Gerard A. Quinn

1927–



Born May 6th, in Belfast, Northern Ireland, where his home still is, Gerard Quinn contends that he is a born artist, not a made one, having had a flair for art work since an early age.

Although most of his work appears in the newspaper field, including strip cartooning, his favourite pastime has long been drawing fantasy and weird illustrations for his own amusement. Early in 1951 he submitted a number of these to *New Worlds*, which were promptly returned as being unsuitable, but was pleasantly surprised some two months later when a commission for a science fiction illustration arrived. Despite its apparent shortcomings when seen in print, readers asked for more, and he has gone on improving and experimenting with increasing success.

So much so that major book publishers are asking for his work upon dust-jackets and interiors. Having completed interior work for Arthur Clarke's *Islands In The Sky* he is working on the wrapper for Clarke's next adult book *Prelude To Space*.

A self-taught artist, Gerard relies upon the author to give him the "atmosphere" for his art work, taking from eight to twelve hours to complete an illustration providing that it doesn't entail any special techniques. This does not apply to colour work, which can take several days.

At present he is not satisfied with the type of illustrations he is producing and intends slanting them more towards the technical than the human.

NEW WORLDS

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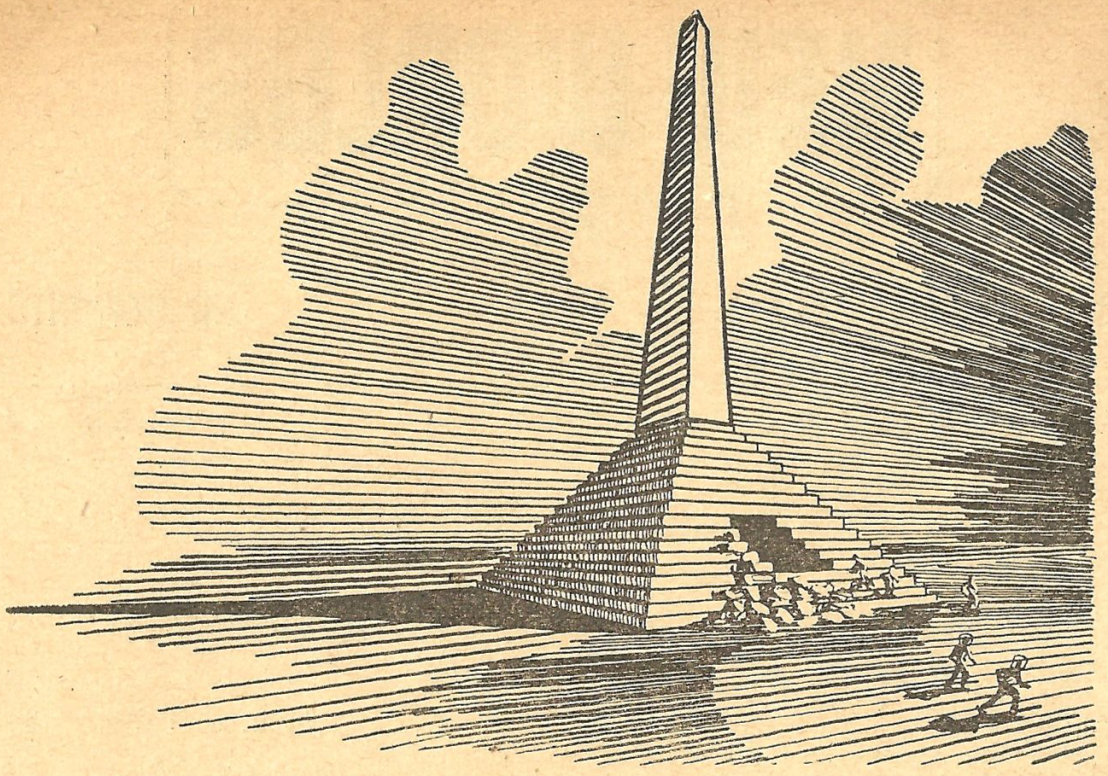


Hidden somewhere in the galaxy was an all-powerful weapon, its only clue a meaningless piece of doggerel. Whoever solved the puzzle would rule the galaxy—or save it.

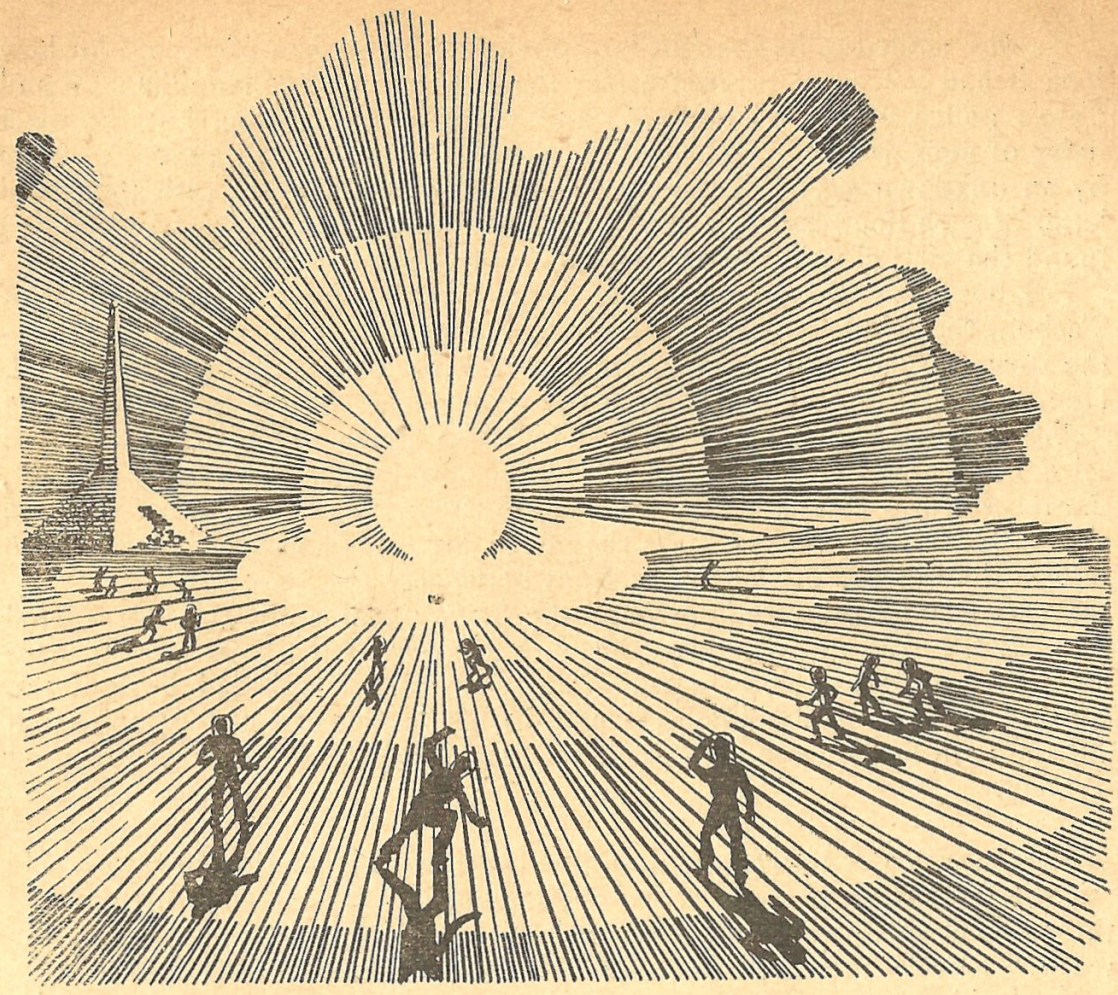
GALACTIC QUEST

By GEORGE DUNCAN

Illustrated by CLOTHIER

After the moment of fear, the instinctive panic, had come swift, tense action—flight, his blood racing to the hammering thought in his brain. The only thought . . . *escape*! The smell of death haunted him. A kaleidoscope of glittering needle-guns and uniformed police, charred bodies and stampeding feet revolved through the screams and groans of dying men. Who had betrayed the meeting, Jon Hawkes did not know; that there could have been a traitor seemed impossible—Cato must have planted a spy in their midst.

But whatever the cause, the result was nightmare; the organization smashed and the hunt on. Perhaps a handful of rebels escaped the massacre, Hawkes among them. The streets had been floodlit, warnings broadcast, armed patrols ringing the area in tight cordon. He would never have broken through had not one of the rebel group sacrificed his life in a mad rush for freedom,



drawing attention momentarily away from him. And Hawkes reached the spaceport.

The starship *Stella* was an ovoid of gleaming metal, its longer axis measuring a fraction under one mile, destination Rhyll, planet of the Dark Star M–1. He had booked passage on the ship under an assumed name, but dared not board her openly. Fortunately, he had not revealed his secret at the meeting—the attack had come too soon—so Cato's secret police did not suspect his immediate destination and he was able to smuggle himself aboard the starship with her cargo. A stowaway to the stars . . .

He crouched in warm darkness, aware by the vibration of metal under his feet and a dynamic throbbing in the air, that the *Stella* was in flight, away from Earth, building up speed for the instant of transmission which would hurl her through the time-barrier. In forty-eight hours, if he were not discovered and killed, Jon Hawkes would land on Rhyll and his quest begin. As he lay in the shadowed gloom of the ship's hold, a piece of doggerel jingled through his head:

Twin towers pierce a lightless sky
Etched from the rock where no birds cry,
City of death and resignation—
Hell knows no greater devastation
Or terror, than they who flee
Nameless o'er a night-dark sea !

Hawkes smiled as he thought how obvious the clue had been, and for how long it had lain undiscovered under the very noses of Maximillian IV and Cato's police force. So obvious—and yet so subtle. Who, but the most naive of men, would have looked for the clue to Techon in a piece of verse by an unknown poet? Yet there it was, six lines of verse with the initial letter of each line reading down to form the word: TECHON. And he had found the vital clue in the official library of Galactic Union!

For five years, Jon Hawkes had been searching for the hiding place of Techon, the fabulous weapon of Rhyll, the weapon "too terrible to use"—the weapon that would enable him to break the power of Maximillian IV, Democrat of the Union, and free the galaxy from despotism. Five years spent dodging Cato's secret police, building up an organisation ready to seize Techon and turn it against the Union. And now, with victory in sight, the rebel group had been betrayed and destroyed; Hawkes, alone, was free to act, to seek out Techon in its remote hiding place and use the weapon to release the peoples of the galaxy from bondage.

Power surged and pulsed through the *Stella's* hull as the starship winged through the void of outerspace, heading away from the solar system, nose pointed at the incredibly distant Dark Star M–1. Huddled in darkness, Hawkes listened to the jingling verse in his head and resolved to search out the twin towers, the night-dark sea, and solve the mystery surrounding Techon.

The hours passed slowly, and no-one came to discover the stowaway. He felt the first pangs of hunger, the craving for liquid to quench his parched throat—and there were more than twenty-four hours to go before the ship reached Rhyll. The *Stella* had not yet attained instantaneous transition.

He decided he must move out into the open. The *Stella* was a large ship, carrying several hundred passengers, and no-one knew he was aboard; it should be possible to lose himself in the crowd. He told himself it would be easier to leave the starship at Rhyll as a fully credited passenger, but he knew he was rationalizing his desire for food and drink. In any case, he must arrive at his destination in full command of his physical and mental powers.

Hawkes moved through the darkness, feeling his way along the curved metal wall to a bulkhead and a steel door. The holds were seldom locked, in case of fire, and the door opened easily. He looked down the brightly lit passage beyond, saw a row of closed doors. There was no-one to see him as he slipped into the passage, closing the door of the hold behind him. He walked to the end of the corridor and mingled with the passengers.

There was a notice: TO THE DINING HALL, and he followed printed directions. He knew a moment of shock as he passed a uniformed guard, one of Cato's special police, but the man did not challenge him. Hawkes relaxed; after all, the photograph they had of him was more than five years old, and he had changed in that time.

He had lost weight, a tall man, broad of chest and well-muscled; his hair was tinged with grey at the sides and there were lines about his eyes and mouth. Five years of living dangerously had made his face hard, his expression cold with an inner bitterness. At thirty, Hawkes was lean, wolfish, clad in the universal one-piece zipper suit, grey with scarlet flashes.

He reached the dining hall and passed through translucent swing doors.

The walls were pale blue, the roof arched and decorated in gold and silver, the tables ebony and gleaming chromium; rich drapes broke the mathematically severe circle of the hall into private niches, and muted music permeated the air.

Hawkes walked the central aisle, glancing casually at tables on either side. He did not want to sit alone; that might draw unwanted attention. He needed a companion, some unsuspecting innocent to cover his presence aboard the *Stella*. His eyes roved the few occupied tables, searching for such a person—and found her . . .

Other eyes were on her, too. She sat alone, at a table near one of the many doors, aware of the men who watched her with covert, desiring glances, yet unembarrassed by them. She raised her head, and her eyes met Hawkes'; she smiled, and beckoned a welcome.

Hawkes hesitated. Who was she? Then he saw heads turn to see whom she had invited to her table, and he knew he must go forward. To do otherwise would arouse suspicion. He moved slowly towards her table, instinct telling him to turn and run from a trap. It seemed as if she had been waiting for him, knowing that he would come. She was the spider, and he the fly.

Hawkes lengthened his stride, forcing a smile, wondering about her. Could she be the mistress of some important executive in the Union? That she was beautiful was apparent to the most casual glance; more than that, she held herself with the pride and assurance of one used to giving commands. Her gown, a shimmering transparency revealing a superb figure, marked her as a high-born lady; lesser women were confined to the universal grey and scarlet.

As he reached her side, her lips moved in formal introduction:

"I am Deirdre."

Hawkes bowed, and replied:

"I am Jon."

He drew up a chair and sat opposite her across the small table. Her loveliness was breath-taking; flame-red hair piled high atop her head and fastened by a single jewel; curved lips of inviting crimson set in a smooth oval face; wide, tawny eyes with excitement and mystery flickering in their depths. Hawkes felt intoxicated by her nearness, his pulse racing, the needle of danger pricking him, warning him against her.

" I hope you don't mind," she murmured. "I was lonely."

He knew it to be a lie; how could she, so alluring that every man's eyes rested on her, ever be lonely?

"I'm flattered," he said smoothly, "that you should choose my company amongst so many admirers!"

She laughed softly, a slim hand reaching across to stroke his. The contact, so warm and intimate, thrilled him: the subtle fragrance of her perfume came to him, stirring his blood.

"You interest me, Jon. There is something about you that attracts me, a certain quality I find stimulating. I see adventure and daring in your face, even danger. You are a man of action, bold, careless of the odds against you—and such men are rare in my life."

She laughed again, withdrawing her hand.

"But you are hungry—please do not wait for me. I have eaten. I will sip

a wine and wait your pleasure. I have a feeling we were destined to meet, that our paths lead to the same goal, and I am glad."

Hawke's brain was a whirlpool of confusion and his skin tingled with the awareness of danger. Was she playing with him? Amusing herself while she waited for the trap to be sprung? A waiter hovered by the table and Hawkes gave his order: whatever was coming, he must eat.

She sipped her wine, tawny eyes watching him over the rim of the glass, smiling as a cat with a mouse. Hawkes ate hungrily, sat back with a feeling of contentment, replete, ready for the next move. He wished he had a gun, but only Cato's men were allowed to carry arms; and the penalty for disobedience was death.

Deirdre said: "It is almost the time for transition. Shall we watch the starscreen together? You can explain it to me."

"If you wish."

They left the dining hall and walked the main corridor of the *Stella*. A crowd had gathered to watch the screen, but Hawkes found a corner where he and Deirdre could be alone. The chronometer registered five minutes to transition-time; the needle on the velocimeter was creeping towards a thin red line.

"When the needle reaches the red mark," he said, "the ship attains the speed of light, then—instantaneous transition."

Four minutes to go. Deirdre asked:

"But how? It seems incredible. The time-factor involved must be—well . . . "

"Time ceases to exist," Hawkes replied. "It's as simple as that. The ship takes twenty-four hours to accelerate to the speed of light. Transition takes place. Then a further twenty-four hours to decelerate towards Rhyll."

Three minutes. There was tension in the air, an expectancy amongst the crowd, a nervousness born of the awareness that the *Stella* was about to be flung hundreds of light-years across space.

"Watch the screen," Hawkes said. "The stars become streaks of light at the speed we're travelling, but it's the relative positions which reveal the change. See the bright streak in the top right-hand corner? That's Antares."

Two minutes. The tension mounting. Deirdre slipped her hand in his.

"I should be used to it," she murmured, "but I still get scared. When I think what might happen if anything went wrong——"

One minute. Hawkes found he had tightened his grip on the girl's hand. The screen over their heads was star-streaked, velvet and silver. The needle swung onto the red line.

"Now," he said, and his mouth was dry.

The starscreen winked out—and on again. But now the view had subtly changed. The streaks of light were in different positions, of new intensity. The *Stella* had been transmitted to a part of the galaxy, so remote that light rays took more than five hundred years to reach Earth.

Hawkes relaxed, releasing her hand.

"It's passed." He studied the starscreen. "Good navigating, too. See the faded streak to the bottom-left? That's Antares, the only indication of how far we've travelled. You won't see Dark Star M–1, but it's there all right; our detectors will pick it up."

Tension had gone. The velocimeter needle began to fall back. The crowd dispersed.

"It's incredible," Deirdre said slowly. "All that distance—in a moment. But how ?"

"In no time at all," Hawkes corrected her. "And no-one knows exactly how it works. The principle was discovered by accident; but it seems that the speed of light is the binding force of the space-time continuum, that when a ship reaches this limit, time—as we measure it—ceases to exist. And so we can travel immense distances in a state of no-time, reach any part of the galaxy in forty-eight hours, the time necessary to reach the speed of light and decelerate."

Deirdre said: "The stars—and scarcely more than a century since the first atomic-powered spaceship reached Earth's moon."

Hawkes thought: a century of bloodshed. The expansion of militant power. Colonization and the formation of Galactic Union. A slave civilization, with the people of many worlds held in check by secret police under the ruthless Cato. Maximillian IV, self-styled Democrat of the Union, the greatest tyrant in history. It would have been better if instantaneous transition had never been discovered . . .

Deirdre said: "I live on Rhyll. You must come and stay with me, Jon, I'm sure we have a common interest—in danger."

Icy fingers touched Hawkes' brain. Who was this girl ? How much did she suspect ? Her eyes were looking beyond him and an expression flickered in their tawny depths he had never thought to see there—fear. She pushed him away, whispering:

"Go, quickly. My cabin is 101—I'll join you within fifteen minutes. No, don't look back—danger threatens."

Hawkes moved off, turned into a side passage, glancing back as he reached the corner. A man dressed in black had joined the girl; a man with a ghastly white face, thin-lipped, with large, staring eyes deep-set behind rimless spectacles. Beads of sweat started out on Hawkes' forehead as those penetrating eyes fixed on him, the eyes of Cato, Maximillian IV's right-hand man, head of the secret police.

He dare not run. Hawkes quickened his pace, threading between the *Stella's* passengers, turning again at the next corner. Cato aboard the starship bound for Rhyll; it was a shock. Why ? Did he suspect that Hawkes was after Techon, that he had the clue to the weapon's hiding place ? And Deirdre—what game was she playing ?

He must hide at once. It was no longer safe to remain in the open. The holds ? He remembered that the girl had said, "cabin 101 in fifteen minutes." What did she want with him ? The fact that she had warned him in time to escape Cato indicated that she knew his identity. But she *had* warned him . . .

Hawkes started reading the numbers on cabin doors, making his way aft. 101 was in a short passageway off the main corridor, and the door opened at his touch. The cabin was empty, smelling faintly of her perfume; the drapes were pink and pastel-blue, a feminine touch showing in loosely scattered trinkets. Hawkes took up a position behind the door, waiting.

Long, agonizing minutes passed. Doubts and suspicions filled his head. Were Cato's men searching the starship ? Had Deirdre betrayed him ?

Should he stay in her cabin—or return to the hold? He pressed an ear to the door, listening. Footfalls sounded, the door opened and Deirdre came into the cabin.

Hawkes moved swiftly. He was behind the girl and one arm snaked round her slim form, imprisoning her arms; his other hand went over her mouth, preventing an outcry. He held her quiet, tense, the seconds ticking by. No-one else came through the door; she was alone.

He removed his hand from her mouth, gripping her wrists tightly. His voice was hard, brittle:

"Who are you? What did Cato want with you?"

She laughed softly, pressing against him. Her crimson lips were very close, murmuring:

"Kiss me, Jon . . . "

The warmth and softness of her transmitted itself through the shimmering transparency of her gown; her perfume roused him, the mystery in her tawny eyes fired desire in his veins. Hawkes crushed his lips on hers and knew a moment of infinite ecstasy. Then the awareness of reality returned and the needle of danger pricked at his brain. He released her quickly and sprang back.

Deirdre rubbed her wrists where his grip had hurt her. She said:

"I had thought you could stay here, but that is impossible now. Cato recognized you. His men are searching the ship and even my cabin will not be inviolate. You must return to the holds, Jon Hawkes!"

Coldness gripped him. He snarled:

"How do you know me?"

"Is it so strange? Did you really think yours was the only rebel group? I tell you we are working for the same end, Techon and the destruction of the Union." She saw the question forming on his lips and went on, quickly, before he could speak. "You must trust me, Jon. When the *Stella* berths at Rhyll, I shall be waiting to help you. I'll take you to my Uncle, Vincente, a powerful man on Rhyll, and he will hide you. We shall work together to overthrow Maximillian IV."

She moved to a travelling box, threw back the lid and withdrew a small plastic container which she pushed into Hawkes' hands.

"You will need this," she said. "I know how Cato's mind works. Now you must go—it is no longer safe here."

He moved to the door, paused.

"What did Cato want? How do I know I can trust you?"

She laughed again, but there was no humour in the sound.

"Can you doubt me, after our kiss? Did I resist? As for Cato, even he can appreciate my beauty, but I'll never give myself to him . . . as I might, you. Now go."

Hawkes looked into her eyes, but saw only woman's eternal mystery there. He passed through the doorway, into the passage, and hurried towards the ship's hold, carrying the plastic container she had given him.

Few passengers were in the brightly lit corridors; he saw armed men in the distance, but was in no immediate danger. The *Stella* was a large ship and Cato would be forced to work slowly, cordoning one section at a time. They might leave the holds till the starship reached Rhyll. Loudspeakers broadcast a message:

All passengers will stay in their cabins. A wanted man is aboardship and the police have orders to shoot anyone found in the corridors. The search will not take long but you must co-operate to the full. Remain in your cabins until further orders are given.

Hawkes went through the first hatchway he came across, into the warm darkness of the hold. He felt his way between the racks holding the *Stella's* cargo, till he found a suitable hiding place. He settled to wait out his ordeal. Less than twenty-four hours to the planet of the Dark Star M–1—and Techon. His thoughts turned to Deirdre and time passed . . .

Hours later, Hawkes shifted from his cramped position and made his way through darkness to the bulkheads. He felt for a door—locked. He was a prisoner, isolated, while the cabins were searched, then—— .

There was the faintest sound. A hissing in the air. He smelt a bitter odour through the darkness and fear churned inside him. He had a moment of panic as he realized that Cato was pumping a poison gas through the ventilating system, that soon the hold would be drenched with asphyxiating vapour.

II

Hawkes stumbled back, coughing. The sickly-sweet smell followed, clinging to his clothes. He knew it would be no good trying other doors—Cato would see to it there was no escape for his victim before he pumped in the gas. Death was only seconds away . . .

The plastic container Deirdre had given him was an awkward shape in his arms, forcing him to remember it, and what she had said: "You will need this—I know how Cato's mind works." He tore open the box and fumbled inside, felt a moulded plastic face-piece, lenses, a chemical container. Even in the darkness, he knew it to be a gas-mask. Swiftly, he adjusted the respirator to his mouth and nose, holding his breath while the poison gas hissed about him.

He huddled amongst the cargo, his clothes sticky with the gas, his skin damp and prickly. The mask served its purpose, filtering out the deadly chemicals, allowing him to breathe safe air. There could be no doubt, Deirdre had saved his life. After a time the hissing stopped. The hold was full of gas; he wondered how long it would be before Cato's men came to look for his dead body, and smiled grimly. They were due for a surprise.

Hours passed. The *Stella* must be circling Rhyll, about to land. The air circulated once more; a steady draught from the ventilators told him that Cato was pumping out the gas, filling the hold with pure air. He waited till the pumping stopped, tore off the mask and gulped down fresh air into his lungs; it was exhilarating after the filtered stuff he had been breathing.

The metal walls stopped vibrating; the ship had landed, the passengers, Deirdre amongst them, would be leaving the ship. Abruptly, light flooded the hold, and Hawkes blinked in a dazzling glare, his eyes accustomed to total darkness. Cato was coming.

Hawkes moved quickly toward one of the steel doors. He climbed atop the cargo racks and lay motionless; the police would be expecting to find a corpse on the floor, they might not think to look upwards, and this gave him the advantage of surprise.

The door opened silently and six uniformed men came into the hold. They were armed, but their guns were holstered, unsuspecting that their

victim had been supplied with a gas-mask. Hawkes let them pass, dropped quietly to the floor and went through the door to the corridor.

Another guard was coming towards him. For a moment, they stared at each other in surprise; then Cato's man went for his needle-gun. Hawkes threw himself forward, grasping the man's wrist with both hands, dragging him to the floor; the gun skidded along the passage, out of reach. The guard started to cry out; Hawkes twisted the man's arm, throwing back his head—the edge of his flat hand chopped viciously across the policeman's throat, choking him to silence.

As the guard went limp, Hawkes scooped up his gun and dragged the body into the nearest cabin. He was sweating, knowing he had only minutes before the others discovered his escape. He stripped off his own grey and scarlet, the guard's black uniform, and changed. With the needle-gun in his hand, he raced along the main corridor to the air-lock. Behind him, a shout went up; Cato had found the gas-mask and learnt how he had been tricked.

Outside the ship, flat concrete stretched away to distant buildings. Overhead, a translucent air-containing dome glittered, and bright arc-lamps showed a ring of uniformed police about the *Stella*. Hawkes forced himself to walk slowly towards them, his right arm hanging down, the gun brushing his knee; his life hung on the slender thread of deception, the black uniform he wore.

A gaunt lieutenant of police challenged Hawkes as he approached. Hawkes replied:

"The rebel's body has been found. Dismiss your men."

The lieutenant hesitated, swung suspiciously on Hawkes as men came running from the *Stella*. Hawkes' arm came up; his needle-gun lanced blazing energy and the lieutenant crumpled. He ran fast, shooting back at the men behind—he was through the ring now, and haring for the safety of cover. Needle-guns blasted energy-rays after him. One shot came close enough to sear his skin with sudden heat, then he reached the first building and turned the corner. For the moment, he was safe.

There was an autocar waiting, the sliding door open, the engine softly purring. A feminine voice said, urgently:

"In here, Jon. Hurry !"

Hawkes glimpsed a slim body behind the driving wheel, flame-red hair and tawny eyes. Deirdre. He dived through the doorway and the sliding panel closed behind him. She touched the controls and the autocar leapt forward, picking up speed. Buildings rushed past; they turned off the wide lane on to a secondary road.

Hawkes twisted round in his seat, staring back. No black autocars pursued them. He relaxed a little, glancing at the girl. Her lips were tight-pressed, her hands tensed on the wheel; she seemed oblivious of everything except getting the utmost speed from the car.

"That's twice you've helped me," he said. "I must thank you for saving my life—without the gas-mask . . . "

"Don't talk," she snapped. "Let me concentrate—we won't be safe till I get you to Vincente's."

He cradled the needle-gun in his lap, wondering about her. How far could

he trust her? How much did she know ? He tried to make plans, but nothing he thought of seemed adequate. He had hoped to reach Rhyll unobserved by Cato's secret police and search for Techon; now, he dare not remain in the open. He would be hunted down and killed. Safety demanded a hiding place—and he was a stranger to Rhyll. He realized, grimly, that he had been forced into a position where he must trust the girl at his side.

Their route was tortuous, winding between unlit buildings, using roads in shadow where few people moved. Deirdre changed direction continuously, switching from one city section to another, till Hawkes lost all sense of orientation and began to wonder if she were trying to confuse him rather than his pursuers. He gave up the attempt to fix Rhyll's geography in his mind and concentrated on the fleeting impressions he received as the autocar sped along.

It was a completely artificial world, the city covered by a vast dome. Outside, a frigid airless void gripped the planet's surface, bleak and forbidding. The Dark Star M-1 was invisible against the black pall of space, sending neither light nor heat to Rhyll and its attendant satellite. Atomic power provided the fuel for maintaining life on the planet.

Hawkes glimpsed agricultural areas, factories, offices, shops, rising tiers of tenement dwellings. It was a depressing world, the balance of life carefully maintained under laboratory conditions, its people crushed beneath the despotism of Maximillian IV, living in constant fear of Cato and his secret police. A slave world, no different from any other in the galaxy . . .

The autocar swung into the private grounds of a large, flamboyant house; the gardens were luxuriously ornate, bathed in light, and a swimming pool rippled blue water; tame birds fluttered and sang from the branches of slender trees, the leaves tinted to form a rainbow of colour. No ordinary person lived here; only the high-born, puppets of the Democrat, acquired such opulent quarters. Hawkes stiffened in his seat, hand tightening on the needle-gun, fearing treachery.

The ground sloped downward and the autocar moved underground, into darkness. A metal door slid shut behind them and Deirdre stopped the car. Hawkes smelled her perfume in the dark; her lips brushed his, but she found him tensed, unresponsive.

"Don't you trust me, Jon ? After I saved your life ? Do you imagine that none of Galactic Union's executives long for freedom of action ? Surely you don't really think that only the slave workers are capable of rebellion against the tyrant ?"

Hawkes did not reply. He struggled with an inner conflict, the desire to trust the beautiful girl who had saved him aboard the *Stella* and roused in him a longing he had not felt before, and his duty to mankind—the duty to guard Techon from Maximillian IV and turn it against the despot. It was a conflict he could not resolve.

Lights came on and Hawkes saw that he was in an underground garage. Deirdre slid out of the autocar, Hawkes following her to an elevator in the wall. She pressed a button and the cage swept swiftly up to a higher level. A lighted passage, carpeted with thick piles, led through swinging drapes to a large room furnished in lavender and lemon.

She whispered: "You must trust us, Jon. No-one else can help you here."

A man was seated behind a desk; a large, red-faced man with a hard mouth and eyes like blue marbles. He rose, and waddled forward, heavy and slow of movement, the few blond hairs on his square-cut head glinting like strands of gold. There was a bristle of hair on his upper lip and a golden matting on the back of the hand he extended in greeting.

Dierdre said: "I've brought you Jon Hawkes, uncle. Jon, this is Vincente van Strachan, governor of Rhyll."

Hawkes felt the needle-gun grow heavy in his hand. Van Strachan, Galactic Union's puppet ruler, the man responsible for the suppression of freedom on the planet of Dark Star M–1. He checked his instinctive impulse to blast down the tyrant's underling. Was it possible that van Strachan could be instigating a rebellion ? It seemed fantastic, but Deirdre had saved him from Cato.

"Your suspicions are understandable," van Strachan chuckled, "But you need not be alarmed. I have little love for the Democrat, and we did not rescue you from Cato for nothing." He kissed Deirdre lightly on the cheek. "I wonder if you'd have come so willingly if it had not been for Deirdre ? A beautiful niece is a considerable asset to a scheming man, Mr. Hawkes . . . "

Hawkes did not relax his guard. The light in van Strachan's marble-blue eyes revealed cunning; their owner was dangerous, not to be trusted. Again, he wondered about the girl.

Van Strachan spread his hands, gesturing. "Sit down, Mr. Hawkes. Let me assure you I am very glad to see you here—and now, let us discuss Techon !"

Hawkes said: "I know nothing about the weapon. You are wasting your time."

Van Strachan smiled easily, waving a large hand.

"There's no need to fence with me, Hawkes. Give me the credit for a little intelligence—you did not board the *Stella* only to escape from Earth. You could have taken ship to a score of other planets, each less dangerous than this one. Techon is *here*. I know it; Cato knows it; and you know where the weapon is hidden."

Hawkes' seat was luxurious and he was tired; it would be easy to relax, to slip into sleep. Deirdre poured three glasses of wine and passed them round. Hawkes made sure the wine came from the same bottle, that she slipped nothing into his glass, that they drank before he did. He was not taking the chance of being drugged.

Deirdre sat next to him, opposite her uncle. She said:

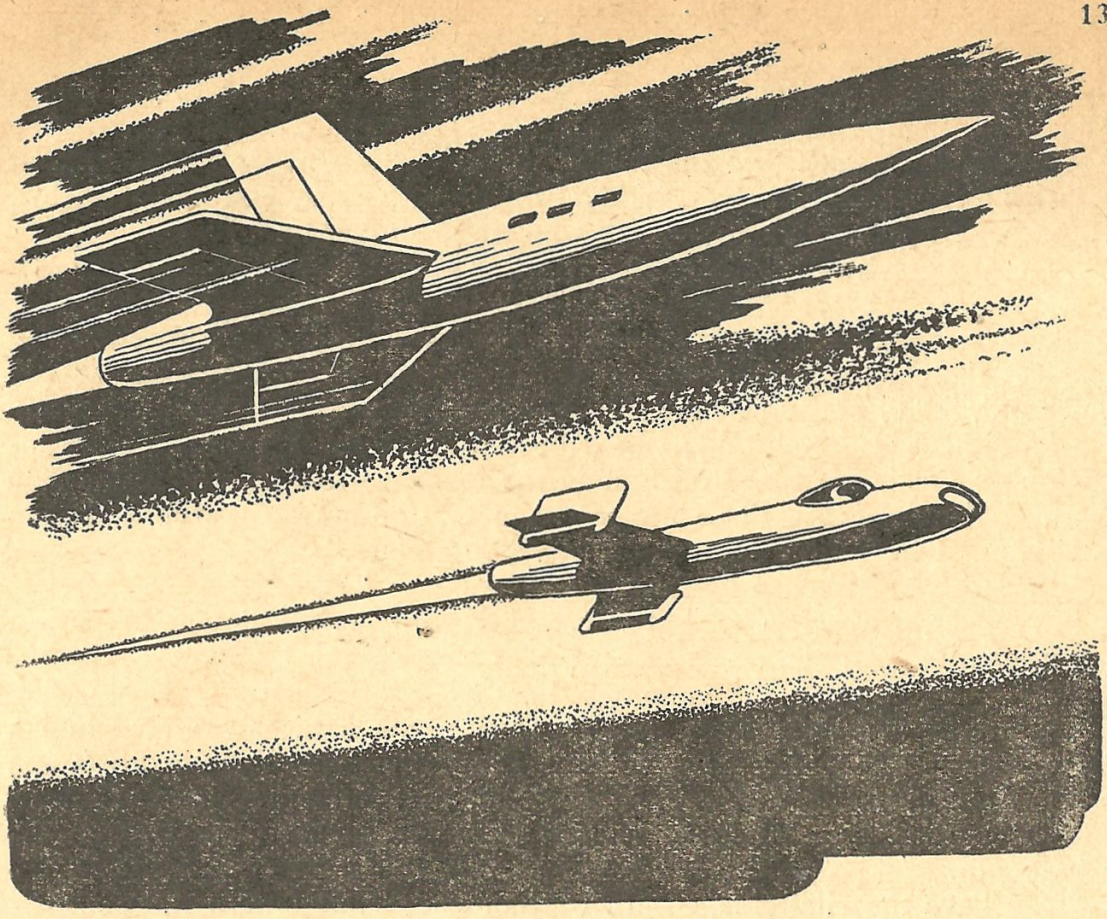
"I wouldn't lie to you, Jon. We want to get Techon for the same reason you do—to use it against the Union, to free the galaxy from despotism."

"True, true, Mr. Hawkes," van Strachan said solemnly. "I swear every word is true. I am governor here, but I am as much a slave as the workers outside. How long do you imagine I would live if I failed to carry out the dreadful commands of Maximillian IV ?"

Hawkes sipped his wine and did not reply. Van Strachan went on:

"I want to overthrow the Union. You want the same; your actions have proved that. I suggest we work together—and we must have Techon. Without that, we are helpless."

Deirdre leaned towards him; there was eagerness in her voice.



"You do have the clue, don't you, Jon? The clue to Techon's hiding place . . . ?"

Van Strachan swilled his wine and stared dreamily into the glass.

"Techon," he murmured, "the fabulous lost weapon of Rhyll. No man knows what it is, but legend tells that no power can stand against it. 'The weapon too terrible to use'." He rolled the syllables on his tongue, savouring them. "That's what the original inhabitants of this planet called Techon. A strange race, with a singular code of morals—threatened by the expansion of Galactic Union, they allowed themselves to be exterminated rather than use their weapon against us. They must have been completely lacking any instinct of self-preservation."

Lines of doggerel ran through Hawkes' brain:

City of death and resignation——

Deirdre said: "I think they were noble, far above us. To think, they had a weapon which would have wiped out the armies of the Democrat—and they refused to use it. They must have had such dignity that we can never imagine."

Hell knows no greater devastation
Or terror . . .

"Instead of fighting back," van Strachan said softly, "they ran away—and were exterminated to the last man, woman and child,"

. . . than they who flee
Nameless o'er a night-dark sea !

Hawkes smiled grimly; Man would never understand the feelings which had prompted the people of Rhyll to let themselves be slaughtered rather than unleash the terrible power of Techon. Man was a fighting race, born

to kill, and die of violence. Yes, he would use Techon against Maximillian IV . . .

Van Strachan said: "So the secret of Techon was never discovered. It remains a tantalizing mystery, hidden, till now—because you have the clue, Hawkes. Why else should you risk your neck coming here ?"

Twin towers pierce a lightless sky
Etched from the rock where no birds cry.

Hawkes imagined a dark, airless sea of rock with fantastic towers rising to meet the disc of an unlighted moon. Somewhere on Rhyll was such a place and, there, Techon lay buried. But that he preferred to keep to himself.

Aloud, he said: "Naturally, I have been hunting for Techon. Our organization on Earth was based on finding the weapon—and using it. But Cato discovered our meeting place and struck first. I do not know where Techon is hidden. I have no clue to the secret hiding place."

Vincente van Strachan looked at his niece.

"My dear, Mr. Hawkes will be staying with us. Will you prepare a room for him ?"

Deirdre smiled at Hawkes and left them. Van Strachan offered him a cigar, took one himself. They lit up. Hawkes enjoyed the smooth aroma of the cigar, drawing lazily at it, watching his host through a cloud of smoke. Those marble-blue eyes held menace; Hawkes tightened his grip on the needle-gun.

"You have the vital clue," van Strachan said, "and I want it. Consider your position here. You are virtually a prisoner in my power. Cato knows you are on Rhyll and his men will scour the whole planet; you dare not leave my house for there is nowhere else you can hide. Suppose I threw you out—how long do you think you'd last ?"

A coldness gripped Hawkes. Van Strachan smiled thinly, stabbing the air with his cigar.

"You see, I hope, that it will be best to fall in with my plans ? Come, Hawkes, you are not a fool. We are both men of experience and know better than to indulge in the fantasy of noble ideals. With Techon, we can dispossess Maximillian IV and seize control of Galactic Union. Together, we can be the greatest power throughout galaxy !"

Hawkes felt the anger building up inside him. Van Strachan had revealed his true purpose in saving him from Cato; he was not concerned with freeing the peoples held in slavery by the Union, only with seizing more power for himself. Vincente van Strachan, Democrat of Galactic Union. Hawkes felt his trigger finger begin the itch and knew he was going to kill him.

He said: "And Deirdre ?"

The hard mouth relaxed.

"She is young and starry-eyed, full of ideals. She'll learn better in time, after our coup; till then, it is best she should continue to believe in my professed desire to use Techon for the good of mankind." Van Strachan chuckled drily. "There's no fool like a young fool—but she'll be as cynical as I when she's a little older."

He squinted at Hawkes through the tobacco haze.

"But that's not what you mean, is it ? I've seen the way you look at her . . . well, I'll make a bargain. And you'll do well to remember you're an

outlaw, a man with a price on his head, before you refuse. Give me the secret of Techon and you'll replace Cato under my rule in Galactic Union—and Deirdre shall be yours."

Hawkes trembled with rage. That this man could be Deirdre's uncle seemed vile infamy—but, at least, he knew the girl could be trusted, and that filled him with immense relief.

Van Strachan said: "Is it a deal ? Do you agree to my terms ?"

"No!" Hawkes intended to shout his denial but his voice came out a hoarse croak. There was something wrong with his throat, a haze before his eyes. "I'm going to kill you, van Strachan," he gasped.

His arm strained to lift the needle-gun—and failed. A paralysis held him powerless. Grey mist covered his eyes and his senses reeled. The gun became too heavy to hold and slipped through his fingers to the carpet. He'd never felt so tired; he exerted his will-power to stagger from the chair. His legs crumpled under the enormous weight of his body and he sprawled headlong. His face was buried in thick pile, everything going black. The last thing he heard was the sardonic laughter of Vincente van Strachan.

III

It had been the cigar. Not the wine but the cigar which had been drugged. Jon Hawkes returned to consciousness, the bitterness of failure gripping him; he told himself he should have been prepared for treachery, that he was the most senseless of fools to have fallen for such a simple trick.

A voice said "Behave yourself and you won't be hurt—try anything and I'll get rough. Please yourself, of course."

Hawkes sat up and stared about him. He was lying on a bed in a room with no windows. Artificial light provided the only illumination. His guard sat on a chair by the door, the only exit from the room.

Hawkes swung his feet to the floor and stood up, eyeing the guard carefully. He was a giant of a man, over six foot, with a squat head set above a barrel-like body; his muscles rippled visibly with the slightest movement and he had the homeliest face Hawkes had ever seen. The giant grinned at him in a friendly manner.

"The governor says you're to stay put because he doesn't want you bumping in to Cato. Me, I hope you'll try to leave—I'm happiest when I'm fighting somebody. You want to fight ?"

Hawkes shook his head and the giant looked disappointed.

"I'm Mark," Hawkes' guard informed him confidentially. "I was hoping you'd start something—it's a long time since I had a good scrap. You sure you don't want to fight ? I wouldn't hurt you, just a friendly fight to pass away the time . . . "

"No thanks," Hawkes said, "you're not my weight. I'd sooner batter my head against a steel wall !"

Mark looked glum.

"My size is against me," he complained. "Everyone gets scared on account I'm a giant. It isn't fair, when all I want is——"

He broke off as the door opened and Deirdre van Strachan came into the room.

"Hello, Miss Deirdre," Mark said, brightening. "Gee, you're looking nice !"

She smiled and said, gracefully: "Thank you, Mark." She turned to Hawkes, frowning: "You're behaving foolishly, Jon. Uncle told me he had to drug you because you turned on him."

Hawkes snapped: "Did he tell you why ? Deirdre, you must listen to me—your uncle is using you for his own vile ends. He isn't concerned with changing the set-up of Galactic Union, only with becoming Democrat himself. That's why he wants to get hold of Techon, to gratify his desire for more power. He's tricked you into believing he wants a free galaxy—and that's the last thing he wants."

She stamped her foot irritably, tossing her head.

"Oh, don't be such a fool ! I know my uncle better than you . . . I suppose you think I want to use Techon to oppress the people, too ?"

"No." He looked at her, slim and proud and very sure of herself. She'd let down her flame-red hair so that it formed a mantle about her shoulders, and had changed the transparent gown for one of emerald-green. "He's using you as bait." Hawkes' lips curled bitterly. "He offered you as my reward—for helping him. A balance, with Techon in one scale and you in the other. How do you like that ?"

She flushed angrily, and stormed:

"How dare you ! Vincente would never suggest such an arrangement—never ! I won't stay and listen to such lies . . . "

She swept to the door, almost colliding with van Strachan as he came in, and disappeared from Hawkes' sight. Van Strachan said:

"Foolish of you to upset my niece like that, Hawkes. You must realize she thinks highly of me, that I can do no wrong. Still, she'll come round in time. I can tell she cares for you, in spite of your attitude towards me."

He laughed in a way that made Hawkes clench his hands. Mark growled, warningly:

"Easy, friend, unless you want your face spoiled."

Hawkes controlled himself; he was well able to give an account of himself in a fight, but Mark was an opponent quite beyond his physical powers. The giant looked capable of flattening him with one hand, as casually as Hawkes would swat an insect.

Van Strachan smiled a little, rubbing his blond moustache.

"I thought you might have changed your ideas by now, but apparently not. However, there is no immediate hurry—and I am sure you appreciate that any loss of time is harmful to you, personally. The sooner we have Techon in our hands, the sooner you will be out of danger."

His blue eyes held Hawkes' in a cold stare.

"You are free to move about the house. Mark will be with you, in case you should be so foolhardy as to tempt Cato's wrath by leaving us. For your own good, I suggest you consider yourself a permanent guest in this house. The library is at your disposal—and contains a large-scale atlas of Rhyll . . . "

He turned to go.

"One thing more. Cato is a frequent visitor here, and you will not want *him* to see you. Return to this room instantly the warning is given—and remember, any future you might have depends upon your surrendering the secret of Techon to me."

The door closed behind him. Hawkes sat on the bed, hands clenched, deep lines etched about his mouth and eyes. Mark said, curiously:

"You really know anything about Techon ? I never took much notice of the story—too fantastic. But the governor seems to believe it all right."

Hawkes didn't bother to reply. He was thinking of Deirdre; somehow he had to prove to her that she was a pawn in her uncle's game for galactic-wide power. He had to open her eyes, reveal the true nature of Vincente van Strachan, and save her from his evil machinations. Everything revolved around Techon—if he could discover the hiding place and . . .

"Mark," he said. "I want to see the library."

The giant grinned.

"Sure, I'll take you there—but don't try to get away or I'll break a few bones !"

Hawkes found that his prison cell was underground, completely isolated, connected to the house by an elevator that worked behind a sliding panel in one of the walls. A secret room that not even Cato suspected of existing. The library was extensive and van Strachan had thoughtfully left a bulky atlas of the planet on the desk.

He sat down and leafed quickly through the maps, forming a general picture of Rhyll's surface. Nothing suggesting Techon's hiding place occurred to him, so he began a slow and methodical search for the twin towers and the night-dark sea. Mark sat close by, watching intently, offering no comment. Van Strachan came in once, smiled, and left without speaking. Deirdre did not appear.

The maps were large-scale and detailed, more than a hundred sheets, and Hawkes began to realize the size of the job he had taken on. But there was nothing else to do. He scanned each sheet closely, noting sea-beds, rock formations, mountain ranges. Rhyll was apparently without vegetation, barren of life except under the vast dome, a dead world circling a dead star, forever in eternal night.

He saw Deirdre the next day, and again tried to persuade her that her uncle was not what he seemed. She refused to listen, and left him, her chin tilted stubbornly, tawny eyes angry; but there was something in her manner that hinted at an inner conflict, the clash between her instinctive feelings for Hawkes and confidence in her uncle.

Shortly afterwards, the alarm came. Cato was approaching. Mark hurried him to the secret room and they stayed there till the head of the secret police had left. Hawkes learnt later that the house had been searched; apparently, Cato did not share Deirdre's trust in Vincente van Strachan. But the secret room remained undiscovered and Cato turned his attentions to Deirdre. She received him coldly, and he retreated—even Cato had to show some respect for the governor's niece. And van Strachan was high in the favours of Maximillian IV.

Hawkes returned to the library to complete his study of the atlas. Again and again he went through the maps, but no trace of the twin towers came to light. He wondered if Techon really existed or whether it was unfounded legend; whether, perhaps, the lines of verse he had found on Earth were not the clue to the hiding place after all; whether Techon was on some other world than Rhyll . . .

It came upon him suddenly; the moon ! Rhyll's moon—a lone satellite orbiting the planet, dark and frozen, hanging invisible in the void. A tiny

world, unexplored, an icy waste without atmosphere—the words of the doggerel ran through his head:

Twin towers pierce a lightless sky
Etched from the rock where no birds cry,

and

. . . they who flee
Nameless o'er a night-dark sea !

It fitted; the lines could mean Rhyll's moon. Hawkes suppressed the excitement that ran through his veins—he must not let van Strachan suspect he had found a lead to Techon. The atlas could not help him now ; photographs showed little, reports told nothing—he must rocket to the moon and explore for himself. But first, he had to escape.

They'd taken his gun and Mark was always there, watching, never leaving him alone for one moment. Escape, which seemed so difficult, proved ridiculously easy. Van Strachan had forgotten to remove a needle-gun from the desk drawer . . . Hawkes edged open the drawer, his hand curling round the butt of the gun. Mark was ten feet away, reading, and the house was silent.

Hawkes had the gun out, pointing the muzzle at his guard. His face was hard and a glitter showed in his eyes. He said:

"Don't make me kill you, Mark !"

The giant started, swore softly. He remained where he was, arms hanging limp.

"Where'd you get that gun ?" he asked incredulously.

Hawkes smiled thinly.

"Seems van Strachan is a little forgetful, Mark. I'm leaving here, and you're going with me. We'll take an autocar and you'll drive me to the spaceport—if you do as I say, I'll let you go then. Give me any trouble and I'll blast you down."

Mark said, uneasily: "I'm not arguing with a needle-gun."

"Let's go, then." Hawkes gestured at the door. "And remember, you'll be the first to die if there's any shooting."

The elevator carried them down to the underground garage. Mark took the wheel of an autocar and Hawkes sat with his gun barrel probing the giant's ribs. He saw nothing of van Strachan or Deirdre, or the governor's servants; luck was with him so far. Mark handled the car expertly, dodging busy traffic routes, heading for the spaceport under the bright lights of the dome. No-one followed them—and Mark, at the wheel of the governor's autocar, ensured easy access to the spaceport.

Hawkes said: "Does van Strachan have a private rocketship here ?"

Mark pointed across the concrete.

"The red-and-green ship. It's always ready for the governor's personal use."

"Fine. Tell van Strachan, when you see him, that I couldn't wait to get his permission to borrow it. And Mark, don't be in a hurry to raise the alarm—I'm a crack shot, and these needle-guns have a long range."

Hawkes moved quickly across the concrete and boarded the red-and-green rocketship. He breathed easier when the airlock closed behind him and he was alone; it didn't matter what Mark did now—he was safe. It was a small ship, designed to be operated by one man. Hawkes studied the controls, checked

the fuel and air; everything was set.

He blasted off. The ship rose, the spacelock in the dome operated automatically, and he was through. Before him, the black void loomed, flecked with distant stars. Rhyll fell away behind and the ship's detectors picked up the moon-mass; he plotted a course and settled down to wait out the next few hours.

Hawkes felt happy; for the first time in what seemed years, he was acting freely. Ever since he'd fled Earth, his actions had been out of his control; forced to stowaway on the *Stella*, he had met with nothing but set-backs, compelling his every move. He'd had no option but to trust Deirdre, to fall into van Strachan's trap. Now he was free—and the limitless, empty spaces ahead gave him an intoxicating feeling of liberty. Doubt and worry left him; he hummed a racy melody, all tension gone. He was free—free to explore Rhyll's moon, search for the twin towers and the night-dark sea. And Techon.

"The fool !"

Vincente van Strachan's lips curled contemptuously and his marble-blue eyes gleamed with satisfaction.

"Hawkes has done exactly as I planned. A more intelligent man would have guessed that I allowed him to escape—that I intended him to lead me to Techon. Did he really suppose I would be stupid enough to leave a needle-gun where he could find it, by accident ?"

Deirdre did not answer the question. She watched the screen in the cabin of her uncle's rocketship, watched the tell-tale mark that was Jon Hawkes in his journeying across space. She was troubled in her mind, remembering what Hawkes had said, disturbed by her uncle's attitude.

Van Strachan said: "Of course he knows where Techon is hidden—and he'll lead us straight to it."

Automatic instruments were registering the course of Hawkes' ship. Deirdre interpreted the readings.

"He seems to be making for the moon."

"Ah !" Van Strachan brushed his moustache with a stubby finger. "That's something I never thought of—the moon. Yes, of course, that would be the perfect hiding place for Techon." He rubbed his hands.

Deirdre said: "I wish you could persuade him to co-operate. I'm sure Jon shares our feelings about using the weapon for breaking Galactic Union."

"To be sure." Van Strachan smiled a little. "This plan of mine will ensure his co-operation, my dear. When we have the weapon and he sees our purpose more clearly, he'll be glad to help. Now don't worry—Hawkes won't be harmed . . . "

Yet, he thought, *not till I've got Techon, not till then*! He shot a sideways glance at his niece. Beautiful. She'd be useful to him, a pawn for influencing other men—after he'd got Hawkes out of her head. He frowned. She really seemed to be in love with that young man ; but she'd get over it.

He smiled as he watched the screen. Techon was almost within his grasp, Hawkes too . . . yes, Jon Hawkes must die !

IV

Rhyll's moon was black as space, invisible to the eye. The ship's detectors pin-pointed the dark mass and Hawkes set automatic controls so that the rocket circled the moon at low altitude. He used the infra-red screen to

watch the surface.

Jagged peaks showed, a desert of rock dust, unshifting in the airless, wind-less void; meteor craters and bottomless rifts split the surface into crazy patterns; in the distance, the peaks of a mountain range jutted up like needle spikes.

The rocketship spiralled about the moon, each circuit giving Hawkes a new view of the unchanging desolation. Everywhere was dust and crystals, rifts and sharp crags. The curved bed of what might once have been a river wound across the bleak landscape. There was no sign to indicate that life had ever existed on Rhyll's satellite, no vestige of man-made works. A loneliness hung across the moon, a silence, a darkness that belonged to the grave.

Again and again, Hawkes circled the moon in his stolen rocketship. Hours passed, searching for the twin towers and a night-dark sea . . . the whole satellite might be the night-dark sea, so perfectly did the description fit. The twin towers? There was nothing remotely resembling any artificial structure. Only jagged mountain peaks, any two of which might be the markers for Techon's hiding place.

Hawkes knew frustration; it writhed inside him like a live thing, growing in intensity. Techon *must* be somewhere close by. The lines about his mouth were taut, his eyes stabbed the barren world revealed by the infra-red screen, his fingers drummed restlessly. Time was running short. Van Strachan would have learnt of his escape; Cato might have discovered he had stolen the red-and-green ship—and he had to find Techon before they found him.

He dreamt of a free galaxy, of people on many planets living without fear; that was what he wanted—Deirdre too. To van Strachan, Techon meant power; the power of Democrat, galactic dictator. Cato sought the weapon to retain the old balance of power, the hated regime of Maximillian IV. Hawkes remembered the rebels who had died on Earth and knew he dare not fail; he, alone, carried the torch of freedom.

Space was a dark bowl studded with glittering lights—and one of the lights grew suddenly brighter, travelling to meet Hawkes' ship. The black rocketship hurtled through the void, coming in to attack. A powerful magnetic screen drew Hawkes' ship off course, clamped the two rockets together, air-lock to air-lock.

Hawkes was thrown violently off-balance as the ship shuddered and bucked under invisible forces; his head struck metalwork, stunning him. Blackness closed in . . .

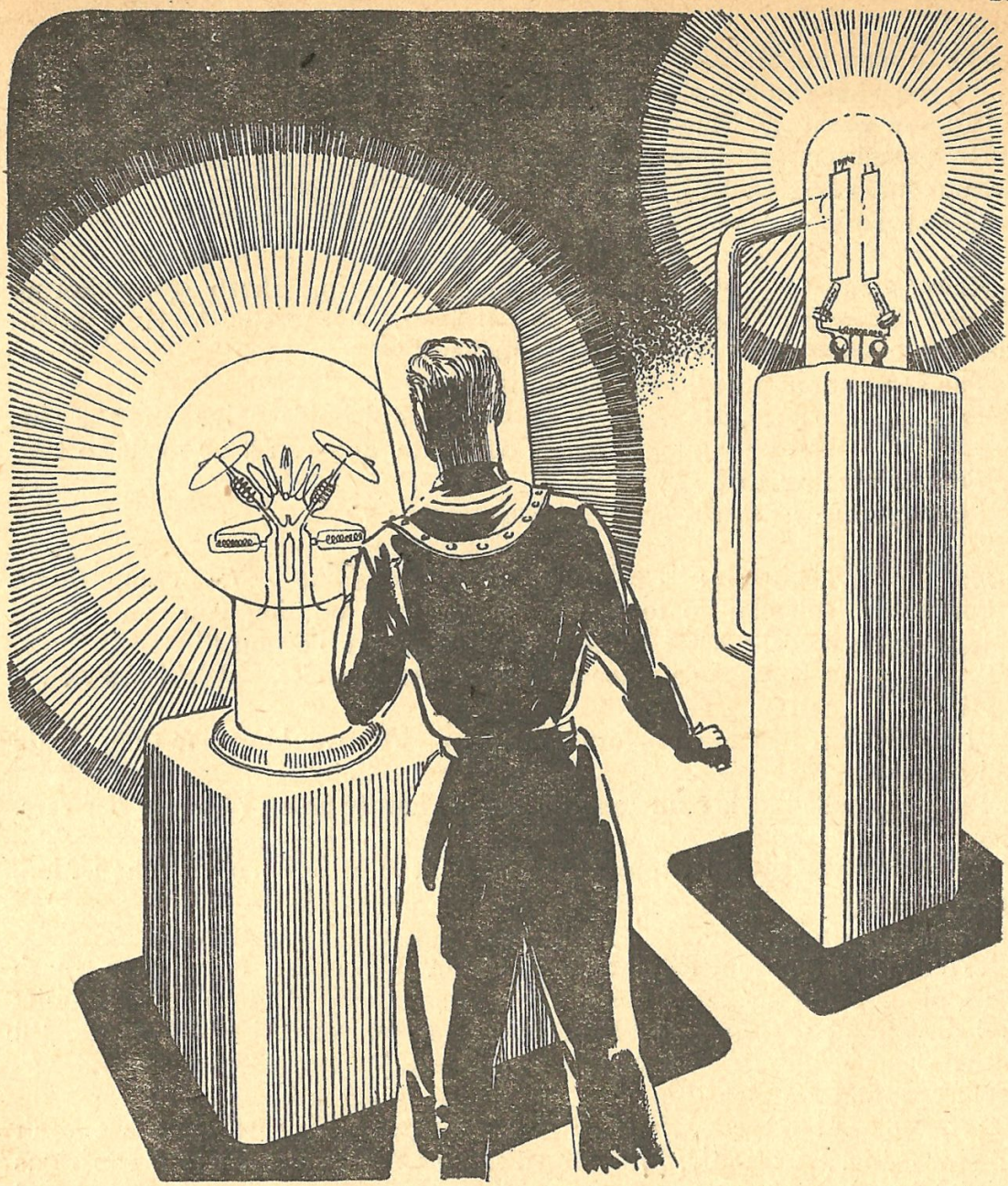
Someone was bathing his head with cold water. He smelled perfume, feminine, alluring, and opened his eyes to see flame-red hair and crimson lips. Tawny eyes lit up with relief as he stirred. Deirdre said:

"He's all right, only stunned."

Hawkes sat up. Beyond the girl, van Strachan sat smoking, marble-blue eyes ice-cold. Hawkes reached for his needle-gun and his hand came away empty. A voice said:

"Looking for this ?"

Mark's homely face grinned down at him and the needle-gun looked like a toy in his large hand. The giant bent over and lifted Hawkes to his feet, as easily as if he were made of rubber.



"Stay quiet, and answer the governor's questions," Mark warned, "and I won't have to get rough."

He tossed the gun to van Strachan and flexed his muscles, grinning at Hawkes in a friendly way. Deirdre turned to face her uncle.

"You promised Jon wouldn't be harmed. Tell Mark to leave him alone."

Van Strachan pointed the needle-gun at Hawkes and said, softly:

"That depends on how well he co-operates. I want Techon—and nothing will stop me getting it. Be sensible, Hawkes, or else——" his voice became harder "——something unpleasant will happen to you."

He sucked on his cigar, blowing out scented smoke. The few blond hairs on his squarish head glinted in the artificial light and he leaned forward, his red face marked by harsh lines.

"I allowed you to escape, Hawkes, so that you could lead me to Techon. We followed the flight of your ship from Rhyll, watched you search the moon's surface—now I *know* you have the clue, though the weapon's hiding place

seems to have eluded you. And I'm tired of flying in circles—you're going to tell me what you know, and I'll take over from there."

"I know nothing," Hawkes replied. "I'm telling you nothing."

He moved forward, ignoring van Strachan's gun. Mark grabbed his arms, twisted them behind him, holding him still. The giant said:

"I warned you to be good."

Hawkes was powerless to move in the giant's grip. Sharp agony shot up his arm; sweat stood out in glistening beads on his forehead. He snarled:

"You'll never make me talk, van Strachan !"

The governor smirked, looking at his niece.

"Your last chance, Hawkes. The bargain still holds—give me the clue and Deirdre shall be yours. Remain obstinate, and you'll be made to talk. Which is it going to be ?"

The girl's face flushed scarlet. She gasped:

"*Uncle* !"

Hawkes said, bitterly: "I told you what he was like—now perhaps you'll believe me. You can go to hell, van Strachan; nothing you can do will induce me to reveal what I know—you'll never get Techon !"

"No ?" Van Strachan's voice was a calculated sneer. "We'll see . . . "

His gun turned on Deirdre.

"I could blast her down before your eyes. You wouldn't like that, would you ?"

The girl looked at her uncle with horror, hardly able to believe her ears. Her voice was shocked.

"Vincente, you must let Jon free. You want to help him smash the Union, don't you ?"

Van Strachan laughed.

"You're too innocent to be true, my dear. Of course, I intend to smash the Union—so that I can become Democrat myself. And you'll keep quiet and do what I tell you, or it'll be the worse for you. Listen, Hawkes, I'll tell you what will happen if you don't talk fast."

He dropped his cigar butt and crushed it under his heel.

"You've head of *reverse dianetics* ? It's outlawed, of course, but that won't stop me using it. Simply, I'll drug you into a coma, blanket your conscious mind—then torture you. The pain will by-pass your conscious mind and sink into your unconscious. A series of mental shocks will register, filed but not indexed—they'll stay deep in your unconscious, beyond the control of the rational part of your brain. And I'll introduce a trigger-word, a simple association which will bring back all the pain, release the nightmare locked away in your unconscious."

He waddled forward, thrusting his face close to Hawkes', his eyes glittering.

"You'll be locked in a padded cell, your hands fastened so you can't hurt yourself. And I'll speak the trigger word. Day after day, you'll relive the agony, writhe in pain till your mind cracks. How long do you think you can take that kind of treatment, Hawkes ? You'll beg me to stop it, to reverse the process—and you'll have to tell me about Techon before I'll release you from the incubus living deep in your own unconscious mind."

Hawkes sagged in Mark's grip; he struggled desperately to wrench free—succeeded only in straining his arms to breaking point. Sweat ran down his

face, moistened his lips, and he cursed bitterly. If van Strachan carried out his threat to use *reverse dianetics*, he would be reduced to an idiot, unable to prevent himself revealing the vital clue. His eyes moved in silent appeal to Deirdre; she alone could help him now.

The girl's face was a white mask, bloodless. She ran at van Strachan, her clenched hands beating him, sobbing:

"You can't mean it . . . you can't do that to Jon . . . "

He struck her across the head with his gun, sending her reeling back, a trickle of blood staining her cheek; he brushed her away as if she were an insect in his path.

"You swine !" Hawkes raged helplessly in Mark's grasp, cursing van Strachan till the governor hit him across the mouth. Deirdre picked herself up from the floor, holding her head between her hands.

Van Strachan looked at Mark and said: "We'll——"

He stopped, frowning, as the ship rocked gently.

"What was that ?"

Hawkes could have told him. Another ship had arrived, locking hull to hull in the void; now, three ships spun together about Rhyll's moon. Abruptly, the air-lock burst open and men crowded in —men in shiny, black uniforms with needle-guns in their hands. Cato, head of the secret police, followed them aboard the red-and-green rocketship.

There was a moment's breathless silence. The colour left van Strachan's face and he licked his lips. Deirdre cowered away from Cato's intense gaze. Hawkes felt his last shred of hope wither and die as he looked at the hard-faced police agents. Only Mark remained unmoved; the slow-thinking giant had not yet realized his own danger—he tightened his grip on Hawkes, waiting for the governor's orders.

Cato moved forward with the easy grace of a panther. He was a small man, thin; it seemed incredible that so slight a man could hold the peoples of the galaxy in a grip of terror. His white face made stark contrast with the black of his uniform; large, staring eyes burned behind rimless glasses. There was an aura of power about him, an inhuman ruthlessness that made any appeal for mercy unthinkable.

"A fortuitous meeting," Cato purred. "At last, I have the elusive Jon Hawkes. I thought I had him aboard the *Stella*, but——" he bowed slightly towards Deirdre "——your beautiful niece tricked me, van Strachan. I knew you had him hidden—and waited my time. Now, you are all in my power !"

Van Strachan blustered:

"I caught him for you, Cato. I intended to hand him over to you. I——"

Cato ignored his words. He held out his hands.

"Give me your gun."

The needle-gun was an embarrassment in van Strachan's hand. There were too many of Cato's men for him to think of using it; he thrust the gun at the police chief, glad to be rid of it. A little of his confidence returned.

"Hawkes knows the secret of Techon," he burst out. "If we can make him talk . . . perhaps Maximillian IV will not rule much longer. Together, we can bend the Union to our wishes. I was about to use *reverse dianetics*—"

Cato looked at Mark. He said:

"Stand away from Hawkes."

Van Strachan added: "Yes, do as he says, Mark."

The giant released Hawkes and moved away. Cato said, coldly:

"Blast him !"

Two needle-guns swung into line with Mark's huge body; blazing energy rays shot out, burning into his chest. Mark toppled and crashed to the floor and lay still. The room was filled with the pungent smell of burnt flesh.

Deirdre moaned softly and covered her eyes. Van Strachan began to shake like a jelly. Hawkes clenched his hands and glared at Cato; with half-a-dozen guns trained on him, he dare not force a fight. The police chief smiled thinly.

"*Reverse dianetics* would appear to be the best plan for opening Hawkes' mouth; I congratulate you on thinking of that, van Strachan. But I do not need your help. I shall take Techon for myself and turn it against Maximillian IV. I shall be Democrat—and will consider it my pleasant duty to provide for your niece . . . "

Hawkes swore, and lunged at Cato. Three gun-butts swung, crashed into his face, beating him back.

"If you try that again," Cato purred. "My men will shoot to maim—and you won't get far with your legs burned away."

Deirdre said nothing. She stared at Cato, her cheeks pale, horrified.

Van Strachan licked dry lips. "My niece is beautiful," he said. "Many men have wanted her. Spare me, and——"

Cato laughed, raising his gun, pointing the muzzle at van Strachan. Fear bubbled at the governor's lips.

"No—no ! I can be useful——"

Marble-blue eyes glazed over; the hard mouth sagged. A lance of searing energy bored into van Strachan and he slumped to the floor at Cato's feet. The girl began to cry.

Cato snapped orders at his men.

"Manacle Hawkes and take him aboard my ship. The girl is my property and not to be harmed in any way."

A red mist danced in front of Hawkes . . . Cato thought of Deirdre as his *property*. He went beserk, swinging wild fists at the men who crowded round him. Gun-butts battered him and he was dragged down; steel bands clamped his wrists; heavy boots slammed into him. Blood-streaked, barely half-conscious, he was forced through the airlock to Cato's ship. He had one last glimpse of Deirdre, slim and lovely, red hair down over her shoulders, and the way Cato looked at her; and he shuddered, suddenly afraid for her.

He was taken to a small, bare room. The walls were metal and the door opened only from the outside. The light was high in the ceiling, screened, and the only piece of furniture a metal chair solidly welded to steel floor plates. Hawkes was pushed into the chair, arms and legs secured by stout leather straps. Then they left him.

Time passed; Hawkes thought grimly of the girl he loved, and his thoughts were not pleasant. The ship's movement transmitted itself through the metal plates under his feet; the rockets were firing. He felt the shock as heavy guns opened up and guessed that both van Strachan's ships had been atomized, all evidence destroyed. One ship alone circled Rhyll's moon, Cato's ship—

with Hawkes a prisoner.

Cato came into the room with a man carrying a black box.

"You could save yourself considerable pain by talking now, Hawkes." The head of the secret police paused for a reply: none came. "Very well, proceed with the operation."

Sweat formed on Hawkes' skin and he strained at the straps holding him. He could do nothing; and he must not reveal the clue to Techon. Somehow, he must keep back the vital knowledge. He watched Cato's assistant fill a hypodermic syringe. The needle pricked his arm; his eyes followed the falling level of liquid in the cylinder as the drug was pumped into a vein. His head began to swim and Cato's words had a hollow ring.

"Nothing crude, Hawkes—but scientific torture can be so much more effective. We have a little gadget to connect directly with your nervous system, achieving a maximum of pain with the minimum of effort. It will not stop till you tell us what you know about Techon. *Now* !"

He felt metal contacts on his bare skull, fine needles probed the skin, touched nerves; an electrical generator hummed in the background. The pain started . . .

A man sat alone in a vast room, one wall of which was taken up by a visiscreen. He was an enormous man with a bald head set upon a gross body and, as he sprawled in a wide, padded chair, his robes spread across the floor. With each little movement he made, rolls of flesh quivered and shook like castanets; his double chin champed noiselessly as he transferred sugared delicacies from a plastic container to his mouth with one fat hand. His corpulence was such that he resembled a bloated pear with appendages, and his flesh clothed him better than the garments of many another man; no sign of bone formation showed through the mountain of fat. Black-button eyes peered from under sagging, hairless brows, staring intently at the lighted screen.

It was a special kind of screen; electrons flashed through space, rebounded and were trapped at the source, transformed in a web of energy to provide pin-points of light on the black screen. Its effect was to provide light where there was no light, to reveal that which was normally invisible. The man-mountain watched the wall-screen and saw Rhyll's moon and the single rocketship circling it.

Dark Star M–1 and its planet Rhyll were hidden in the black emptiness of space. The moon made a silver disc on the screen; the rocketship, which should have been indistinguishable from the dark void, was a silver cylinder. For hours, the fat man had watched the cylinder sweep from the disc, round and round, incessantly. He continued to watch, stuffing sweetmeats into his capacious jaws.

He could afford to wait, to sprawl and wait and watch, sucking the sugared delicacies he loved. Time meant little to him; he was content to watch the rocketship in its journeying round Rhyll's moon. The black-button eyes stared without emotion at the screen and the brain encased in fat waited for the moment of action. It would be soon . . .

Abruptly, the silver ship left its orbit and angled away from the moon, falling through space, accelerating. A fat hand paused on the way to the cavernous mouth, sweetmeat suspended in the air. A calculating machine

clicked and whirred in the vast room as data was automatically fed into it. A small panel lit up.

The fat man waited, tenseness creasing heavy jowls. The machine indexed data regarding the rocketship's flight and computed the probable destination from direction and speed. Numbers came up on the small panel.

Heavy jowls relaxed once more and the man-mountain spoke aloud:

"Land on Rhyll."

Wall microphones carried his words to the control room of the starship and the atomic drive throbbed to life. The visiscreen followed the flight of the silver ship towards the planet of Dark Star M–1 . . . and a fat hand continued to feed a cavernous mouth.

V

Wordless sounds crawled from between the lips of Jon Hawkes. His whole body was afire, every nerve fibre shrieking protest against the excruciating agony that welled up from his unconscious mind. The original torture had finished long ago; now, Cato was using *reverse dianetics* to break his resistance, to get the secret of Techon from him.

The pain was filed away, deep in his unconscious. Cato spoke the trigger-word: *Torture*! and it began all over again. Only this time he was conscious, every cell of his brain screaming, his body writhing, straining against the leather straps holding him rigid in the chair. His muscles ached and sweat poured off him. Cato leaned against the wall, smiling, watching him—a cat playing with a trapped mouse.

Hawkes could not fight the agony inside him. Even though the torture had ended and no-one touched him, he could not control the terrible pain the association word brought back. The nightmare went on and on, driving him to the brink of insanity. And it would be so easy to stop the pain . . .

he had only to speak the doggerel revealing Techon's secret hiding place. That was all.

Cato spoke again: "Relax." It was the trigger-word to blot out the pain. Hawkes slumped forward, the muscles of his body slackening; he had beaten the police chief—he hadn't broken yet. The secret of Techon was still safe.

They forced liquid food between his lips and let him rest for twenty minutes. Cato wasn't taking the chance of him dying before he talked. It started again . . .

Torture !

Agonizing pain vibrated through his nervous system. The leather straps creaked; a stream of words poured out from his lips; sweat dried on his skin and began to itch. He fought back the six lines of verse that would bring him relief—Techon must never fall into the hands of Cato, to be used against the peoples of the galaxy, creating yet another bond to hold them in slavery. Then——

Relax.

Twenty minutes respite from the nightmare of the unconscious. And——

Torture !

It would go on till his will-power snapped. It could go on for ever. How much longer could he stand the torment of his own memory, brought back by that simple trigger-word? He must break down in the end. Why shouldn't he . . .

Relax.

They used a drug to prevent him falling asleep. Liquid food. Twenty minutes thinking of the pain to come. And Cato standing there, smiling, knowing it was only a matter of time.

Torture !

Relax.

Torture !

He couldn't stand it much longer. His nerve fibres sang with exquisite pain, his muscles were bruised straining at the straps. Searing fire ran through his body. His brain was about to explode.

He couldn't take it any longer. He had to stop the agony—he had to . . .

Words streamed from his lips, jumbled, almost incoherent. Cato leaned forward, listening intently. The words became verse, taking on meaning:

"Twin towers pierce a lightless sky
Etched from the rock where no birds cry,
City of death and resignation—
Hell knows no greater devastation
Or terror, than they who flee
Nameless o'er a night-dark sea !"

Cato laughed; he knew the geography of Rhyll and recognised the description.

"Put him to sleep," he commanded, "and reverse the treatment. I have another use for Jon Hawkes."

He left the prison cell for the control room of the rocketship, set course for Rhyll, planet of the Dark Star M–1, and blasted out of the moon orbit. His eyes gleamed with triumph; Techon was within his grasp. He had the clue and he knew the hiding place; he would seize the weapon and turn it against Maximillian IV. With the galaxy in the palm of his hand, ultimate

power would be his, and he could turn to lesser pleasures. Deirdre, for instance. . .

Jon Hawkes returned to life with a feeling of bitter failure. He found himself in the control room of the rocketship, his hands manacled. Deirdre was there, stiff and proud, ignoring Cato's glances. Three other men were present, watching the screen, controlling the ship's descent to Rhyll.

Hawkes couldn't face the girl, knowing he had betrayed his race. He stared at the floor, wishing he were dead, wondering why Cato had spared him, what new torment awaited him.

Deirdre said, softly: "Don't blame yourself, Jon—no-one could have held out against that. I blame myself; if I hadn't taken you to Vincente's—if only I'd seen what my uncle was really like, this wouldn't have happened."

Cato laughed.

"So you thought the twin towers were on the moon, Hawkes ? I know better, so does the beautiful Deirdre—and everyone else familiar with Rhyll's history. The night-dark sea refers to a dried up plain where once an underground sea flowed through caverns deep beneath the surface of the planet. Which explains the lightless sky and the rock where no birds cry. The twin towers are there, too; high, pointed rocks that were once altars in the old religion of the people of Rhyll. It's so simple when you know."

Deirdre said: "It's true, Jon, there can be no doubt about it." She bit her lip. "If only you'd told me . . . "

Cato snapped : "*Torture* !"

Hawkes winced, but nothing happened inside his head. The pain did not come back. Cato laughed again.

"Cured, you see ? Dianetic treatment wiped out the memory, the trigger-word no longer has any effect. You wonder why I bothered to return you to normal ? I'll tell you. No-one knows what form Techon takes, what power is released by the 'weapon too terrible to use'—and I must know what it is I'm handling. So I'll try it out on you—you'll be the guinea-pig, the first test of Techon's power. It'll be interesting to see what happens!"

Hawkes sucked dry breath, shuddering. He could only hope that death would be instantaneous.

One of Cato's men spoke; "Landing."

Hawkes watched the screen as the planet's surface loomed up. He saw the huge, translucent dome as the ship plunged down—the airlock operated automatically. Then the screen was filled with a broad sweep of concrete, and buildings showed in the distance. The ship landed—he was back on Rhyll.

Five black autocars were waiting at the spaceport. Cato's men, armed with needle-guns, formed an escort as the party set off for the underground caverns. The cars did not need to travel far; beyond the concrete, close to the translucent wall of the dome curving away overhead, a ruined temple stood, landmark of a race which had allowed itself to be exterminated rather than use Techon. Cato's men cleared rubble from the entrance; the whole party donned spacesuits.

"There's no air below ground," Cato said briefly. "Conditions are similar to those outside the dome."

Hawkes was forcibly clothed in a spacesuit and pushed into darkness.

Powerful torches showed the long slope leading down to the caverns; dust gathered thickly on the ground, and on rocky ledges. The passage widened as it sank deeper beneath the surface.

Deirdre was close to Hawkes, Cato close to her. Before and behind them, space-suited police agents moved, eerie figures in an eerie landscape. The slope steepened its descent, reached a flat expanse of dust and rock salts; the irregular walls of the cavern stretched away and were lost to sight beyond the range of the torches. Dust and silence, the only sounds those of orders coming over radio headsets.

Cato studied an old map, then a compass. He moved off across the seabed, heading into the unknown. The airless void was dark. Dust rose in clouds from stumbling feet, swirling in the beams of the torches. A vast emptiness spread about them, frightening, menacing. Techon was here, somewhere . . .

Hawkes wondered if the ghosts of Rhyll's dead inhabitants watched as the party crossed the night-dark sea. They had been a strange race, prompted by some alien emotion to prefer extinction to using Techon against the hordes of the Democrat. Would they regret that decision if they could see Cato's force, about to release the terrible power of their lost weapon ? Or were they indifferent to the fate of Man ? Hawkes shivered inside his spacesuit.

The underground desert stretched endlessly to a receding horizon. Grotesque figures stumbled through thick dust, leaving a trail of footprints behind. Torch beams crossed and threw fantastic shadows; jutting crags loomed out of the brooding darkness. Cato's voice came over the radio:

"The towers . . . at last !"

Hawkes wiped dust from his visor and stared across the silent plain. His pulse quickened as he saw the end of his quest, and a line of verse ran through his head:

Twin towers pierce a lightless sky.

Outlined by stabbing torch beams, two mighty crags rose high above the sand. Gaunt and majestic, they soared upward, guardians of the fabulous weapon of Rhyll; artificial structures of stone, piled up to form two pyramids . . .

Etched from the rock where no birds cry.

Cato's voice sounded: "Watch the prisoners."

Needle-guns drawn, two guards moved to Hawkes' side; two more closed in about Deirdre. Cato led the rest of the party forward to inspect the twin towers. Each pyramid was a slender, tapering column with a square base, sides some thirty feet long. A thin, regular marking showed where smaller rocks had been used to fill up a cavity in the base of each tower and Cato set his men to work, tearing out these stones. Whatever Techon might be, it undoubtedly lay buried beneath the altars of a forgotten religion.

Hawkes edged nearer, stopped as one of the guards raised his gun. The position seemed hopeless. Deirdre's face was pale under the visor of her spacesuit. They watched the police agents rip out the stonework, drag something metallic from a niche deep-set in the first tower.

Cato's voice rang with triumph: "Techon !"

It was a strange machine, a mesh of incredibly fine wiring set on a black plastic base; bare wires formed helices within helices, all interconnected.

The eye, tracing the route of the coiled wire, became dazzled; the brain, working on the mathematical intricacies of intermeshed spirals, grew dazed. There was no obvious indication of either operation or performance of the machine. Cato studied it, baffled.

Hawkes realized, suddenly, why there were two towers—this maze of wiring was not the whole of Techon; a twin section still lay buried under the second pyramid. His spirit rose . . . if Cato did not guess this, the galaxy might yet be saved from new terror. But the police chief was not a fool; he, too, realized that something was missing, and his eyes strayed to the second tower. He snapped commands:

"Break open the other pyramid !"

Space-suited figures toiled at the base of the tower, clearing away stones, exposing another cavity. All eyes were focused on the machine under the pyramid of rock; nerves were taut, excitement ran like fire through men's veins. Cato had forgotten Deirdre's existence; Hawke's guards temporarily ignored him.

Hawkes turned, tense. This might be his last chance of escape. He could not prevent Cato seizing the fabulous weapon, but he might run for safety . . . his eyes stared back across the night-dark sea and saw a tiny glimmer of light. Someone was following their footprints towards the twin towers.

It was a single, faint light, winking on and off. Obviously not one of Cato's police—there was a hint of secrecy about the light. Whoever it was, he tried to conceal his approach. Hawkes' pulse beat quicker and he shot a glance at Deirdre. She, too, saw the approaching torch, and wondered what it meant.

Hawkes had a wild dream that it might be a rebel group, intent on grabbing Techon at the last moment and using it to rid the galaxy of despotism. To run now would draw attention to the newcomer. He hesitated, then moved nearer the towers.

Cato and his men had not yet noticed the light behind them; their attention was riveted on the new machine, the twin half of Techon. They had it out in the open now, a black case with a bell-shaped funnel and two operating levers, carved to suit other than human hands. Projecting prongs indicated where the section attached to slots in the base of the wire mesh. Cato himself completed the erection of Techon, swinging the funnel to point at Hawkes.

"Stand clear," he ordered the guards. "Drag the girl away from Hawkes."

Hawkes was alone, facing the unknown weapon. He licked dry lips and shouted into the radio mouthpiece:

"Cato has Techon—attack now !"

He could only hope that whoever was behind the flickering light that moved steadily nearer was listening on his radio headset. Cato slammed down the first lever; the machine hummed to life and the helices began to glow, throwing off a weird violet light. The source of power for Techon had obviously not deteriorated over the years—and the second lever would operate the weapon . . .

Blazing light flooded the arena. A hundred torches illuminated the men grouped about the twin towers. A voice boomed:

"*Blast them* !"

Hawkes yelled through the radio:

"Deirdre—down !"

He threw himself to the dust, turning to see their attackers. Not more than fifty yards behind them, a wave of space-suited men moved with grim intent. The single flickering light had concealed the approach of a small army; the airless void had carried no sound.

Needle-guns flared and blazing energy beams lanced across the sand. Cato's men, caught unprepared, dropped under withering fire. Cato struggled to turn Techon on this new threat, screaming at the remnants of his force.

"The Democrat ! It's Maximillian IV—shoot, you fools, shoot !"

Hawkes cursed, his hope of reprieve gone. It was no rebel group, but the all-powerful Democrat who had trailed them across the night-dark sea. Whichever side won, he could only expect death—and Techon would still fall into the hands of the oppressors of humanity. There was one chance—if he could get to Techon and turn the weapon on both parties . . .

His guards were dead. Cato's small force fought back desperately, blasting the Democrat's army. Maximillian IV's voice came over the radio:

"You are going to die, Cato. I have no use for traitors."

Hawkes wriggled across the sand, nearer the glowing mesh of wire. He said, urgently:

"Deirdre, get behind the machine—hurry !'

From the corner of his eye, he saw the girl crawling behind him. Men were falling around them, spacesuits ripped open, expelling the vital air. The Democrat's army moved nearer, firing continuously, decimating Cato's ranks with grim efficiency. There was no sound except that from the radio headset; battle orders, curses, the groans of dying men. Against bleak rock and endless dust, grotesque figures fought and died in silence, the scene illuminated by a weird violet glow and the flashes of needle-guns.

Hawkes glimpsed the Democrat, the enormous bulk of his body contained in a spacesuit, his bald head gleaming under a transparent visor, black-button eyes searching out his treacherous chief of police; he resembled an obscene, bloated pear as he rolled forward towards the twin towers. He was so close that Hawkes could see the rolls of flesh quivering, the fat jaws chewing on a sweetmeat. And this was the man who ruled a galaxy, who wanted Techon to hold the peoples of many planets in slavery . . .

Lightening blasts criss-crossed under a nightmare sky as the last of Cato's men fought for their lives. Cato struggled with Techon—and Hawkes had nearly reached him.

The Democrat's voice came again: "Kill the traitor !"

A dozen needle-guns aimed for the lone figure over the maze of glowing wire, blasted the living target with searing lances of energy. Cato seemed to explode, his spacesuit ripped to shreds; his body was hurled backwards in the sand, writhed a moment, then was still. The few remaining police agents started to run across the night-dark sea; they could expect no mercy; flight was their only hope. And death followed them.

Hawkes heard the voice of Maximillian IV, throbbing with triumph:

"Techon—Techon is mine !"

Hawkes came to his knees, crouching in the shadow of the twin towers. He snapped: "Behind me, Deirdre !" and hurled himself forward, right hand gripping the second operating lever of Rhyll's ancient weapon.

A muttered curse over the radio: a needle-gun blasted—and missed. They did not have a second chance; Cato had already swung the bell-shaped muzzle of Techon to cover the Democrat's force—he had been in the act of releasing its terrible power when death had struck. Hawkes yanked down the lever and dropped to the ground, waiting . . .

Nothing seemed to happen. The wire helices continued to glow, the machine hummed steadily. No death ray erupted to consume Maximillian IV and his men. Deirdre's gloved hand slid into Hawkes', held tightly as they huddled under cover. The line of the Democrat's army marched on—the radio was strangely silent.

Hawkes laughed bitterly. Techon was a failure—he had risked his life in a galactic-wide quest, for nothing. He looked into Deirdre's eyes and, in their tawny depths, saw something that kindled a flame inside him. He smiled crookedly, and said:

"This is the end. What might have been——" he shrugged "——who knows ?"

She pressed his hand tighter, smiling, and there was no longer any mystery in her eyes. She whispered:

"I love you, Jon . . . I've always loved you. We'll be together, for always."

Long seconds dragged by, and still no guns blazed fiery death. Hawkes stood up, facing the enemies of freedom, and wondered at what he saw. Space-suited figures lurched unsteadily, crashed into one another and fell unmoving in the dust. Others wandered aimlessly, like robots out of control.

"Techon," Hawkes said breathlessly. "*It's working* !"

Silently and invisibly Techon threw out an alien beam which destroyed the nerve tissues of the brain, severing all cell-connections, reducing each man to an uncontrolled physical body. All thought was annihilated; the brain became a chaotic mass of cells with association. Mindless, the minions of Maximillian IV reeled and fell, walked into solid rock and collapsed, tripped over obstacles. The Democrat was one of the last to drop, staring vacuously, black-button eyes devoid of all thought. He lay there, unknowing, unaware, to die when his air cylinders became exhausted.

Deirdre clutched Hawkes' arm. There was horror in her voice:

"What's happened to them ? Why are they so helpless ?"

Hawkes said: "It affects their brains. They are no longer human, just robots, mindless, devoid of control. That is the power of Techon."

The girl shuddered.

" 'The weapon too terrible to use.' Jon, we must destroy this devilish thing. The people of Rhyll were right—this power must not be released."

Hawkes switched off the machine and stared across the night-dark sea. There was a stillness, a silence that set his nerves on edge. Fallen torches, still shining, showed the twin towers rising high above them, the blasted corpses of Cato's police, the still-living, mindless hulks that had once been men.

"We cannot refuse to use Techon," he said heavily. "We are different from the people of Rhyll. Man is a fighter; we cannot be content to live under the Union. Maximillian IV and Cato are dead—but there will be others, equally tyrannical, waiting to step into their shoes. And we have the power to stop them. We must use Techon to free the galaxy for ever."

Deirdre was silent, thinking of the future, of a home to be shared with the man at her side—and their children.

"You are right, Jon," she said at last. "Techon was given us to blaze a trail of freedom across the galaxy. We cannot refuse to use it. No matter what horror may follow, Man was ordained to carve his own destiny. Violence is our right."

He wondered what the people of Rhyll would have replied to that, and sighed.

. . . they who flee
Nameless o'er a night-dark sea !

But the ghosts of a dead race did not reply, and Hawkes took her hand in his and led her towards the world they would make anew.

THE END

THE LITERARY LINE-UP

There is no lead novelette in the next issue but, instead, two long "shorts," both by fairly new writers fast becoming regular contributors to our pages. Peter Hawkins leads off with "The Exterminators," telling of an alien race who police the Galaxy unknown to us, who "clear" worlds they require for their own colonisation—and Earth comes under that edict ! Lan Wright in " . . . Is No Robbery" works on contact with a race whose social set-up is so different to our own that they do not understand the process of buying and selling. The activities of a Trade Commission from Earth who want to buy raw materials makes quite a story.

Purely by coincidence two authors come up with similar themes although the stories are entirely different—the problem of what happens to a space pilot's wife while he is away, and it is interesting to see how they each solve the problem in their stories. E. C. Tubb's "Rockets Aren't Human" is a straight drama played logically to its conclusion, while J. F. Burke's "Golden Slumbers" introduces an idea quite new to science-fiction.

There will also be a delightful Jack Chandler story, "Jetsam," with a fire-cracker in its tail, and another John Christopher adventure of Max Larkin entitled "The Prophet," plus our regular features.

September ratings showed a marked preference for the two "peace" stories—something psychological there somewhere—and the serial moved up into third place.

1.	Project Peace	Lan Wright
2.	The Peacemaker	F. G. Rayer
3.	The Esp Worlds	J. T. M'Intosh
4.	The Broken Record . .	James Macgregor
5.	The Serpent	A. Bertram Chandler
6.	Emergency Working . .	E. R. James

This story concerns an isolated incident in Mr. Tubb's Martian history—its characters are ordinary individuals, its hero is a criminal. The setting, a dust storm on Mars.

ALIEN DUST

By E. C. TUBB

Illustrated by QUINN

They found him lying on the old sea bed to the west of town. Sand and the dry, sterile air, had arrested decay, preserving him so well that, at a casual glance, he almost appeared to be asleep. He lay on one side, his knees drawn up a little, one arm outstretched. Aside from a faint discolouration around the mouth the features were unmarred. He seemed to be smiling, the eyes half open. He looked very peaceful.

He could have been lying there for five years, or fifty, or five hundred—except that there were no men here that long ago.

He drew a deep breath, held it until the blood hammered within his skull, then released it in a long sigh of gratification. He smiled as he looked at the sky, so dark as to be almost black, and at the tiny ball of the sun low on the horizon. The air smelt clean, thin and dry and a little exhilarating. He savoured it, breathing deeply.

Behind him towered the delicate spire of the rocket ship. Before him, beyond the rippled dust of the landing field, the huddled buildings of the colony. With sudden impatience he swung his duffle bag to his shoulder, staggering at the unexpected absence of weight. One of the other passengers called to him.

"Where are you going, Sam?"

"Down to the colony. No use waiting here, they probably expect us to find our own way."

They hesitated, then, following his lead, shouldered their bags and fell in behind him. Their feet sent thin plumes of dust coiling high into the silent air.

Captain Ventor was a man well past middle age. He sprawled in a chair behind a rough table and watched them as they filed through the low door. A faded uniform jacket, open at the neck, still bore tarnished insignia. Thick corduroy trousers and high knee boots completed his attire.

He didn't move until they were all assembled, their duffle bags on the floor beside them, eyes shifting nervously. The legs of his chair thumped to the ground as he stood.

"Welcome to the colony," he said tiredly. "Later you will be shown round and allocated quarters. Now, please raise your right hands. Repeat after me," his voice had a mechanical drone. "I solemnly swear to obey the rules and customs of the colony, to obey my superior officers, to work as directed, and to be of good heart. So help me God."

They mumbled the words, trying not to see his sarcastic grin. He nodded, sat down, sprawled his legs before him.

"I would like to make certain things quite clear to you before anyone gets the wrong ideas. I don't like having you here. I don't want you here, but it seems as if I have no choice." His cold eyes raked them. "Who first got the brilliant idea of rehabilitating young criminals by sending them to the colony, I don't know. I think it was a mistake. We shall see who was right."

They sat, some of them, seething in silent anger at the undisguised contempt in his voice. Others tightened their lips, and vowed later vengeance. Sam protested.

"I don't think you are being quite fair, Captain." He faltered into silence at the glance Ventor flung at him.

"What's your name ?"

"Sam Watson."

"Say sir when you speak to me. What's your name ?"

"Sam Watson—sir."

"I see." Ventor ruffled a thin pile of onion skin paper. "Three times convicted, I see. Theft. Suspicion of felony. Robbery with violence. A pretty record. How old are you ?"

"Eighteen sir."

"Proud of yourself, aren't you ? A tough guy. A would-be big shot." He spat. "A sneaking yellow coward I'd call you. Well ?"

"I stole because I was hungry. A man caught me. He beat me. I hit back." Sam tried to keep his voice steady. "We're not criminals, sir. Back home they knew that. We all need a chance to regain our self respect. That's why we volunteered for the colony, sir. We didn't have to."

"You could have served your time in the penitentiary," Ventor sneered. "Your parents must be very proud of you."

"My parents died in the war, sir, when I was three." He looked at the Captain. "You were well out of it—sir."

For a moment Sam thought Ventor was going to strike him.

Lew Prentice leaned over his narrow bunk. "Sam !" he whispered.

"What is it ?"

Lew glanced furtively at the sleeping occupants of the other bunks. "Ventor's got it in for you. Here—" a silver of metal gleamed for an instant between his fingers.

"What is it ?"

"A knife. What did you think it was, a can opener ?"

"No thanks," said Sam handing it back.

"Don't be a fool, Sam." Lew grimaced, his expression strange for a sixteen year old. "I learnt the hard way. If you don't get them first, then they'll get you. Take it."

"No, Lew. Ventor's not like that. He may hate me, but he'll stick to the rules." He tried to change the subject "What do you think of it? "

"This place ?" Lew spat. "I thought it would be easy. Three years here or five in jail, what else could I choose. Now I'm not so sure."

"Regretting it already ?" Sam laughed. "You'll get used to it. Three years isn't too long."

"Too long for me," Lew grumbled. "All I can see in it is sand and work. Did you see some of the old timers ?"

"Yes. I talked to a man called Pop. He's going to be in charge of this group."

"I know who you mean, a whiskery old fellow with red eyes." Lew chuckled. "I gave him a chew of tobacco for the knife."

"Give it back, Lew." Sam urged. "What good is it out here ? If you used it, they'd kill you. You can't run. You can't hide out. You can't even get back home unless you toe the line. For the next three years we're going

to work, and work hard. Maybe you won't feel the same at the end of it."

"Maybe," said Lew, he didn't sound too sure.

Someone chuckled from across the room.

"Who's that ?" Lew called.

"Keep calm young fella, it's me. Pop." He came towards them blinking in the tiny glow of a hand flash. "I heard you talking. Sam's got sense."

"Who asked you ?" Lew sneered.

"Nobody," Pop said mildly. "But I've been here a long time. I know."

"Tell us about it," said Sam. He made room on the cot.

"It ain't much to tell." He wiped the back of his hand across his bearded lips. "Got another chew of tobacco, young fella ?" he asked Lew.

"No."

"That's a pity. I'd hate for Captain Ventor to know that you've got a knife. He wouldn't like it. He wouldn't like it one little bit."

"Are you blackmailing me ?" Lew asked in a tight voice.

"You could call it that," admitted the old man cheerily.

"Why you . . . Here." the knife thudded down to the floor, a plug of tobacco followed it. Pop bit off a chunk and worked his jaws busily.

"Long time since I had a chew," he drolled. "What made you bring tobacco, young fella ?"

"I guessed it would be short, I had an idea," Lew sounded curt. "Get on with the story."

"Captain Ventor didn't dodge the war, I was with him when the news came through, and he tried every way to get back home. He couldn't."

"Does that make him a hero ?" Sam asked bitterly.

Pop spat a thin stream of brown juice. "His only son was killed in the war. Died in hospital of radiation burns. Ventor couldn't get home to see him."

"I see." Sam sat quietly thinking. "Why does he hate us coming here ?"

"Ventor remembers the days when the colony was new. We had the pick of the bunch in those days, the best men obtainable. They built the colony. Piped water from the pole. Started the mine. Things were booming, then it all folded."

"How was that ?"

"Someone added up some figures one day. They found that while billions had been spent, only thousands had been returned. It was a poor investment, they wrote it off the books."

"Abandoned it do you mean ?"

"Yes. Venus had been opened up by then, and every ship was wanted for the project. We were lucky they didn't abandon us altogether." He sat chewing silently, staring into the darkness. "I remember when Ventor first came here. He was mad with enthusiasm. The things he did, tried, wanted to do. They cut off his supplies, recalled his experts, left him a bare staff to keep the essentials running. Can you blame him for feeling bitter ?"

"Maybe not. But is it our fault ?"

"You're criminals, aren't you ?"

"In a way," admitted Sam. "There are always people like us after every war. Cast adrift at too young an age. Unwanted. Brought up in charity wards. Kicked under. When we kick back, we're labelled criminals." He sighed.

Pop looked at him curiously. "For a youngster you talk funny. Maybe you shouldn't be here."

"I wanted to be here," said Sam. He rolled over onto his side. "I'm tired. Get some sleep now."

The old man stood looking down at him, idly scratching his beard. He shrugged.

"The colony is self supporting, and that means that everyone must work."

Captain Ventor stood, legs apart, in front of the office building. Before him the new arrivals stood in a ragged line. It was just after dawn, and from the desert a chill wind blew, stinging bare checks, sending shivers through thin bodies. Ventor swayed a little, hands clasped behind him, cold eyes scanning the group.

"I'll stand for no malingering, no shirking, no idleness. If you don't work, you don't eat. It's as simple as that," he grinned savagely.

They shuffled their feet in the thick, loose sand, trying to avoid his eyes. Little plumes of dust spurted from beneath their boots, coiling slowly in the thin air. Several of the boys started to cough.

"Right," snapped Ventor. "After you've eaten I'll detail you to various groups. Assemble here in thirty minutes. Dismiss !" He spun on his heel, entered the office building.

Lew looked at Sam. "What are we supposed to do now ?"

Sam shrugged. "Eat I guess," He looked around him. "Look ! There's Pop." He broke into a run.

The old man grinned at them through his beard. "Cook shack's in here, son, better hurry." He led them into the bare hut and up to a low counter. "Grab a tray and dive in."

Thankfully Sam lined up holding out his tray to the acid-faced cook. A spoonful of grey porridge-like stuff, a cup of water, and a hunk of what seemed to be raw dough, was slapped onto the tray. Dubiously Sam tasted it, shuddered, fought a desire to vomit. Beside him Lew spat in sudden anger.

"What do they think we are ?" he snarled. "This slop's not fit for pigs."

Pop cackled, reaching for the tray. "Better get used to it son, it's all you're going to get for the next three years."

"Is it hell !" Lew swore with savage bitterness. "I'll see about that." He looked around. None of the new arrivals had more than tasted their food. They sat, sullen and hungry, ripe for trouble. Lew rapped on the table.

"Listen fellows, do we stand for this ? I'm willing to work, sure I am, but I need food to work on. I can't eat this filth. Can you ?"

"No !" yelled a scar faced youth. Others muttered their agreement. "What do we do about it, Lew ?"

"Remember what Ventor said ?" Lew stared at the little group. "If we don't work, we don't eat. Well. I say if we don't eat, we don't work. They can send me back if they like. I'll serve my time in jail, at least I'll get fed there."

"Take it easy, Lew." Sam protested. "We made our choice, let's stick to it."

Lew shook off the restraining hand. "To hell with that talk. I want decent food. Does Ventor eat this swill ? Do the others ? Why should we ?"

"What the matter with it ?" The cook stood beside them, the heavy ladle swinging from one hand. It's good enough for the rest of us. What's so special about you ?"

Lew sneered. "Don't give me that. I'll believe that you eat this muck when I see you do it."

"Why you dirty little scut !" the cook swung the ladle, face red with anger. Lew cringed.

"Hold it !" Ventor stood just within the door, cold eyes weighing the scene. "What's the trouble ?"

The group fell silent, looking at each other, avoiding Ventor's eyes. The cook grunted, lowered the ladle, began to pick up the trays.

"I asked what is the trouble. Isn't there one of you man enough to tell me ? You there," he pointed to the scar faced youth. "What's on your mind ?"

"Nothing."

"What !"

"Nothing, sir."

"Good. Then get outside, all of you."

"Wait !" Lew faced the grim commander doggedly. "What about some decent food ?"

"So that's it !" Ventor smiled grimly. "I thought so. What's the matter with what you've had ?"

"I haven't had any," Lew denied. "I don't call that filth food."

"Don't you ?" Ventor breathed quietly. "Better men than you'll ever be have eaten it, still eat it." He looked contemptuously at them. "I see no reason to explain to you. I'll merely say this. The food you had this morning is the same type as you can expect during your stay here. I recommend that you get used to it. Now outside. Quick !"

Anger made his voice brittle and sharp.

Sam eased the pack on his back, stopped, wiped the transparent face plate of his mask. He felt tired, his head ached and his lungs burned. He swayed a little, fighting the desire to sleep, then grimly forced himself to continue the march.

There were three of them. Way ahead the squat figure of Pop led the little column, then Lew, finally himself. All were burdened with heavy packs, all wore the drab overalls and face masks necessary on desert journeys. Sam licked dry lips, and fought a desire to cough. Thankfully he noticed that Pop had stopped. Wearily he dragged his way onwards.

Pop grinned as he slumped down beside the others. Lew grunted, and passed the canteen, gratefully Sam let the tepid water trickle down his parched throat.

"How much further, Pop ?"

"About five miles." The old man glanced sharply at him. "What's the matter, Sam ? Still feel tired?"

"It'll pass." Sam stretched full length on the sifting sand. "Oxygen shortage, I suppose. Think nothing of it."

"Not after six months, Sam." Pop lifted his mask, scratched his beard. "Oxygen lack will make you feel tired for a while, then you adjust to it. Look at Lew."

Lew grunted. He had lost the petulant look he had worn on arrival. His eyes were clear, hard work, clean living, and a final acceptance of conditions had hardened him. He grinned at Sam.

"Pop's right, Sam. Maybe you had better report sick when we get back. Ventor'll find you an inside job."

"No !" Sam vehemently shook his head. "Leave me alone."

Lew shrugged. "As you say, Sam."

Pop grunted. "I remember when we had transport for desert travel. Electric tractors. Used to run up to the great canal sometimes, do a bit of prospecting, never found anything though."

"What happened to them ? The tractors, I mean."

"Battery plates warped, we couldn't get replacements, in the end we tore them down for scrap."

Lew grunted, sifting fine sand between gloved fingers. "Now we've got to walk to the power pile. What do we do when we get there, Pop ?"

" Relieve the crew. Replace the yeast in the tanks with fresh cultures. Just keep an eye on things until the relief comes. Routine mostly."

"Is it necessary ?" Sam propped himself on one elbow. "I thought the pile was wholly automatic ?"

"Mostly it is, but we daren't take any chances." Pop rubbed his beard. "If anything happened to the pile . . . " he shrugged.

"Serious, eh ?"

"Life and death," agreed Pop. "Cut off power to the settlement, and we all die."

"I don't see it," protested Lew. "We could do without lights, work the air filters by hand, just take things as they come until the next rocket. It couldn't be comfortable, but we could last out."

"Could we ?" Pop grinned sardonically. "What about the food plant ? The water pumps ? The blowers ?" He shook his head. "The yeast cultures don't breed true, they have to be constantly replaced. If we're to eat, then we must have power for the incubators, the distillers, the sterilisers. With no power, we couldn't operate the blowers, we'd be buried at the first storm."

"I see," Lew nodded. "Then why have the pile so far away ?"

"What could we use for shielding ?" Pop gestured at the desert. "No heavy metals. The only thing we could do was to have it far enough so that the settlement would be safe in case of a blow-up."

"What about radiation ?"

Pop shrugged.

The pile was housed in a low dome, snuggling almost invisible against the dun coloured desert. Cables snaked from it, leading across the swelling plain to the settlement. The three men arrived just before sundown, and within an hour, despite the darkness, the old crew had left them in sole charge.

Sam stood outside for a while, watching the twinkling lights of their hand-beams die in the distance. He shivered as the night wind chilled his blood, reluctantly he entered the dome.

It was cosy in a rough fashion. A few photographs stuck to the walls, a crude attempt at decoration, several names scrawled in pencil. Pop looked at

them reminiscently. Lew dropped his pack on the table, began to loosen the broad straps.

"Wait a while, Lew." Pop spoke sharply. "Better clean out the tanks first. We don't want the culture to become infected."

"I'll do it, Pop," Sam offered, "I've done it before. You and Lew could check the pile."

"You sure that you know what to do ?" Pop squinted at Sam. "A mistake could be pretty important. We're here for quite a spell."

"I know," said Sam curtly. He slipped off his own pack, and made his way towards the culture room. It was to one side of the living quarters, a small compartment, half filled with the nutrient tanks containing the edible yeast. He spun valves, letting the fluid drain into vats, scooped out the doughy mass, flushed and cleaned the tanks, replaced the fluid with fresh solution, and set the thermostat.

Returning to the living room, he unpacked the haversacks, gently removed the bulky containers, stripped off the outer wrappings, and carried them into the culture room.

Moving quickly, he opened the containers, tipped their contents into the tanks, set the irradiation lamps, and closed the compartments. If nothing had gone wrong, the yeast spores would grow, develop, and provide food for many months to come.

Turning to the mass he had just removed, Sam cut off several portions, dropped the rest into a waste container, and carrying the removed portions, re-entered the living room.

"Come and get it," he called. "Supper's ready."

Pop yelled a reply, and within moments both he and Lew squeezed through the door.

"Everything okay ?" Sam asked.

"Some leakage from the mercury boiler," grunted Pop around a mouthful of yeast. "Nothing serious."

Lew gagged over his food. "Tastes funny," he complained.

"It looked pretty unhealthy," Sam agreed. "I dumped the rest. The new culture should be ready soon though." He grinned. "Six months ago, Lew, you wouldn't have touched it. Remember ?"

Lew nodded. "I still don't like it, but I like starving less." He pushed aside his empty plate. "It beats me how men like Ventor could stick here year after year. Nothing to eat but this tasteless swill. Nothing to look at but desert. Nothing to do but work. Why do they do it ?"

Pop grunted. He sat, scratching at his beard, looking into the past. "I don't know, Lew," he said slowly. "It's hard to explain. At first it was all new and fresh and exciting. We expected hardship, we welcomed it. It was all part of the great adventure, the conquest of a new world. We were heroes." Deliberately he spat. "Now I think we were all fools !"

"Why did you stay, Pop ?"

"Me ?" the old man shrugged. "I liked it, then. When the novelty had worn off, I couldn't leave," he caught their startled looks. "No ships," he explained. "And worse, nowhere to go."

"Nowhere to go ?" Lew snorted. "Why you could have stayed in any city. There's always work to be had—if you don't mind work."

"No, lad," Pop shook his head. "You don't understand. I'm not a young man, not any longer. Here I fit in. I know everyone, and they know me. I can do a useful job of work," he grinned mirthlessly. "Sometimes I can even fool myself that what I do is important. On Earth? A tramp, an old fool, unwanted, in the way." He sighed gustily.

"Does Ventor feel like that?" Sam asked slowly.

"Mars is his life," said Pop simply.

Sam nodded, then suddenly bent over in a spasm of coughing. He clutched at the edge of the table, fighting for breath, the coughs seemed to be tearing his lungs to shreds.

Pop watched him with understanding.

Ventor drummed thick fingers on the edge of his desk, and frowned irritably. "Why didn't you report sick before?"

Sam stood tiredly before the desk. "I intended to, sir. I didn't think it was important."

"I see. You realise of course what is wrong with you."

"Not exactly, sir. Is it serious?"

Ventor nodded slowly. "You could call it that. We used to get a lot of it, that is why all out-workers wear masks. A condition of the lungs caused by certain erosive effects of the dust. You must have been careless."

Sam nodded, thinking of all the times he had walked to the edge of the settlement, watching the magic of sundown, the swift blossoming of the stars against a curtain of deepest black. He shuffled his feet miserably.

Ventor sighed. "Fortunately we seem to have caught it in time. You will return to Earth on the next rocket. With careful hospitalisation you will arrest the condition. That is all." He began studying papers on the desk before him.

Sam cleared his throat. "Excuse me, sir."

Ventor looked up irritably. "Well? What is it?"

"I have been talking to people here, sir. They say that this condition will debar me from ever leaving Earth. It that true, sir?"

Ventor frowned. "I don't understand you."

"If I leave Mars, will I be able to return?" Sam stepped forward earnestly. "I'm not worried about my punishment, I'll serve my time out on Earth if I have to, but tell me—will I be able to return?"

Ventor leaned back in his chair, and surveyed Sam carefully. "I think I know what you're afraid of," he sneered. "I can set your mind at rest. With your lung condition you will never be allowed to leave Earth again. Acceleration shock would kill you. There is no risk, of course, in leaving Mars."

"Then I don't want to leave."

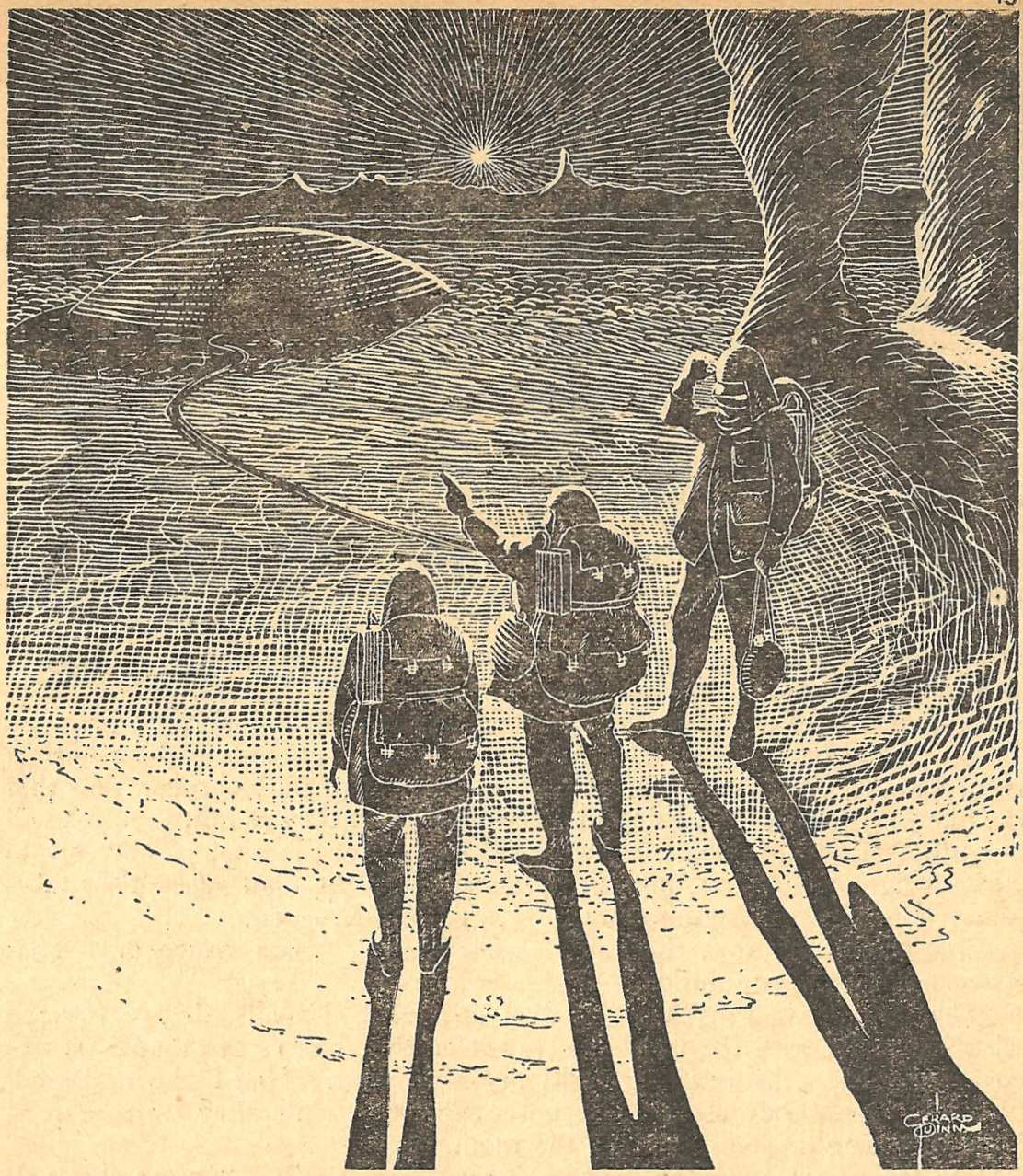
"What?"

"You heard what I said," Sam cried desperately. "I want to stay here. I don't want to go back to Earth."

"I see!" Ventor nodded slowly. "Why?"

"You should understand how I feel. Of all men, you should know best. May I stay?"

Something flickered deep in Ventor's eyes. He bit his lip. "You realise what it means?" he asked quietly. "Your condition will grow worse, until a



time will arrive when you cannot leave. It means spending the rest of your life here. You are still young, life has much to offer. A home—a wife—comfort and soft living. Do you realise what you stand to lose?"

Sam nodded. "I realise too, sir, what I stand to gain. May I stay?"

"If you wish." Ventor busied himself with his papers. "But think it over for a while first. You will be safe until the second rocket from now. If at any time you wish to change your mind, do so. Don't feel that I shall deride you if you do. Remember—you are deciding the destiny of your whole life." He stood up. "Return to the pile, I'll arrange for the emergency tractor to take you—the batteries should be good for one more trip." He hesitated, held out his hand. "Good luck—son."

Sam had never seen his eyes glisten so brightly.

*

The storm was one of the worst Pop had ever seen. He stamped into the pile dome, slapping dust from his overall, spitting it from his mouth. He

looked worried. Lew glanced up from where he and Sam were playing chess. "Bad outside ?"

"A stinker." Pop stepped across to the phone, cranked the handle, growled into the mouthpiece. "Pile speaking. How's things at your end ?"

A muffled squawking came from the earpiece. "I can't help it," growled the old man. "If I step up voltage much more I'll short the board. What are you doing with all that power ?"

He listened awhile, grunted, slammed down the receiver. "They've picked now to sterilise the yeast tanks," he complained. "That means they've got everything electrical working at once. Blowers, air filters, lights, irradiation lamps, the works," he snorted disgustedly.

"Can't we handle it ?" Lew asked.

"Sure we can—provided nothing happens." Pop moved restlessly about the tiny room. "I don't like it," he muttered. "I don't like it at all."

"Why not ?" Sam asked.

"Friction," grunted the old man. "The sand rubbing against the cables," he explained. "When it really begins to blow the dust acts like a sand blast. The cables are thinly covered, we couldn't afford the weight to import heavily armoured cable. If the sand wears the insulation, they will short. The settlement will be without power."

Lew looked up startled. "Haven't we got a safety margin ?"

"Sure. There are two cables, either one can carry enough load for normal requirements, but requirements aren't normal. A storm like this means that the blowers must be kept going in full operation, if they're not, the dust will bury the settlement, clog the air filters, asphyxiate the men. They can do without lights, of course, but they are sterilizing the food vats. That takes power, lots of it. If anything happens . . . " he shrugged.

"But I thought that the cables were buried," Sam frowned. "That seems an obvious precaution."

"How could we bury them ?" Pop snorted. "Usually they're covered with sand, but with the wind the way it is, the chances are they'll be uncovered. Then the insulation will begin to wear. Hell !" he muttered. "Why couldn't they send us decent equipment while they were at it ?" Still muttering he stamped from the room.

Lew looked up from the board grinning sardonically. "Queer old coot. What's he got to worry about ?"

"You heard him," Sam said moving a piece. "Do you want the settlement to be wrecked ?"

"Why not ?" Lew glanced towards the door, and lowered his voice. "Look—suppose the power does fail ? All right, the food supply breaks down, the settlement gets buried. What happens ? They send word by the next rocket. The project is already running on a shoestring. I bet that they'll cancel the whole thing and recall us all. Think of it, Sam ! Within three months we'd all be home !"

"I see," said Sam quietly. "You'd like that wouldn't you ?"

"Are you crazy ? Of course I'd like it. We'd all like it." Lew spat. "What have I got to like about this place anyway ? No decent food. Not even a drink. No women. Hell, man, I'd give ten years of my life to get back home."

"What about, Ventor ? Pop ? All the other old timers ?"

"What about them ?" Lew sneered. "All these old coots are the same. Sure they like it here. Big fish in a little pond. What good would they be back home ? Why, I bet that none of them has the price of a decent suit." He looked furtively at the door. "How about it, Sam ?"

"You put on a good act," Sam said dully. "I'd begun to think that you liked it here."

Lew shrugged. "What else could I do ? Ventor holds all the aces, I had to pretend." He jerked his head. "Hold it ! Pop's coming back." He bent over the board.

"Your move," Sam muttered.

"Is it ?" said Lew. "I think it's up to you." He looked meaningfully at Sam.

Lying on his narrow bunk, Sam stared into the darkness and tried to sleep. From above him, Pop sent rumbling snores echoing through the tiny room. From the other bunk, Lew's deep breathing made a sighing accompaniment.

It was useless. He had never felt so wide awake. Earth scenes floated before him, limmed on the velvet darkness. Snow. A city's streets awash with rain. The bright lights of the rocket port. He licked his lips, remembering the cool taste of ice cream, the long satisfying drinks of cold water. His mouth watered at the memory of steak, onions, and the fried chicken he had once enjoyed.

Moving carefully in the darkness he slipped out of bed. Silently he donned the thick overall, the knee boots, gloves and face mask. Arms outstretched he felt his way to the door, closed it behind him, flicked on the lights. Within minutes he was standing before the double doors of the dome entrance.

Dust had seeped past even the close fitting panels. He shrugged, swung wide the inner door, closed it, opened the outer. The storm swirled around him.

Dust, carried on winds which swept a thousand miles across the planet, boiled around him. It was long past dawn, yet it was impossible to see a glimmer of daylight. He snapped on his handflash, the beam losing itself a foot from source in a cloud thicker than any fog imagined. Countless millions of particles, so minute as to be invisible, worn to mere single crystals by eons of erosion, friction, and sheer age, swirled and drifted across the planet.

From overhead Sam could hear the shrill whine of the blowers, giant fans agitating the air, blowing the dust away from the dome in a ceaseless effort to keep the area clear. Stooping low, he shone the flash directly onto the ground. It seemed to be in constant life. Tiny ripples ran across it, eddied, coiled, smoothed and rippled again. The very surface of Mars being torn aloft by the relentless wind.

He shuddered, and turned back to the doorway. For a moment he felt blind panic as he groped in the darkness; then one hand struck the dome and he breathed again. Thankfully he forced the door into its sockets, jerked open the inner one, and stumbled into the arms of Pop.

He hung weakly for a moment, fighting the desire to cough, then jerked upright.

"Hello, Pop," he grinned. "It's pretty bad outside." He slid off the gloves, tugged off the mask, wriggled out of the overall. Wonderingly he stared at a reddish stain on the collar, touching his neck he felt a warm stickiness. Carelessly protected flesh had been lacerated by the tiny dust motes. Pop

grunted.

"Better dress that wound." He sounded worried.

"What's the matter ?"

"Alarm went just after you left. The mercury boiler's sprung a leak, I'll have to fix it. Watch the board will you ?" He gestured towards the power output meters.

"Serious ?"

"Could be. I'll use the secondary boiler, Tell Lew to lend a hand."

"Wait a minute," said Lew. He rubbed sleepy eyes. "The boiler's near the pile isn't it ?"

"What of it ?" snapped the old man.

"Leave me out," Lew grated. "I don't intend getting burnt by radiation."

"I'll help," offered Sam.

"No !" Pop tightened his lips. "I want you near the board. I don't trust that young renegade." He stamped away. Sam looked at Lew.

"He must have heard you last night."

Lew shrugged. "What of it ?"

"Nothing." said Sam dully. "Nothing at all." He turned to watch the board.

A needle flickered, jumped, then fell to zero. A second crept across the dial, resting against a pin. Somewhere a fuse exploded with a sharp bang. The telephone began to ring with a desperate urgency. Sam picked up the receiver.

"Pile here."

"That you, Pop ?" The voice sounded strained.

"No. Sam Watson. Pop's working on the boiler."

"Get him will you. Quick !"

Pop wiped grease from one hand and snatched the receiver.

"What is it ?"

He listened awhile, eyes darting towards the power board. "I know," he grunted " but what can I do about it ?"

The instrument crackled against his ear.

"I can't leave. The boiler's got to be fixed as soon as possible, If not, there'll be no power anyway." He listened again. "How can I ?" he yelled. "I'm alone with two boys, one I can't trust, and the other's half dead. I knew this would happen someday, blast those shinypants on Earth !"

He listened again, and seemed to slump. "I understand," he said quietly. "I'll do my best." Slowly he hung up.

"What's the matter ?" Sam asked.

"Cable's gone," Pop said. He seemed suddenly very old. "They're desperate for power, the secondary boiler can't handle it."

"What can we do ?"

"Fix it," grunted Pop. He grabbed hold of Lew. "Listen. You're going to help me on the boiler. You can come willingly, or I'll smash your teeth in and drag you along. Which is it to be ?"

"Why can't he go ?" Lew muttered.

"Sam stays by the board. Well ?"

"I'll come," Lew snarled, his eyes darting hate.

"Couldn't we repair the cable ?" Sam asked.

"In this storm ?" Pop snorted. "No. We'll have to chance the yeast going

bad. Nothing else we can do."

"But even if you repair the boiler, the single line won't carry all that's needed," urged Sam. "Why not let me try and fix it ?"

"Don't be crazy, Sam," Lew snapped. "What do we care if the stuff rots ? The quicker it goes, the quicker we get back home."

The smack of Pop's hand sounded startlingly loud. Lew reeled back against the wall, blood staining his cheek. He crouched, snarling like an animal.

Pop scratched his beard. "If you could do it ?" he breathed. "If you could only do it ?"

"I'll do it," Sam said quietly.

"Good." Pop spun to the board, flicked toggles, studied dials. "The break seems to be about half a mile from here. If you could reach it, wrap it with insulating tape ?"

Sam nodded. He noticed that he was breathing faster than usual.

He dressed with care, Pop watching him critically. Sam winced as the edge of the mask rubbed against his neck, he tried to ease it, lifting the edge of the mask. Pop shook his head.

"You'll have to stand it, Sam. The dust will choke you otherwise. Here ——" he smeared the wound with salve. At the door he hesitated, scratching his beard. "You know what you have to do, Sam. Just follow the cable, when you find the break wrap the tape round it. I'll run a low current through so that you can feel a shock at the weak point. I'll clip you to the cable by a chain and slip ring. If conditions are too bad, come back."

He pulled the mask over his head, jerked the door open, stepped out into the storm.

Outside Sam groped blindly, swinging his arms. A hand gripped him, pulled him around the side of the dome. Stooping, Pop snapped the slip ring around the cable, the dim glow of his flashlight throwing a puddle of light over the thick coil. He squeezed Sam's arm, and bent his head, masks touching.

"Stay connected to the cable," Sam heard him yell. "Whatever happens, don't leave it. Understand ?"

Sam nodded, stooped, and half crouching plunged into the whirling dust. Three steps, and he was utterly alone.

The wind wasn't too bad, the air was too thin for that. It was the dust, the thick swirling dust, that made the journey difficult. Sam plunged, slipped, ploughed his slow way through waist high drifts, that dragged at him with soft menace. He couldn't see. The face plate of the mask was thickly covered, wiping it was a waste of time. He crawled onwards, dragging the thin chain behind him, hoping to feel the slight shock which would signal the broken cable.

Things improved a little after he fought his way through the drifts heaped around the dome. He could feel the sand coiling away beneath his gloved hands, as he crawled on hands and knees, tethered by the chain. Without it, he knew, he would have been hopelessly lost, but the slight drag at his waist spelt safety.

How far he crawled he couldn't tell. He began to have trouble breathing, dust had clogged the air filters. Clumsily he tried to clean them, fumbling with gloved hands. It was useless, doggedly he crawled on.

At first he didn't realise what the shock meant. It stabbed at him again, and he gasped with relief. He had found the break. Blindly he groped for the chain, found it, guided himself to the cable. It lay uncovered, a slight drift to one side, the rest unprotected from the scouring sand.

Wiping the face plate, he squinted in the feeble glow of the flashlight. The thick rubber insulation was worn paper thin, in places it had fretted away, exposing the gleaming copper beneath. Sparks flashed from it to the ground. From his belt Sam jerked one of the rolls of insulating tape. Pausing only to clean his mask, he began to wrap the cable.

He used the first roll, and the second, then the third. The cable, took them all, but the weak spot had been protected. Sam rested on his heels. sweating, choking for breath as he fought to suck air through the clogged filters. Wearily he stumbled to his feet, turned, staggered back towards the dome. He felt terribly weak, his head spun and his lungs burned. He tasted something warm and salty filling his mouth. He wished that he could spit.

It was hard to walk. He swayed from side to side, each time being jerked to a halt by the tethering chain. Once he fell. Once he tripped. Then he kicked something, stumbled, took several wild steps, and fell heavily. The stab of electric current jerked his senses clear.

Desperately he crawled to the cable. The rubber had been stripped off for a distance of several inches. He felt sick as he realised what had happened. Weakened by the elements, the insulation hadn't been able to withstand the savage jerk he had given the slip ring by his fall. The thin metal had scraped the cable clean. Even through the dust-covered mask Sam could see the showering sparks.

He felt at his belt, knowing even as he did so, that it was a waste of time. He had used all the tape. Glumly he sat down, and forced his spinning head to clear. He had to cover the cable. But how ?

He had only one thing to use. The flexible hose leading from the face piece of his mask, to the air filters. If he cut down one side, slipped it over the bare cable, tied it in position, it would serve as a temporary repair. The chain would do to tie it.

He grinned a little as he worked. A wry grin. He was thinking of Lew. Finally he was satisfied, then, keeping one hand on the cable, began his slow crawl. Dust swirled around him. He could feel the grittiness of it against his teeth. The sharp burn of it as it settled on the soft membranes of nose and eyes. It was hard to see, it was almost impossible to breath. Eyes closed, lips pressed together, Sam crawled onward.

He never knew just when he lost the cable, One moment his gloved hand touched it, the next his fingers trailed in the dust. He kept moving for a while, though he had no real hope. Suddenly he coughed, tried to restrain it, and failed. Something within him seemed to yield, he choked, coughed again, and the inside of the mask became full of blood.

He jerked if off, flung it aside. Took a deep breath of dust filled air, and screamed with the pain of burning lungs. Huddled on his side, back to the wind, he spewed his life onto the greedy sand.

The pain faded. The coughing died. The wind rustled about him. drifting a layer of fine dust, piling it against his back. Sam shuddered, flung out an arm, then relaxed.

The wind blew on.

THE END

Escape Velocity – or Escapism?

The first intrepid explorers to survive the rigours of space and stand on the Moon's surface will probably look "up" at the Earth, hanging like a great technicolored jewel against the star-studded backdrop of space (depending upon which phase the planet is in and general weather conditions back "home"—and a lot of other "ifs" as well . . . suppose they landed on the far side of the moon), and be completely overwhelmed emotionally at the sight which greets their eyes. To reach that stage they will have believed in the possibility of space flight; more particularly they will have believed in the technicalities of both their training and their craft. Whether they return safely from that first trip is something only history will record. One thing is certain, however—they will have escaped from Earth, physically.

Mentally, most readers of science-fiction have made that trip many times, but they must for ever remain chairborne astronauts, their thoughts voyaging freely amongst the stars while their bodies live in a narrow "life-belt" of 20 miles (10 miles each way above and below the Earth's surface—and only then at the extremities with artificial aids).

For that reason, science-fiction has many times been called "escapist literature," and the phrase can be twisted to suit almost any dogma, political or otherwise. Not only *can* be, but *has been*. It has been stated that readers of science-fiction dwell in a mental world of their own because they want to ignore the strife of the modern world; to shut out the possibilities of atomic warfare; to ignore the starvation and misery that goes on in parts of the world other than their own; to forget Korea; the H-bomb; the toll of road deaths; murder; thuggery; fires and earthquakes.

Possibly. But *all* fiction is escapist, whether it is based in the past, the present or the future—even fact can be a form of escapism, mentally, providing the reader can visualise events taking place elsewhere, and with the fast tempo of this modern age happenings the other side of the world can be on TV or film within scant hours of the occurrence.

I prefer to believe that the average science-fiction reader (whether he reads regularly or occasionally) is one jump ahead of the general public in that he is already prepared for the vast storehouse of knowledge that will open up as soon as space flight becomes a reality—much as he would like to be the first Man on the Moon, he realises the chances are remote that he will be The Person—but that he isn't trying to evade any of the issues back here in the "life-belt."

If anything he is better able to evaluate world events because he can more clearly see and understand the infinitesimal part those events play in the lifetime of a planet, itself only a grain of sand in the vastness of space, its life but a second in the vastness of the Cosmos.

JOHN CARNELL

It wasn't exactly a Court Martial—the prisoner being a civilian—but the Security Branch wanted to know why the wrong pilot had taken off in the first manned rocketship. The obvious inference was sabotage—but the not so obvious . . .

ASSISTED PASSAGE

By JAMES WHITE

Illustrated by HUNTER

He knew himself to have that rare knack of making friends with everybody, and the Corporal, who was also a keen amateur gardener, and himself had become very pally. Now, glancing at the stiffly-marching figure beside him, he wondered if he reached for his pipe whether the Corporal would shoot him.

He would have liked to say something, but the grim set of the soldier's jaw, and the hurt, ashamed look in his usually friendly eyes made him keep silent. The Major's hut was only three minutes away at this pace, and any explanation he could give would be long, complicated and quite incredible, especially if it was the true one.

The Corporal halted at the green-painted door of the Nissen hut and rapped three times. His other hand hovered over the butt of his pistol, and his eyes were grimly watchful, though he never looked any higher than the level of Mathewson's tie. The orderly who escorted them to the inner office also avoided meeting his eyes, and the little group of civilians inside seemed to be interested only in the design of the linoleum.

Major Turner said "Very good, Corporal. At ease," and fell silent for the space of two long, interminable minutes, during which he stared fixedly at some papers on his blotter. Ordinary attempts at sabotage he could deal with, that was a Security Officer's job, as was counter-espionage and the screening of technicians, but this . . . . He didn't quite know what to do. Finally he spoke; his voice was low, but the suppressed anger in it was unmistakable.

"If we were at war, you know what I would do to you." It was a statement rather than a question. "Shoot you."

And Dr. Mathewson knew he would have done just that, too. The Major was tough. He kept silent, trying to think of a way of presenting the truth in such a way as to make it appear not completely incredible, because he knew the questions, cold, incisive, deeply-probing questions, would start in a matter of short seconds now, and any story based on a lie wouldn't stand up for more than five minutes. Besides being a martinet, the Major had tacked onto his name a few solid degrees in psychology that very few people knew about.

One of the five civilians present stirred restlessly. It was Ellison. The mention of shooting had shaken him. He spoke hesitantly, almost inaudibly, without raising his eyes.

"But the Doc. isn't a *spy*. There must be some explanation for what he's done. He isn't the type that would, would——," he broke off, then finished

lamely, "He's never——, he doesn't *act* like a spy."

The Major glanced at him and murmured softly, pityingly, " Famous last words." His tone left no doubt in the hearer's mind what he thought of Ellison, which was that he was far too child-like and trusting to be allowed out. "Get conscious," he ended sharply. "D'you think they *all* look like cloak and dagger desperados."

Ellison looked as if he was about to tell the Major exactly what he thought of him, but Turner had resumed staring at his blotter, so he subsided sullenly, a slow blush creeping over his neck and ears. He was of far too shy and sensitive nature to win a name-calling contest against the Major, anyway.

Mathewson had of course expected some support from the civilians present, but Ellison's sincere if somewhat incoherent defence of his character had come as a bit of a shock, for Ellison, more than any other individual on the site, had the most reasons to hate his guts. It gave him a warm, grateful feeling to know that he had inspired such loyalty and affection . . .

His musings were cut short by the Major who was talking again. With a start he realised that it was to him.

" . . . . that lying will be futile and a complete waste of my time and your breath. *I'll* tell *you* what happened that night, you can then tell me *why* it happened, and, the most important piece of information," he nodded slightly towards the two NCO's wearing 'phones and staring intently at radar screens over in a darkened corner of the room, "What will happen next."

He paused, then continued in a low voice devoid of feeling, like a judge summing up after a murder trial, not wishing to influence the jurymen.

"At approximately 22.40 hours on the night in question you entered the canteen and ordered, very tactfully, of course, that Ellison should go to bed and get as much rest as possible before take-off at 06.00 the following morning. You accompanied him to his room and doped his hot milk and saw that he drank it all before leaving. At 23.08 you drew a light truck from the M.T. Officer telling him it was required to take some gear to the ship for last minute tests on the automatic controls. While the people in the canteen were loudly finishing off their farewell party to the, by now, deeply unconscious official pilot, you arrived at the ship with a load of equipment and Allen. Together you made between nine and eleven trips up into the ship. The last time you came down alone and succeeded in making the guard believe that Allen had already left on foot for his hut——" Here he glared coldly at the Corporal, "——leaving the truck for you. At 23.40 you drove the truck to the Administration block and entered the building. At approximately 23.52 the Corporal on guard heard the ship's gyros start up, followed by the fuel pumps and the automatic Fire Alarm. After switching the siren to General Emergency he went quickly to the safety trench at the edge of the take-off apron. It was now 23.58. Two minutes later the ship took off."

The low monologue stopped, and a hint of puzzlement crept into the Major's voice when he resumed. The others sat in strained, attentive silence, scarcely moving. The proverbial pin, had it dropped just then, would have made quite a clatter.

"There was a good deal of confusion for several hours after the departure of the ship. You, as Director of Research and hence the highest-ranking authority on the site, could have got clean away at any time up until the declaration of martial law early this morning. I don't quite understand that.

You must be very new to this game or . . . " He looked thoughtful for a moment, then said sharply, "Or did you think the Corporal would have died in the blast ? If that had happened you could have told any cock and bull story you pleased and been believed, because Allen wasn't with you when the M.T. Officer gave you the truck. It very nearly happened that way, too."

He looked straight at the standing Doctor and said softly, "A spy *and* a murderer. You play the game dirty, don't you, Doc. ?"

This last accusation came as a shock to Mathewson. Allen and himself had made the vital decision a long time ago, and planned the operation in such a way that no foreseeable change in circumstance would find them at a loss. They had discussed, many times and at great length, all the possible repercussions taking the spaceship would have on the authorities, and the steps those authorities would take regarding Mathewson, and devised various means of keeping him at least physically unharmed until the Second stage of the plan began. A charge of murder was the only thing *not* allowed for. The whole thing sounded unreal, fantastic; his ears must surely be lying. Spies, in this modern age, were rarely just shot out of hand, he knew. And in the more civilised countries they sometimes weren't shot at all. Murderers were different. Little wonder none of them would look him in the face. But the thing was silly. Stupid. Surely they knew him well enough to realise he could never bring himself to do a thing like that—— most of the people present had known him for years. The Major was the one he had to convince, however, He glanced sideways at the Corporal a little anxiously before replying.

"There was plenty of time for him to reach safety. The only danger was that he might try to break into the ship to restrain the pilot, but he had been made to believe the ship was deserted. Besides, I had told him repeatedly what to do in the event of there being a premature ignition of the fuel or some similar accident. Knowing the thorough safety measures practiced by technicians and the numerous locks and alarms designed to prevent such accidents, he probably thought I was inclined to worry needlessly or that I wasn't quite myself because of the nearness of the take-off. The point I want to make is that he knew exactly what to do, and he was in no danger at any time. Also——" Mathewson glanced quickly at the Corporal again. It made him uncomfortable to be constantly saying "he" when the object of the discussion was barely two feet away, "——You have probably found out by now that we were on very good terms——quite friendly, in fact." He stopped, waiting.

"True ?" asked the Major, switching his attention to the Corporal. His expression conveyed exactly what he thought of soldiers who made friends with people who sabotaged multi-million pound defence projects.

The Corporal's mind had been busy during the Doctor's version of the affair and was still a little confused. He badly wanted to give Mathewson the benefit of the doubt, but he needed time to think this out. The sudden question startled him. He nodded foolishly, then seeing the frown of displeasure gathering on the Major's brow, clipped out a hasty "Yes, sir."

After a moment's silence Turner resumed. He looked slightly disappointed.

"That seems to prove your innocence of attempted murder, but it could also mean you were clever enough to have a good story to fall back on if the plan failed. You see, I still think the Corporal was meant to die; other-

wise why are you still on the site ? Why aren't you with Allen's friends, safe and sound, back in . . ."

He broke off. One of the ear-phoned N.C.O.'s cleared his throat and said, in that emotionless sing-song peculiar to all radio operators, "London reporting in. Seeing nil, still raining. Radar shows objects still in close proximity, no further manoeuvering. Ends." During acknowledgement of the message the people in that room who had been straining to catch every word of that brief but meaningful report slowly brought their attention back to Mathewson and the Major.

" The taking of a life is of secondary importance compared to the main charge, so we'll forget about that for the moment. You aided in the theft, and probably destruction, of a spaceship which was the culmination of many years of research and cost a truly astronomical amount of the nation's money —money it could ill afford, as you well know. Beside this a human life has only, well . . ." he glanced at the Corporal, " . . . a sentimental value. I think its time we got down to business. I suggest you start at the beginning, and don't forget I can check on almost everything you say. First. When did you meet Allen originally ? and, just for the record, what is his real name ? What do his friends call him——if you can pronounce it, that is ?"

"His real name is Allen. He spells it differently, though. And he hasn't got any friends other than the ones he made here," said Mathewson, and waited for Turner to say something.

The Major settled back in his chair and looked at Mathewson steadily. It was obvious that he didn't believe him, but he kept silent, waiting for the rest of it.

The accused shuffled uncomfortably and shifted his weight onto one foot. Nobody had even thought of giving him a chair, he wasn't quite human any more. He looked at the group of civilians. They seemed a little less hostile, but very puzzled. He knew that the higher technical staff of the site were for the most part shrewd, brilliant, if somewhat erratic men. Perhaps some of the most civilised men on the planet. Moreover, he knew them to be the greatest collection of starry-eyed idealists ever collected in one place, a fact which they all strove desperately to conceal. Surely someone would believe him, and understand his reasons for doing this thing. He started to speak again.

"I met him for the first time on that Met. expedition to the Antarctic which took rocket soundings above the south magnetic pole. One of the prefabs developed a bad flaw and had to be written off. I was the only person with a hut all to myself, if you didn't count the ton or so of equipment that shared it with me, so naturally one of the displaced persons was dumped on me, together with a couple of cubic yards of *his* equipment. The D.P. was Allen. The living space became so severely limited that extreme caution had to be observed in getting in and out of bed lest a careless movement of a foot or an elbow damaged an irreplaceable piece of apparatus. In cramped quarters like those one either gets to like a room-mate or to dislike him intensely. We got on very well.

" His job was to see to the cameras and various telemetering devices that went up in the sounding rockets, but I quickly found out that he could do any job almost as well, and sometimes better than the people whose speciality it was. He made good tea, too, so naturally he was well liked. It was every-

one's considered opinion that he was a born genius. But he was very shy and hesitant, and when he did say something, especially if it was on a technical subject, you got the impression that he'd given it all the consideration one usually gives only to a move in chess. He had a really brilliant mind, though like most of us on that project he was quite young, so we couldn't understand this shyness of his.

"One night, however, he let his hair down. We had gone out to retrieve the spools and tapes from a rocket that had been blown some distance from the camp. We had quite a job finding it, too. The thing was buried under about ten feet of snow and we had to use a mine detector. When the job was finished we were tired, cold and hungry, and had a mile or more to walk back to our hut. Misfortunes and confidences seem to go together. It happened something like this . . ."

The two men shifted their packs higher as they approached a particularly steep snowdrift. Their breaths drifted behind them, slowly disippating in the brittle air. There was no moon, but the snowfield was lit softly by the subdued fitful glow of the Aurora, and the sharp, coldly-burning stars that crowded thickly in the sable sky. It was a beautiful night. The men plodded wearily to the top of the drift and stopped. Allen said, "I'd better check the direction again. These pint-sized mountain ranges have got me all crossed up." He fished out a compass. Mathewson just grunted, glad of the rest.

Mathewson had been leaning on his ski-stick, regaining his breath, and looking down at his dimly-seen snowshoes, thinking of that badly-overworked joke about 'Tennis, anyone' ?, when he suddenly realised that his feet were cold and that Allen hadn't said a word for over ten minutes. He looked up. After a few seconds he coughed deliberately and tried to whistle in an exaggerated attempt to attract attention. Apparently he couldn't even hear him.

Allen was standing motionless with his head thrown back, looking at that glorious sky. His attention as far as Mathewson could see, was focused in the region of a first magnitude star which the Doctor guessed was Fomalhaut. The compass, held loosely in a clumsy mitten, had slipped and thudded softly into the powdery snow, but the man remained a statue. And he looked as if he would so remain until the next blizzard blew up and covered him. In the dim light his expression couldn't be discerned, but he obviously was in the grip of some strong emotion. His eyes seemed to be wet, but that might have been due to the cold. Seeing him like that made Mathewson feel uncomfortable, as if in some way he was eavesdropping. He shuffied up to Allen, feeling just like a bull on the threshold of a china shop, and shook his elbow gently.

"Penny for your thoughts."

Stammering, Allen came abruptly back to earth. Then he spoke rapidly, as if nothing had happened.

"Uh——er——if we follow that star," he pointed, "for about twenty minutes, we'll be home. We should see the lights from the top of that big drift ahead."

"You must have been a Boy Scout in your young and formative period," bantered Mathewson. If Allen didn't feel like telling him anything he certainly wasn't going to pry. He want on, hamming it strongly, "Sir, I place myself completely in your hands."

"Onward !" said Allen, and humming a rousing fanfare which was horribly off-key, led the way down the slope. He was himself again.

They had been trudging for ten minutes and the yellow lights of the camp were well in sight ahead when Allen spoke again. He seemed queerly hesitant.

"I hear you're for Australia when you finish here, Doc ?"

"That's right," said Mathewson.

There was no point in denying it, the Doctor knew. The fact that he was shortly to take charge of the Satellite Vehicle project at Woomera was supposed to be Top Secret, but as half the men on this present job were joining him the secret hadn't been kept very well.

"I like working with rockets," said Allen seriously, then he finished with a rush "Maybe you could get me a job ?"

It seemed a silly request to the Doctor, for he knew Allen had the necessary technical qualifications to obtain a post in any rocket research project in the world, judging from the things he'd done here. Why, there was one little gadget he'd thought up in only two hours to get distortion-free signals from high altitudes during magnetic storms. That extremely simple but utterly revolutionary dingus would make him a fortune when he patented it. Since Allen was an American—— at least he spoke like an American—— it was strange that the White Sands crowd hadn't grabbed him long ago. They spared neither trouble or expense to get the best brains, he knew, and it seemed the logical place for Allen to go. But the thing that struck the Doctor as being most strange was the manner of his asking, as if hoping for a great favour. He said quietly, not allowing a hint of his puzzlement to show in his voice, "I'd be glad to have you along, you know that. Just send your application through the usual channels and I'll O.K. it. I didn't know unemployment was a problem with *you*." He paused. "Why you poor starving genius, you," he fumbled with an imaginary wallet in the region of his hip pocket, he was hamming it again, "Would you like a little something . . . not charity, of course . . . a loan, or an advance ?"

But Allen wasn't entering into the spirit of the thing this time. When he spoke again his voice was still serious, and he was very ill at ease.

"I meant could you, personally, get me a job. You see, Doc., it's that 'application through channels' that is the whole trouble. Doc, I haven't got a single degree."

Before Mathewson could make any reply to this startling bit of information he was talking again.

"And I suppose you've been wondering why I didn't try for White Sands. Well I did, but I couldn't get a look in. Not even as a *very* junior technician. Security wouldn't pass me," he said bitterly. He was probably thinking of the things they were doing at that heaven of rocket technicians, where they had chucked chemical fuels entirely because, it was whispered, they had an atomic motor a-building that was suitable for use in a spaceship, though its completion and tests would take a few years yet. He hurried on, "But don't think it was anything political. It wasn't, though they thought so. They wanted to trace me back to the cradle to check up. It was unheard of that anyone as well up in technical subjects as I undoubtedly was could be without at least a few degrees. They wanted to know what universities and

what colleges I had attended. Science, in this modern age is a highly complicated and specialised affair, did I expect them to believe that I got all this knowledge just by reading books ? All right then, what *primary* school had I attended ?

"I wouldn't tell them so I got the push."

To give himself time to take this in Mathewson started to re-arrange the hood of his parka. Finally he coughed and said, "And did you pick up all your gen from books ?"

As soon as he uttered it he knew it was a stupid question, but it was the only one he could think of at the moment.

Allen shook his head. "My education was the same as thousands of others back home, though I knew what I wanted to be and specialised almost from the beginning. But I just can't tell you where I got it," his voice became almost inaudible. It must have cost him an effort to get out the last sentence, "for . . . well . . . strong personal reasons."

Mathewson couldn't see his face, but he could imagine it burning hot with shame and embarrassment, and wondered what tremendous scrape the other could have got himself into to make him act like this. Still, it was none of his business. And, if you looked at it properly, there really wasn't a problem at all. He spoke, choosing the words carefully.

"This is all very unusual. The important thing though is your ability and not your past life. I have a good idea of your character generally, so I think it would be possible to give you a position there." Talking like this made Mathewson feel like a stuffed shirt. He stopped, and then in his more normal tones said, "Buck up, Buster. We'll fiddle it through somehow. It'll be all right."

Allen said, "Thanks, Doc." very softly, and that was all. But into those two words he put something that made the other sure that he'd just done the greatest good deed of his life. It was an altogether pleasant sensation.

At their hut, while they were hanging up the snowshoes, Allen paused and looked up at that glorious sky again. Mathewson joined him. "It's quite a sight, isn't it ?" he said softly.

The other could not have heard him. He murmured, "It's a terrible thing to be homesick, Doc," and turned quickly to enter the hut.

As the present job would finish in two days this seemed a strange remark to come off with, but when they had bunked down just before going to sleep, Allen came up with an even stranger one. He said, "Do you remember when I was checking our course on top of that drift, and you said I must have been a Boy Scout ? Doc, what is a Boy Scout ?"

He seemed quite serious about it, too. Mathewson didn't know what to think. He told him to shut up and go to sleep or he'd crown him with something.

Next morning Allen talked about nothing but Woomera.

"All right, all right. So he made a neat contact," The Major was growing impatient. "But I don't want a whole history. You wangled him the job—— by going over my head when I turned him down——and he settled in. Then what ? How did he convert you, or was it money ?"

"No. It wasn't money, and he didn't 'convert' me either. It wasn't

anything like that at all" Mathewson sighed. The other seemed to have a one track mind.

"Oh, so he just asked you nicely for the ship and you gave it to him, just like that," Turner's tone was bitingly sarcastic, "What's a spaceship more or less between friends sort of thing, is that it ?"

"Yes, something like that." The Doctor waited for the shock wave of the inevitable explosion to hit him.

Turner rose half out of his seat and stiffened in that strained position while his face reddened and a vein in his temple started a measured throbbing. His eyes were pure murder. He opened his mouth, but the explosion didn't come. He eased back into the chair and said dully, "Tell me about the first time he asked for it," then recovering himself somewhat, "And don't take all day."

"It was one night about three months ago. I had asked him to stay with us over the weekend. The Project looked like being finished eight months ahead of schedule. Incidentally, this was due to the amazing work put into new engine designs by Allen, and by his ability at bug-suppressing generally, as anyone here will tell you. We were taking it easy. My wife had taken the children to the pictures and we were just loafing around and talking. He began to get more and more nervous and restless, but I didn't mention it. We were discussing the effect of acceleration on some of the more sensitive valves——they are practically foolproof, of course, but we were being morbid. He kept suggesting improvements, and alternative layouts, just as he did when that refrigeration problem came up. And the time when we bogged down on the venturi linings and he ended up by inventing that new alloy that stayed at white heat for two hours before it softened. These suggestions were like the others, wild, unheard of, and impossibly simple—and, when we'd screwed up enough courage to try them, quite workable. I told him to please, please stop. Most of the radio equipment was already installed and it would mean tearing it all out again. He was undoubtedly a genius, but hadn't he improved that ship enough already ? Anyone would think *he* was taking the thing out.

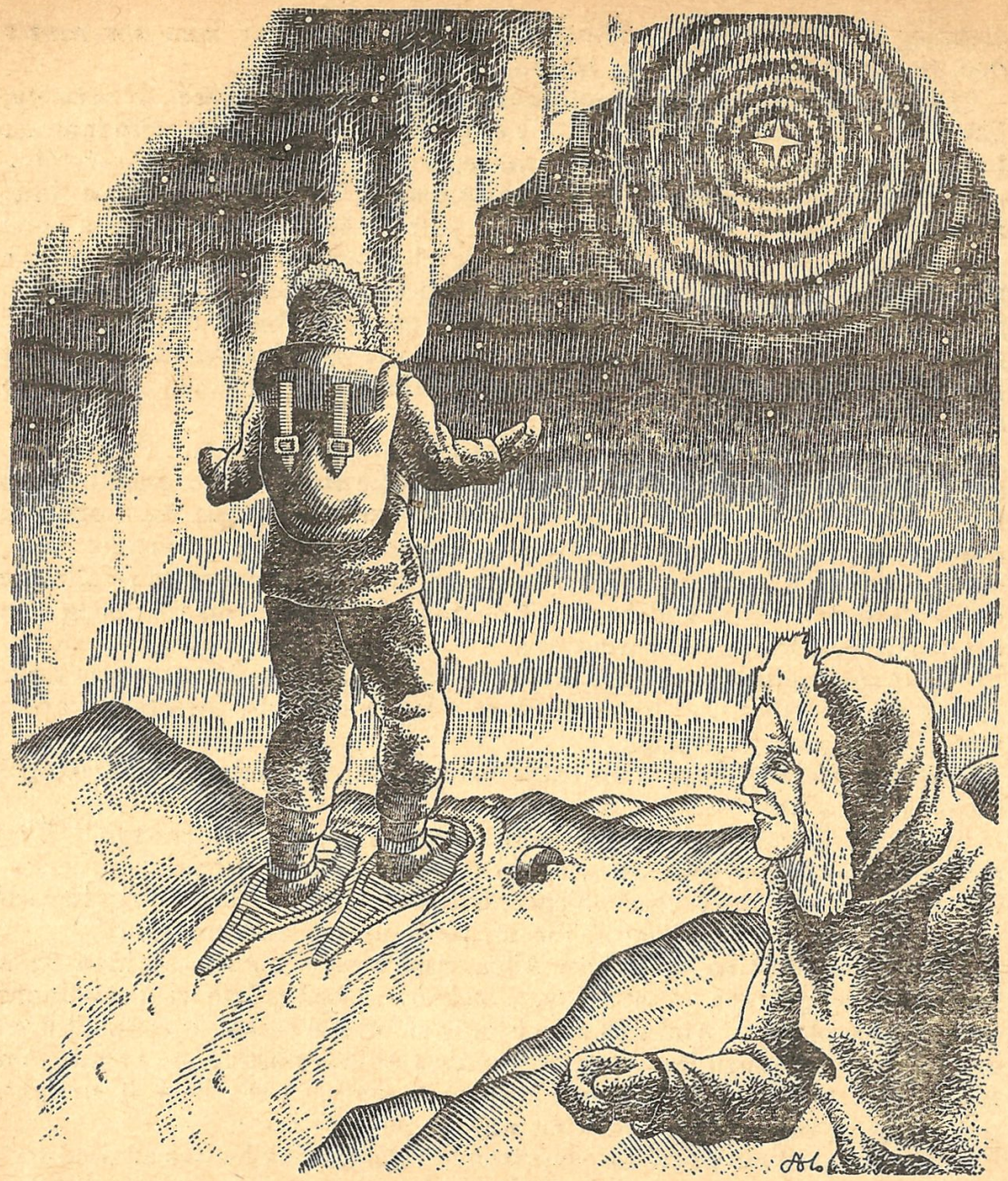
"It was meant to be a joke, but he shut up like a clam for more than ten minutes. Finally he said "Who is going to take her out, Doc. ?"

"That," I said, "Is information to be divulged to nobody until the day before take-off, it is classified, it is Top Secret, it is too utterly hush-hush for words. It has been entrusted to only two people on the site, the chief Security Officer and myself. But anyone will tell you its Ellison."

"Ellison." He appeared disappointed somehow. Then, "He's the logical one, I suppose, but . . . Doc, I want to go."

"I think I just gawped at him for a bit. There might have been two, or just possibly three people on the site who wouldn't have sold their souls to be able to take off in that ship, but the job of piloting rockets is a highly specialized one, one for which the final exams have yet to be set. He couldn't even fly a plane. But I thought I knew how he felt.

"Suddenly he started talking, rapidly, his voice low and deadly in earnest. 'I can do it, Doc, you can believe me. I've experience you don't know about, lots of it, I've *got* to go out. Why do you think I nearly killed myself to get this job here when White Sands turned me down, and all those gadgets and



improvements I 'suggested' and had built into the ship, when I could have been pulling in a fat salary ? I wanted to impress the high-ups, I wanted to be indispensable, the only person who really *knew* the ship. But because I never flew a jet I get the brush off. Don't you think I couldn't have learned easily if I'd known it was necessary ? You don't have to be able to ride a bike to drive a car. These last two years that has been my only aim in life, the *only* aim, to get out into space again . . ." he bit the sentence off and froze, slowly going pale.

"I'm awful sorry, old man. I had an inkling how you felt, you know, and I suggested you for the job, but—if you want to hear a very unfunny joke I can tell one. They thought you too valuable to risk in a . . ." then it penetrated, "*Again* ! What d'you mean 'again ?' "

"He was quiet for a long time. I could see he was trying to make a difficult

decision, the sort that one's life depends on. They don't come any harder than that. Then he made up his mind.

"I had hoped this would be unnecessary, Doc, but this place . . . security, red tape, restrictions, screening . . . I'm lost. I just can't cope with it at all. I thought when I was forced down two years ago in north Ontario everything would be all right. A bit difficult at first maybe, but just a matter of time. I had the language, of course, that was part of my job, and I had a good idea of the high stage of technological development of the place, so things looked rosy. True, my ship was in little pieces, all of them at the bottom of a lake, with all the communicating gear, but with my ability I should be off here in no time, I thought. Well, you can guess what happened. When we met on the South Pole job I'd about given up hope, but now . . . listen to that a minute!"

The radio was turned on low, a request record programme. An old disc of that indestructable crooner was spinning. The voice, warm, friendly, and frankly sentimental, was singing, ' . . . winds are the gustiest, the roads the dustiest, the friends the trustiest, way back home . . .' There was a lot more, about green hills and cool streams and long, sweet-smelling grass rippling in a hot summer breeze, and boyhood memories of . . . Oh, that song had practically everything. He went on,

"That song puts my feelings across better than I can, but it doesn't say half of the . . . the . . ." he stopped, at a loss for words, then blurted out, "Oh, Doc, I want to go home."

"Allen confessing he was an extra-terrestrial shook me. But somehow I wasn't really surpri——"

"Stop !" The Major's voice was unrecognisable, "That's enough," The others came bolt upright, three of them said '*Extra-terrestrial* !' in perfect unison, and somebody else whispered, "He's *mad.*" Controlling himself with difficulty Turner silenced the incipient uproar and continued.

"Now you want us to believe Allen wasn't even human—a Man from Mars, or maybe Venus. That's silly. You know as well as I do what conditions are on those planets. And that ship is only an orbital rocket, it couldn't even reach the moon, much less . . . But why do I bother wasting my breath, you aren't even trying to be reasonable in your story. Let's have it straight, where did he come from, and what was his purpose ?"

"He didn't tell me where he came from—I don't think he was allowed to." Mathewson could see the Major going red again, and hurried on, "But it was definitely an extra-solar planet. He didn't intend going in the rocket. That was to be used merely to take him to the parent ship based on Titan. Small ships can't mount overdrive . . . " One of the technicians muttered, "Anybody knows *that*," and shook his head dazedly. " . . . or he might possibly have used it to go directly home. His job was a minor one. While the rest of the party did their research on the outer planets he was sent here to look the place over again and find out roughly how soon we would get into space, so that their race would know when to expect contact if the work on Titan took longer than planned. If we already had space travel, no matter how crude and inefficient the method, they would have been bound to contact us and obtain permission to occupy the satellite. But as we hadn't even left the Earth, and their project would take at the very longest only a little over three years, this was unnecessary, and we were left in blissful ignorance.

"He was given eight months to do the job. The first six went in brushing up on the language; even with his training this was a little difficult. He knew it already, of course, but the recordings he'd studied back home had been made and translated during the original Survey, and were sixty-odd years out of date. The remaining two months were spent in digging up and relaying to the mother ship as much information as was possible without actually landing. There was some spare time when that chore was finished. so he decided to risk a landing. This was strictly forbidden and very definitely contra-regs, of course, but he liked the look of the place and he wanted to pick up a few souvenirs.

"On the way down he side-swiped a mountain-top and flopped into a deep freshwater lake. The scoutship and everything in it was converted into finely-reduced junk, but he was able to walk away from it, though he had to use a spacesuit as the wreck was one hundred-odd feet under water."

Mathewson paused, thinking of Allen's long, hard struggle to adapt to the customs of a world of aliens, and his almost hopeless resolve to rejoin his friends, and the desperate battle to make sure the Woomera ship would be finished in time. He looked over at the civilians. They were watching him intently, taking it all in. Maybe they weren't believing any of it, but they were definitely interested. Ellison was agog. The Major was tapping his slightly yellowish teeth with his pencil, with the air of one waiting not too patiently for somebody to shut up and stop wasting his time. Before he could put the thought into words the Doctor continued quickly.

"He *had* to take the first ship. It would have been easier to wangle a passage on a later ascent, but the mother ship would have left for home by that time. As it was, there was a very close race against time. After he told me all about it that night we began work on the Drive that was to take him to Titan. It is a surprisingly simple affair, a little like the, as yet, theoretical Ion Drive we talk about sometimes, though that model was very inefficient since Terran makeshifts had to be used instead of the proper equipment. By this time he was the sole authority on everything electrical that went into the ship, so there was no difficulty in installing the thing. But some of the apparatus just couldn't be disguised as normal gear and had to be carried aboard a little before take-off. The plan was to ascend to the group of 'cargo' rockets which contained the basic equipment and skeleton structure for the spacestation, and join them in their six-hour Pole to Pole orbit. Then he had to round them up into a tight bunch and, using some of the parts they carried, finish the drive unit. The Drive completed he was to radio the base here and then blow for Titan. The whole business was to be finished in eight hours at most, but five would have been plenty of time." Mathewson looked across at the two N.C.O.'s at their screens, and ended worriedly, "I hope nothing has happened to him."

"Let's make this as simple as possible. You say 'Allen' came from another planet, had an accident, got stranded, and you gave him a spaceship to help him get home again." Turner was furious. He showed it by being mildly reproving and very, very sarcastic. "That was terribly generous of you. Giving a twelve million pound spaceship to an almost perfect stranger, and him not even an Earthman." The Major *tsk*, *tsk'd* and fell silent.

For the first time since the Doctor had been brought in Ellison spoke up.

He addressed the Major. "You don't get it, sir." Apparently he'd forgotten completely that he was the official pilot; his voice was awed, his eyes shone joyously, "The gift of the ship will make a big impression on Allen's friends. It is a friendly act towards a highly advanced and probably extremely powerful race, one they can't ignore. And, the most important item, it will prove to them that we are *civilised.*" Then he amended, "At least some of us are." A technician beside him vigorously nodded agreement.

"Oh, no! Not you, too." From the look on Major Turner's face he obviously thought they should both have been certified long ago, but before he could give the thought expression the sing-song voice of the sergeant at the receiver focused all attention on the incoming message.

"Capetown reporting in. Radar shows two distinct traces, means ship is definitely pulling away from station. Signal indicates separation of about seven five yards, with this distance steadily increasing though at a very slow rate. Seeing nil, Sun in the way. Ends."

In the silence that followed the report Doctor Mathewson could be heard whispering, "He's not dead. Did you hear that. He's moving. He's not dead." There was a terrific load off his mind.

The Major smiled wolfishly, "No, he's not dead, *yet.*" He had everyone's attention now. When he went on his tone was neither bitingly sarcastic nor pitched high in anger, it was low, clear and under perfect control. It sounded briskly efficient and very, very tough.

"I know what Allen is, even though I don't know *who* he is specifically, and by this time you should know, too. I'm beginning to feel a little sorry for all of you. You people, and especially the Doctor, were completely taken in by a consummate actor and expert psychologist who sized you up to a T and pulled the principle of the Big Lie on you. It might have been anyone, but you, Mathewson, fell for it. I'll ask one question. Did you build and test any of this Ion Drive equipment yourself ?"

The Doctor shook his head, "No, but I've got three notebooks filled with circuit diagrams and equations. Besides, he said it worked only in a vacuum."

"I thought so. There is no Ion Drive, no base on Titan and no extra-solar planet. You should be able to see that now. Another thing. He was to link up with the 'cargo' rockets in the six hour orbit and remain there for not more than eight hours, ostensibly to complete assembly of the 'drive.' Well, he's now been gone over *two days*, and I'm afraid to think what damage he has done to our equipment there. If he's smashed it, another five years will be needed to replace it and build the spacestation and global TV relay we had hoped to have in partial operation early next year. He was to leave that orbit, in fact, the last report shows he has already begun to, but he's not going to Titan. Instead he will return to Earth with a very valuable ship, and he won't land anywhere near here. That you can be sure of. However, he isn't going to get away with it. I can't be absolutely sure of the damage he's done the spacestation gear, so I'm waiting until the ship is a few miles away from it before I blast him. When he is a safe distance away from it a 'cargo' rocket with its payload replaced by a homing device and an adequate charge of HE on proximity fuse will be sent up on radio control. I can't allow that ship to fall into the wrong hands." He finished grimly, "Mister Allen has had it."

There was a stunned silence, broken by Mathewson, who gasped, "You

can't do that. What about . . . ?" But he was drowned in the general hubbub. Somebody was shouting, "What about those gadgets ?" at the top of his voice and another, just a little lower in volume was stating loudly, "He *did* talk funny. Remember that ti——," the rest was noisy but indecipherable. The Major hit the desk top a smash with his fist and yelled "Quiet!"

In easy stages the room grew quiet. Suddenly the sergeant at one of the radar screens leaned forward tensely, then clipped out "Got her now sir."

Turner nodded curtly in acknowledgment and addressed the civilians again. "The ship has just been picked on up radar. It is due to pass over this point in roughly fifteen minutes. Eleven minutes before that occurs we will launch the intercepter missile——" he looked at his watch, and outside there was a sudden whistling thunder that climbed and faded and died in the high blue sky—"There it goes."

Mathewson bowed his head. His shoulders sagged and he seemed to have grown suddenly old. The others too, were deathly silent, listening to the dying echoes of the take-off. What their thoughts were was anybody's guess, but they were sad ones, one could tell that from their faces. On the wall a hitherto unused speaker crackled loudly and burst into life.

"Allen calling base. Hope you can hear me. Doc.—Hi, there ! Is the Major being nasty ? On the level, I hope everything went off O.K. I'd have called you sooner but I had to break into the transmitter for parts for the Drive. There were breakages on the way up, that's why I've had to hang around so long. But everything's fine now and I'm on my way. Doc, I feel like dancing . . . Bet Major Turner is having a fit at this moment, but you've got those notebooks so nobody'll mind me swiping this old rowboat of yours. But warn them that the experiments must be carried out in space. The field from the coils in the converter stage, especially in atmos—— but you know all this, Doc., we've been through it before. I have to sign off now, this sender is strictly from breadcrumbs, I've got to keep spitting on one of the terminals to insure a good contact, so you can imagine what its like. I'm going now Doc . . . home." The metallic voice stopped. There was an awkward silence, then it said simply, "Thanks, Doc." The words seemed queerly distorted, due probably to atmospherics, or maybe emotion, then there was a sharp click and silence returned.

The first sergeant cleared his throat and said plaintively, "Sir, the target seems to be radiating strongly on this wavelength, I can't get a fix with this glare covering the . . ."

He was interrupted by the other N.C.O., who seemed to have forgotten all the strict rules about the use of the emotionless sing-song when delivering messages. He was almost shouting, "Sir, Melbourne reporting in. Say radar's gone nuts, but seeing's fine. 'Scope shows ship is travelling in a sharp outward spiral at between four and six G's, fairly *belting* along, they say. They want to know how the h . . . Oh, excuse me, sir . . . how can we possible hit anything going that fast with the makeshift thing we sent after it ? And why is the ship trailing what appears to be an incandescent searchlight beam forty-odd miles long ? Asks what the bl . . . er, is going on anyway ?" Breathless, he waited for the reply.

The civilians were being very rowdy and obstreperous, so he couldn't hear the reply, which was just as well perhaps. It wasn't very polite.

THE END

At the close of the last war science was only just catching up with modern mechanical needs. Since then laboratory experiments have extended the work begun under vital necessity and come up with some interesting results. Here are some from chemical research.

SILICONES

By JOHN NEWMAN

During World War II equipment was operated under extreme conditions; aircraft flew higher than ever before, at heights where the temperature fell low enough to freeze the oil in the pipes; tanks operated under desert conditions where the grease was liquid and bearings overheated; radio sets were taken into jungle areas where the ever present moisture caused rapid failure of the units due to short-circuiting.

It was obvious that the materials used were not standing up to the treatment they were receiving; either the equipment had to be redesigned or tougher materials found. Chemists were given the problem, "What can be used to stand up to these conditions and to prevent failures ?"

The Chemists went back to their books and laboratories and soon returned with the answer. Silicones.

Silicones are synthetic materials containing the element silicon, symbol Si. Silicon is the second most plentiful element on Earth and forms the majority of rocks and soil. It does not occur naturally as the element Silicon but is usually found in the form of silica—SiO_2, where Si stands for a silicon atom and O_2 for two oxygen atoms. Silica is the main constituent of sand and occurs in a very pure form as quartz.

Silica will stand up to extremes of temperature; it can be heated until white hot and then plunged into ice water without cracking; it will withstand boiling sulphuric acid. Chemists took silica and built up compounds from it so that they had almost the inertness of silica yet were plastic enough to have many more uses.

Just as silicones were used to overcome the difficulties caused by modern warfare so are they being used more and more in peacetime to overcome industrial problems. When space flight is a fact it is obvious that new materials will be required to meet the even more extreme conditions of outer space. Once again silicones will show their usefulness.

The first silicones were prepared at the beginning of this century but it was not until the end of the last war that they were produced on any large scale. However, their properties proved so valuable that their production rapidly expanded until they are now the basis of a large industry.

Silicon is in some ways similar to carbon, which has the same type of atomic structure. Carbon atoms have the ability to join together to form chains and rings of atoms, such as –c–c–c– where c stands for a carbon atom and – for a bond between them. Carbon is unique in being able to do this and it is upon this peculiar property that the chemistry of all known living creatures depends.

By varying the type and number of atoms in the chains and rings an infinite number of carbon compounds are possible. Each compound has its own individual properties and it is these amazing variations of chemical and physical properties that enable the formation of the complex cell structures of living creatures. Without such complex structures life, as we know it, would be impossible.

By finding out how natural carbon compounds are constructed and by creating them from simpler compounds chemists have advanced to the stage where they can design on paper a new chemical compound. Without actually making it they can often accurately predict its physical and chemical properties and what its effect on a living creature will be. By working in reverse they can take the properties required and design and synthesise a compound which will have these properties. This has been described as "tailoring" molecules.

Although silicon atoms will not directly join to other silicon atoms the oxide silica will form chains and rings, some of them very large. The difference between carbon and silicon compounds is that each silicon atom is separated from its neighbour by an oxygen atom in the form –Si–O–Si–O where Si and O stand for the silicon and oxygen atoms and – for the bonds linking them.

It is this ability of forming chains and rings that enables chemists to "tailor" complex silicones for jobs where ordinary carbon compounds are not suitable.

Of course, natural silica compounds have been used by Man for many thousands of years. Asbestos has found great use because it is heat resistant and because the atoms are arranged in long chains. Because of the chain-like structures asbestos can be separated into fibres which can be woven into cloth.

Similarly, mica has a flat structure, the atoms in the molecules are essentially in single planes and these planes can be easily split apart. By taking a piece of mica and a razor blade it is possible to keep on splitting it into plates. If this was continued indefinitely a single molecule, a very thin plane, of mica would be left. In reverse, by building up from a large number of such molecules, whose structure the chemist knows, compounds having the desired properties can be made.

Unfortunately the natural silica compounds are all brittle or weak. None of them are liquids and most of them have such high melting temperatures that they are difficult to use. However, by starting from silica a series of compounds similar in structure to carbon compounds can be prepared. These silicon compounds are called silicones and are liquids. They are

remarkably stable, remaining liquid at temperatures as low as –40°C. and showing no signs of breaking down or burning at 250°C. Not only are they unchanged chemically within this temperature range but their physical properties also change only slightly.

This is particularly useful as the viscosity—the oiliness —of the silicones remains almost constant. In contrast to this, the viscosity of ordinary oils changes greatly with temperature. At low temperatures ordinary oils set solid to waxy materials and at higher temperatures they run too easily, become charred and easily burn.

Some silicones, which are liquids, are used as lubricants where conditions are so rigorous that ordinary oils are inferior or useless. Silicones can be used to transfer heat from one material to another in heat exchangers; cooling hot gases flowing out of a chemical plant and using the heat in another part of the process. Here the ability of silicones to withstand high temperatures without breaking down or corroding metal pipes and valves is used to its fullest.

By dissolving solids in the liquid silicones they are made much thicker and greasier. The products made in this way are known as silicone greases. They have many uses as lubricants, replacing conventional greases wherever inertness is important.

Because the silicone greases only become solid at extremely low temperatures they are essential for operating machinery under Arctic conditions.

The recent emphasis by the U.S.A. on strategical air bases in the Arctic and the use of ground troops and armour in areas such as Alaska have brought the need for lubricants such as the silicone greases well to the forefront. At first it was found that even the bolts of rifles, due to the oil freezing, became solidly locked in position if they were not kept warm.

Now silicones are used to prevent such occurrences. They are also used for the lubrication systems of aircraft flying at very high altitude, for not all the mechanisms of a modern plane can be kept warm at heights of five miles and more.

They would be the perfect answer to the problem of lubricating the moving parts of space suits. In fact, there is now no problem in the construction of space suits which cannot be overcome by the use of modern synthetics. Synthetic plastics have been developed for such a variety of conditions that their number far outstrips the number of natural materials used.

Because the silicone greases are non-poisonous and have no taste or smell they are used to grease the pans for baking bread. This prevents the bread sticking to the metal. Fats were used but these charred and were difficult to clean off once they had been heated in the oven.

The silicones can be treated to form linkages between the long chains so that the products, silicone rubbers, have all the elastic properties of natural rubber. Other silicones can be made with various properties. Some are thermosetting; on heating they set hard to tough flexible solids which do not melt if they are reheated. These are similar to the ordinary thermosetting plastics such as Bakelite, although the silicones are far more inert.

Another useful property of the silicones is now being developed. This is their water repellent property.

Most ordinary materials become wetted easily; fabrics soak up moisture and glass and china become covered with a thin film of water. However, this can be prevented by spreading a thin skin of silicones over the material. When this is present the water cannot form a thin layer but collects into separate drops which can be easily shaken off.

This is very useful for treating electrical equipment such as radio sets which have to work in moist atmospheres. A continuous film of water can conduct electricity and cause short-circuits but if the water is broken up into droplets the circuits cannot be completed and the life of the radio set is very much increased. Because silicones are unaffected by most conditions a coating of them cannot be removed by cleaning and one treatment is enough to last almost indefinitely.

By treating fabrics such as Nylon, Terylene or cellulose acetate with a suspension of silicones in water they can be made water repellent and therefore waterproof. Water on the surface of fabrics treated in this way cannot soak in and stays on the outside until it is shaken off. This waterproofing is not removed by dry cleaning, a common fault of older methods of treating cloth with chemicals to make it water repellent. Unfortunately this method will not work with wool or cotton.

Glass cleaned with a cloth impregnated with silicones is brighter and stays cleaner for longer than if cleaned by any other method. This is due to the coating of silicone given to the surface of the glass.

This is also the basis of the new car and furniture polishes containing silicones. The polish lasts longer and is more resistant to water and friction. Once put on it is very difficult to remove. This makes the job of respraying a car not quite so easy, as all polish must be cleaned off before the cellulosing can be carried out.

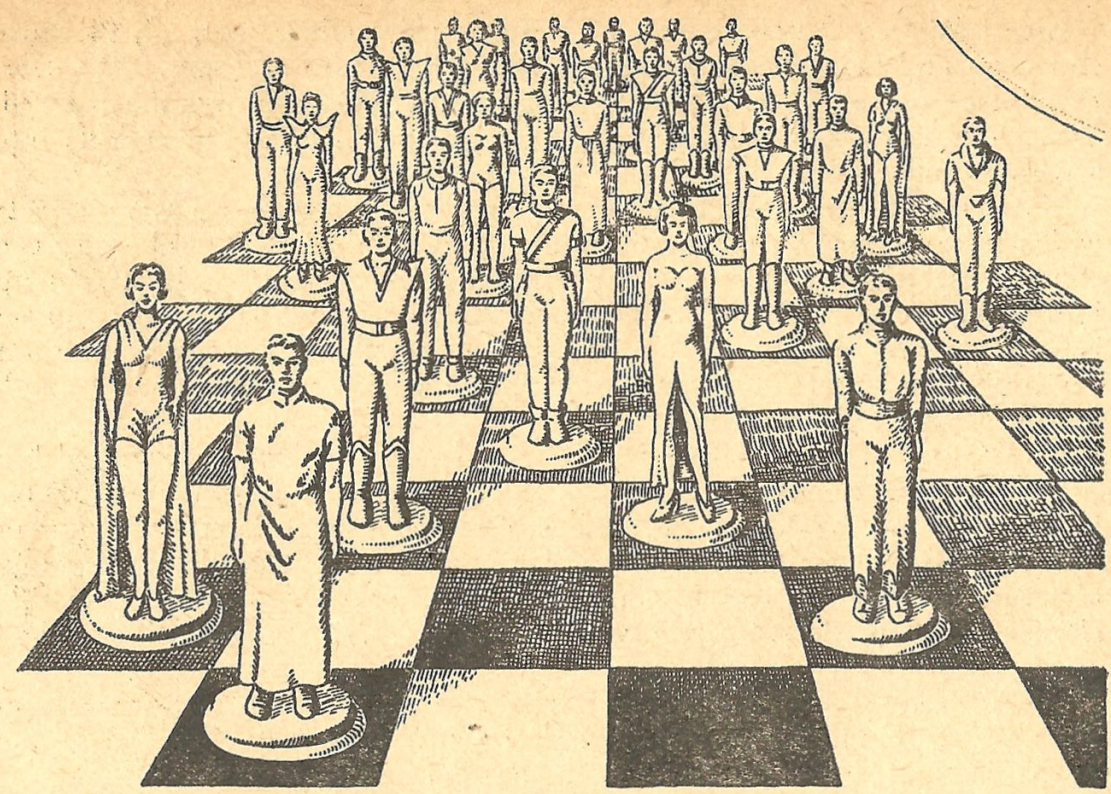
Silicone paints are now available. These are unchanged up to the boiling point of sulphur, over 400°C., a temperature at which ordinary paints char and quickly peel off.

Cement and stone are made waterproof by silicones. A special silicone is used which slowly reacts with water to form silica. The cement or stone is soaked with this compound and the reaction takes place within the pores, completely sealing them and making the material impervious to water.

Another curious characteristic of the silicones is their ability to prevent mixtures containing water from foaming. This is used in chemical plant and in breweries, where silicones are added to the vats during fermentation, to prevent the foam, due to the carbon dioxide evolved, becoming excessive. Here again the non poisonous nature of the silicones is important.

In fact there is scarcely a major industry which does not utilise one or other of the peculiar properties of the silicones. Their wide range of properties places them next to carbon compounds in importance. Looking at the complexity of the silicon molecules possible, it is easy to imagine, as many writers have done, a form of life based on silicon instead of carbon. Perhaps, somewhere, a race is even now developing the "curious" chemistry of carbon compounds and wondering whether carbon could form enough complex molecules to give rise to an "organic" chemistry, a chemistry of living creatures.

THE END



Most of the pieces in the game were only Pawns, but when one of them became a Knight and killed the King the Players of the Game had to think hard before it was checkmate.

CHESSBOARD

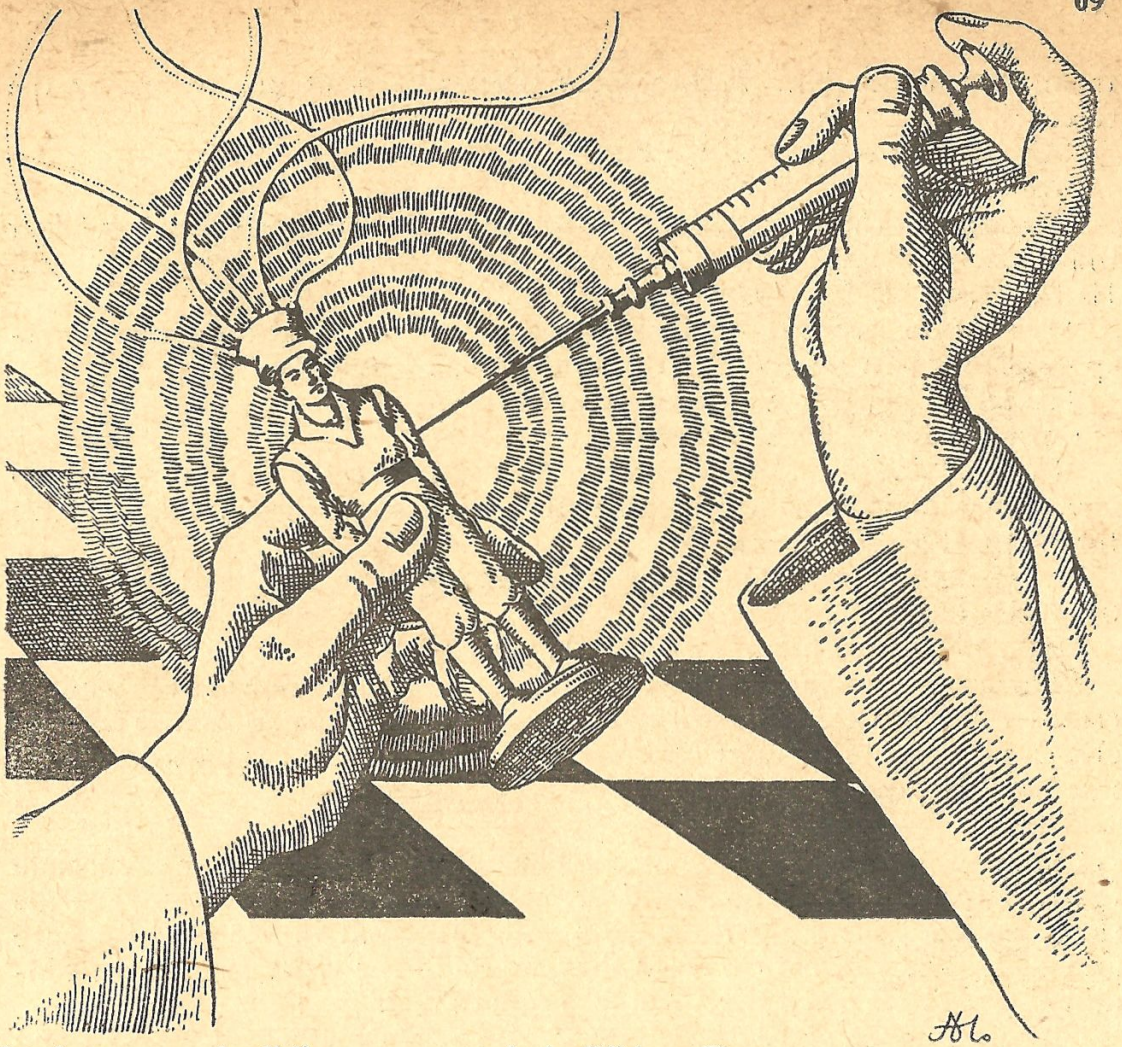
By J. F. BURKE

Illustrated by HUNTER

The sharp finger of the machine in the corner began silently to jot down its small meticulous notes on the chart. Marc Peregrine watched it for a moment and then went towards the glass wall of his office and looked down at the busy scene below.

Light as gentle as daylight shone on the mothers who brought their children in from the General Service Cars outside. The calmness and efficiency of the white-coated staff made it seem that everything was moving slowly, almost indolently. But Marc nodded with satisfaction, watching the deft movements—the words exchanged with the mothers, the quick consultation of the record pad, the injection in the babies' arms and the momentary application of the supersonic skullcaps.

He heard the warning click as someone approached his door, and turned



in time to see it sliding open to admit Gibbon Dormer.

"Hello, Gib. More reports? "

"I've got one here I'd like you to look at. I have an idea someone's made a mistake."

"A mistake ?"

It was so incredible that they did not take it seriously. They smiled, and spread the sheets out on the smooth surface of the black desk.

Gibbon Dormer's finger traced the line of a column of figures. "Here," he said. "This figure here. A Grade 14A—lower level intellectual, classified as non-active, suitable for local administration—but the injection doesn't tally. And the s.s. signal seems to be that for a Grade 4B, active."

Marc Peregrine looked incredulously at the evidence before his eyes. At last he said:

"Which station ?"

"Local 28. New Bay City."

"We'll check up. It must be an error on the Recorder."

Dormer switched on the visi-screen beyond the desk, and raised his thick, straggling eyebrows. "First time I heard of that, and if there was one, how is it that the total on this side——"

"A compensating error," said Peregrine curtly. "Must be. No other possible explanation."

They waited for the screen to glow. As images rushed suddenly towards

them, and a face blinked into focus, Peregrine went on, addressing the screen:

"An error on your monthly return."

"An error, sir ?"

They spread the chart before the screen, and Peregrine's lean forefinger indicated the erring figure. The eyes of the man on the screen widened. He shook his head. "I don't understand."

"Neither do we. Fetch your Recorder operator. And the operative responsible for this injection. Five minutes—no longer."

The screen blurred to an opaque green.

Dormer said: "This is serious."

"I don't think so," said Peregrine. "It's not often the Recorders develop mechanical faults without tripping a relay and flashing the warning, but this time it must have happened."

"I hope so. This is too crucial a period for us to risk having unknown quantities floating about."

Peregrine allowed himself a cold, confident smile.

"There won't be any unknown quantities. Even if there had been a minor error—which is unthinkable—it could hardly affect our major plan. The child chosen for the revolutionary outbreak thirty years hence has passed through this building, under our own eyes."

"So has his assassin."

"Exactly. The two—er—major actors in the drama of our immediate future have been chosen, and will be ready to assume their roles when the times comes. The supporting parts will be played in the way we have arranged. The crowds will do as they are told—the visi-casts and the conditioning we have given them will take care of that."

Gibbon Dormer still looked uneasy. He was a mathematician first and foremost, and liked to have his unknown quantities resolved.

The screen shone clear again. A young man with apprehensive eyes looked out at them.

"You gave an injection two days ago," snapped Peregrine, "to a child in the class of . . . let me see . . . "

He consulted the chart, framed his questions, and fired them at the young man, who tried to stare back at him without fear.

"I made no mistake, sir," he said when the questioning had ended. "I am sure of that."

"Positive ?"

"Positive. There is no likelihood of our record pads containing an error."

"And no likelihood of you yourself making a mistake ?"

"Very little, sir. We have been trained not to."

"Of course. So you suggest . . . ?"

"A mechanical defect in the Recorder from which your transmission was made, sir."

"Put the Recorder operator on."

Another face, another nervous voice. Orders from Gibbon Dormer: the Recorder to be overhauled, the check transmitter to be used for the next two months to make sure that no more errors crept in. "This is an important time. We can afford no mistakes. You have not been told what we are

working on, but you have been told that scrupulous exactness is essential over this period, haven't you ?"

"Yes sir."

"Mind you remember it. The equilibrium of our society depends on our Control Centres. There must be no errors—not even minor errors."

"No sir."

Dormer switched off the screen. "I suppose it's all right," he said doubtfully. "The responsibility of all this——"

"We have a duty to perform," said Peregrine, quiet and assured. "We mould the shape of our society, and the time has come when something new is needed. This coming dictatorship and the war that will follow is necessary. There is too much philosophical discontent, and an inevitable spread of idle dissension among the lower levels."

"I know all that. But I'm worried. We don't know what havoc an intruder might cause."

"One man—one ordinary man—can't alter the shape of society that has been rigidly controlled from these centres for a hundred years."

Dormer shook his head, still studying the chart. "I don't see why not," he said softly. "Isn't that what we ourselves have been planning ? The launching of a prefabricated dictator on a society conditioned to accept him —and then to overthrow him, after bloodshed and bitterness."

"All of which," said Peregrine, "is essential in order to introduce that element of surprise which will put an end to the jaded condition of our present epoch. It is"—again he smiled thinly and fanatically—"our duty to experiment. The balance of society depends on our experiments."

When Hammond Wyatt was twenty-nine years old, he became conscious of a strange dissatisfaction stirring inside him.

He had never been as sure of his work and his position in life as most of his friends were. He could not imagine why he should be so unsure of himself. Like everyone else, he had been taken to a Conditioning Control Centre when he was a few weeks old, and he could not understand why he should be so restless. In fact, he found himself mentally rebelling against the mere idea of Conditioning Control.

"If our lives are laid down for us in advance by a group of scientists and sociologists," he found himself arguing, "what sense is there in living at all ? We are not alive: we only exist."

And his friends at school and, later, in the Area Administration Office where he spent his working hours, laughed—a trifle uneasily—and asked why he didn't go and join the Capaldi group. There, they said, was someone else who didn't like the perfectly reasonable, intelligent system under which he lived, and who talked about overthrowing it. Why not go and join him ?

But Wyatt was uncertain about this, too. He distrusted Capaldi's orations and the reports of them that he saw on the visi-cast. There were times when he felt, for some reason he couldn't explain, that Capaldi's outbursts against Control were actually sponsored by Control itself. It seemed absurd. It was mad. But he could not get rid of those suspicions.

"The world is lazy," Capaldi would scream, his face in close-up, his mouth working furiously in the square of the screen. "The time has come to overthrow all those who want us to stay lazy and uncritical. We are being

governed by reactionary scientists—robbed of our freedom, our priceless heritage of free will—we must rise against this infamy . . . "

Certain telesheets attacked Capaldi. Others supported him. People began to argue for and against the ideas that Capaldi was spreading, and there were demonstrations: there were brawls in the palatial squares of the great cities of the world, and within a week ten men had been killed.

Ten men dying by violence because of political differences ! Such a thing had not been heard of for several hundred years.

And yet everyone seemed ready for it. The prospect of war was exciting.

War ? It was strange how eager everyone was, and strange how they accepted the possibility. There was no doubt in anyone's mind that these events were going to lead to a revolution and a war. It was almost as though they had been taught to expect it: their minds had been prepared.

Which was, thought Hammond Wyatt, very suspicious.

He could not understand why his friends could not see the truth as clearly as he himself saw it. This was another one of Control's experiments—and this one was evil and mad. To plunge the world into war merely as a controlled experiment was insane. Whatever the excuse might be—a check on the growth of population, an incentive to creation and activity on the part of the rather jaded, idle scientists of the world, or merely a freakish whim on the part of the Controllers—it was wrong, utterly wrong. The whole thing was evil.

"Control's got everything under control," said one of his acquaintances with a laugh. "Don't worry your head, son. Just when Capaldi thinks he's going to pull off a great coup, he'll find himself stopped."

"If that's so, why is he being allowed to do this at all ?"

"There must be a psychological reason for it. Control knows what it's doing."

"But *we* don't. And I don't like it," said Wyatt.

"Perhaps it's to shake folk out of their complacency. Or to make them value peace more than they do——"

"By starting a war, just so it'll feel good when they leave off ?" Wyatt was contemptuous. He was also uneasy—more and more uneasy.

The voice of Capaldi began to boom louder and louder. Outbreaks of violence were more frequent. Telesheets demanded action from the rarely-used Control Guard, but the Guard did not appear.

"Biding their time," said some.

"They know Capaldi's supporters are too strong," said others.

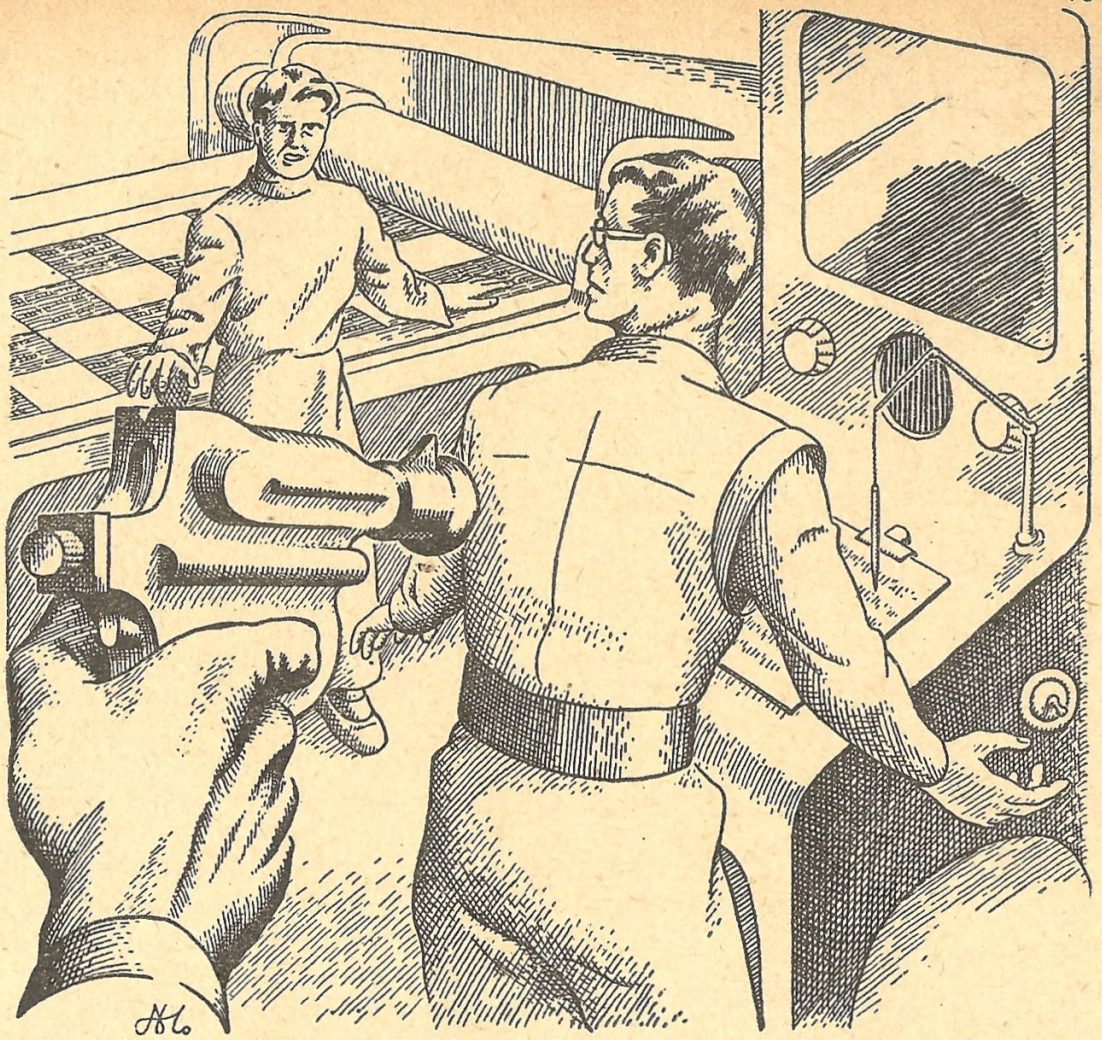
"It's all a fake," said Hammond Wyatt, but he saw that other people had been conditioned to accept one set of beliefs, and that they could not bring themselves to pay any attention to his views.

He watched the face of Capaldi whenever it appeared on the screen—which was often, now—and the expression in the would-be dictator's eyes convinced him that he was right.

There was an uprising in Eurasia. Several Control Centres were taken over by Capaldi's armies. No harm was done, as far as could be told.

The revolt spread. The telesheets that had opposed Capaldi now changed their tune. The world began hastily to adjust itself to the possibility of a new sort of government—a possibility that soon became reality.

"A free world for free men !" cried Capaldi, as his troopers spread across



the continents, taking over this administration and that Control Centre, supplanting this Governor and that Professor.

And still, to Hammond Wyatt, it was like watching pawns moved on a chessboard. Pieces were pushed here and there, moved by fingers from above . . . and Capaldi was only one of the pieces: for all his arrogance and for all the homage that men paid him, he was only a piece on a chessboard, controlled by someone sitting above.

All the business of closing down the Control Centres was a fake. Wyatt was sure of that. He was sure of it, just as he was sure that Capaldi was behaving as he did simply because the Controllers had decreed, about thirty years ago, that a certain child should receive injections and brain impulses that would turn him into a dictator when the time came. It had all been planned.

So Hammond Wyatt, who had always felt himself to be a misfit in this tidy, over-organised world, took the responsibility of that world into his own hands, and went to find Capaldi, and murdered him.

"Killed?" said Marc Peregrine, his face white with incredulous fury. "Assassinated? But it's not time yet. The plans were made for the year after next. This is impossible."

Gibbon Dormer, older and wearier, shrugged. His eyes were thoughtful. "All the same," he said. "it's happened. An assassination, just as we planned——"

"But too early. It doesn't fit in with any of our plans. It can't happen this way—it just can't happen. The whole thing would be out of control."

"That's the way it is."

Peregrine snapped on the visi-screen. Then, as though realising it could tell him nothing, he switched off again and swung back to Dormer.

He said: "We've got to get the man who did it. Or was he killed—mobbed, or anything ?"

"He got away. The Guards are out after him. So are Capaldi's men."

"Capaldi's men must be called off. They're liable to kill him, and we don't want that: we want to ask him questions, and find out what happened." He paused, doubtfully, then went on: "Was it our man who killed him ? I mean, was it the one who should have killed him ?"

Dormer shook his head. "No. It was someone else."

"It's incredible. You've got to make sure we get that man here. Tell Capaldi's henchmen——"

"It won't be any good telling them anything. The idea was implanted in their heads that they would follow Capaldi and fight for him. They worshipped him. Now they're out for blood. We conditioned them that way as part of our plan. The only thing that can withstand them is a larger, more powerful force of men imbued with a similar fanaticism. And those men," Dormer pointed out drily, "aren't ready yet. The urge for a read-justment will not come to fulfilment for more than a year. That's the way we planned it. We didn't figure on accidents of this sort."

They stood and looked down into the great hall, into which mothers still brought their children, although Capaldi and his propagandists had so fervently assured the world that Control Centres no longer functioned. Peregrine said bitterly:

"Oughtn't we to close down for twenty-four hours and check our statistics ? Nothing will be the same now. We'll have to re-cast the whole schedule."

His eyes narrowed suddenly—keen eyes in an old, arrogant face. "There's one thing I've been wondering——"

"And I know what that is," said Dormer. "You've remembered that error years back, when we thought a Recorder was at fault."

"Yes. That operative . . . Suppose he lied, and suppose he *did* make a mistake ?"

Dormer nodded. "That's what I came in to tell you. He did lie. He did make a mistake. A wrong injection, and the wrong pattern of impulses through the s.s. cap: and then he tried to falsify his figures, I suppose, so that the Recorder totals would balance."

"You've checked on this ? "

"Twenty minutes ago," said Dormer, "after the news of the assassination, and after a description of the assassin and a tele-cast reconstruction of his features had been flashed over the world, that operative committed suicide. It made me think. It made me think a lot. And I made enquiries, and got out the old returns, and that's what it amounts to."

Peregrine lifted one arm as though to strike somebody. His face worked. For a moment he could find no words. At last he burst out:

"All our work overthrown by one blunder ! The world completely at the mercy of chance once more, instead of under perfect control: and one

unstable, unpredictable lunatic who's murdered Capaldi and got away . . . "

"We'll find him," said Dormer.

"You've got to find him. Before he can do any more mischief, he must be brought here."

"Every resource we have will be concentrated on the search," said Dormer. "We'll find him."

But it was impossible to concentrate every resource on the search for Hammond Wyatt. There were too many other problems to be faced.

In South America there was an uprising. It was confused and, in the end, unsuccessful since the revolutionaries were uncertain of their own motives, and still hampered by their early conditioning. But it was a bad sign. And the fury of Capaldi's followers, wreaking vengeance on innocent people in their search for their chief's assassin, did not make things easier. Inevitably, there was a split in the ranks, and leaders of opposing factions sprang up.

A Control Centre in Eurasia was destroyed—quite genuinely, this time, during a spasm of mob madness.

Peregrine, seeing the world which he had largely created shattering to pieces like this, turned all his hatred against the missing Hammond Wyatt. The operative who was responsible for Wyatt's condition was dead, so it was no good hating him: Wyatt was the one who must be found; Wyatt was the one on whom Peregrine lusted to pour out his fury.

"You've got to find him and bring him here. We can still restore order out of chaos. We can still help the world to regain its balance by a really intensive programme. But nothing we do will be safe as long as that madman is free. There is no room in our world for sports and mutants. I tell you he's got to be found and brought here."

But in the end nobody found Hammond Wyatt, and nobody brought him to Main Control.

He came of his own accord.

The door clicked warningly, and when Peregrine and Dormer turned, the young man with the beard and the contemptuous eyes was standing there.

Peregrine said: "How did you get in ?"

"I found my way all right," said Wyatt coolly.

"But the Guards——"

"It's quite easy for someone who hasn't been conditioned the right way to get past Guards who've been conditioned—well, shall we say rather too well ?"

Dormer stared. He said: "Your name's Wyatt. You're the murderer we've been looking for."

"Murderer ? That's an ugly word."

The man's calmness infuriated Peregrine. Here was the one—the single irresponsible individual—who had created such havoc in his plans. Peregrine stepped towards the desk, his hand reaching for a switch.

And he was somehow looking into the menace of a blaster, which had almost certainly been taken from one of his own Guards.

"Don't look so surprised," said Hammond Wyatt. "Didn't it occur to you that I could only be here for one reason ? I've come to kill you "

Marc Peregrine felt no fear. His anger was too great for that. He would have attacked the man but for Dormer's restraining hand on his shoulder.

Dormer, trying to make his voice sound reasonable, was saying: "You don't know what you're saying. You don't know what harm you've done, and what harm you'd do now if you were so mad——"

"I know what I've done," came the calm response, "and I know what I'm going to do."

The room was silent. The door was closed, the visi-screen blank. The three men looked at one another. Peregrine and Dormer were tense; Hammond Wyatt was quite at his ease—he was like a man who had come to the end of a long journey and was glad to be here.

"Let's talk about this," said Dormer.

"It won't do you any good," said Wyatt.

"We've got to make you see——"

"I've seen all I want to see of the results of your meddling with human destiny," Wyatt snapped, tilting the blaster slightly so that it winked malevolently at Peregrine's contorted face.

"And what about your own meddling ? If it hadn't been for you, Capaldi would have died when he was supposed to die, with far less bloodshed than there's been now, and the world would have profited from this brief interlude of dictatorship. Because of your insane intervention, there's no telling how it will end now."

"At least men will control their own destinies."

Peregrine sneered. "How many men have ever controlled their own destinies ? The world has been a happier, more peaceful place since Control ruled the minds and actions of men than it was in the days of anarchy and so-called freedom."

"You have no right to govern men's minds," said Wyatt.

Peregrine studied him for a moment, then a sly smile crept into his eyes. He said:

"But what about yourself ? You don't imagine that you're a free agent, do you ?"

"I've never been fooled by Control propaganda. I knew from the start that Capaldi was a fake. I've seen every move of your game. And now I've tipped the board over, and the game will never be played your way again."

"No ?" said Peregrine softly. "But you yourself are only the result of conditioning. A stupid operative made a mistake, and gave you a wrong injection. The brain impulses were wrong, too, and so there was confusion in your mind. But if we had known at the start what had happened, we should have been able to forecast your entire behaviour pattern. You can denounce conditioning all you like, my young friend, but you yourself are not free: you're only a technical error. A technical error," he repeated mockingly.

Hammond Wyatt took a step forward, then halted.

"Once you are out of the way," said Peregrine, "we can establish order once more. It will take time—a long time, thanks to your foolishness—but we have the means at our disposal. Two generations, or perhaps three, and Control will once more govern the destinies of men. And men will be glad."

"Aren't you overlooking something ?" said Wyatt. "I'm not the one who's going to be put out of the way. I've come here to kill you. And I don't intend to waste any more time."

He lifted the blaster purposefully.

Peregrine said: "You madman . . . "

And then the door gave its warning click, and began to slide open.

Wyatt moved so that his back was to the wall. His finger was already moving as he glanced at the newcomer.

For a fraction of a second he faltered, his face puzzled as recognition flooded it. "Rossheim," he said involuntarily.

Before the thin destructive beam could leap towards Peregrine and Dormer, the newcomer had fired—and Hammond Wyatt was momentarily the glowing, dazzling shape of a man, and then nothing.

Life seemed to return to the silent room. It was possible to depress a switch, to summon Records clerks and to send out swift, urgent messages on the visi-screen. The two Controllers, pale but confident, spread out the chart on the desk, and the man whose name was Rossheim watched them without comprehension.

"You're right," said Peregrine, chuckling. "That's what must have happened."

"This figure here"—Dormer's finger traced the line of the column—"accounts for it. It wasn't a compensating error at all. That fool of an operative tried to cover up his mistake by giving someone else a false injection—one whose strength he worked out himself, the lunatic—and hoping we'd overlook it."

"As we did."

"If you're not looking for it, you wouldn't stand a chance of finding it. Very cunning. And this man here . . . "

They both turned gratefully to Rossheim, who had saved their lives. His gaze was remote and strained: he did not seem to know what he had done, nor why he had done it.

Dormer said gently: "You've known Hammond Wyatt for a long time ?"

"Yes. We were at school together, and later I saw him often, though he never really noticed I was there."

"But you felt drawn to him ?"

"Drawn to him ? Yes, that was it. I just knew—there was something inside me that told me—that I had to follow him, and watch him, and that someday I should be needed to do something."

Dormer nodded, flashing a glance at Peregrine. "You see ? The equation works out. Our unknown quantity has been cancelled out."

Peregrine crossed to the window and looked down.

"Now," he said softly, "we can carry on where we left off. A man made a mistake, and upset the balance. But he tried to create a counterbalance, and although a lot of harm has been done, I believe the equilibrium can be restored."

"Two generations," said Dormer, echoing his chief's earlier words; "perhaps three."

"This time there must be no mistakes. We can't afford to run these risks. For the good of mankind," said Peregrine icily, "chance and free-will must be completely eliminated. There can be no happiness otherwise."

With a curt nod he dismissed Rossheim, and called Dormer to his side. Together they pored over a series of charts, and then began to plan the future, which was now safe in their capable hands.

THE END

To the kids hanging round the spaceport the spaceship crews were heroes. The adulation took a lot of living up to, especially with such brief planetfalls between trips.

HEROES DON'T CRY

By GORDON KENT

Illustrated by QUINN

He was big for a spaceman, almost five feet six, and broad in proportion. The soft leather of his uniform hugged a figure utterly devoid of fat—lean, almost boyish, yet vibrant with tensed nerves and hair-trigger reflexes.

He squinted at his reflection in the polished metal of a bulkhead, tilted his peaked cap a little further over one eye, and smiled at the result, His face, no longer young, smiled back at him.

Not a handsome face, not even an ugly one, just an ordinary set of features duplicated a thousand times in any large city. A faint scar marred one cheek, relic of a year-old accident, that, and a certain something about the eyes, set him out from the crowd. Secretly he was glad of the scar.

Footsteps clattered on the metal rungs of the catwalk. A man called out as he passed.

"Coming, Merrill ?"

He didn't wait for an answer, and Merrill was glad of it. He waited until the man had gone, until he could be sure that he was the last then, slowly, savouring to the full the delights of anticipation, he climbed towards the exit port.

He always liked to be the last. Let the others rush, racing to be the first away. They had their reasons—wives, sweethearts, mothers, children maybe, all good excuses to forget their dignity. He couldn't forget his. He had more at stake than the others ever would. He had a part to play, and the most critical audience in the world to play it to, but the rewards were just that much higher.

Outside the sun burned down from a cloudless sky. He narrowed his eyes against the unaccustomed glare, trying to focus on the perimeter. From his vantage point at the nose of the rocket, he could see the high wire fence, the huddle of administrative buildings, the milling crowd gathered around the guarded gateway. Someone waved to him, the upturned face looking like a little white blob, unrecognisable in the distance. With sudden impatience he began to descend.

It was not until he reached the gritty soil of the landing field that he remembered, and cursed softly with irritation. Deliberately he walked around the base of the rocket, squinting up at the gaping mouths of the giant

venturis, moving slowly as if examining the base of the vessel. Stepping behind the shielding expanse of one of the three great fins, he stooped, scrambled in the dirt, and pocketed several pieces of broken stone. He straightened, completed his examination, and strode towards the exit from the field.

They were there ! They would always be there, on Earth, on Mars, on Venus, on any planet anywhere. They had always been there, on the docks, on the railway sidings, on the perimeters of the airports. The new generation with adventure in their blood, and dreams in their hearts. The fledglings, straining at the bonds of home and security. Eager to strike out in the world, held back by lack of years and adult fears for their safety. Eager to bask in reflected glory, ready and willing to worship at the feet of their heroes.

The children !

They clustered about him as he left the gate. Young eager faces staring in rapt worship of the ultimate of their idea of adventure. A spaceman ! A voyager of the great emptiness between the planets. A man who had trod on other worlds, who had seen the stars in all their naked glory. In other ages they would have clustered about the booted legs of the sea adventurers, the flimsy craft of the first aviators. They would have cheered athletes, worshipped film stars, identified themselves to the famous and infamous of their day and age. Now it was the age of space flight, and the spacemen were their heroes.

"Hi, Joe ! Have a good trip?"

Merrill grinned at the shock-headed youngster who wriggled to his side. He clapped an arm around the thin shoulders, playfully tugged at the pigtails of a blushing girl not more than twelve, ruffled the hair of a freckled boy holding a forgotten ice-cream cone.

"Nothing to remember," he answered casually. "Just the usual Mars trip, do one and you've done 'em all."

"Did you have any trouble, Joe ?" the young face looked earnest. "I saw you checking the jets, anything wrong ?"

Merrill laughed. "Not a thing, Spike. Not a thing. I like to be careful, that's all."

"Joe's the engineer," whispered Spike to the pig-tailed girl. "He's more important even than the Captain, aren't you Joe ?"

"I wouldn't say that, Spike. I just make the rocket work, the Captain does the rest of it."

"If you didn't make the rocket work, then what would the Captain do ?" Spike said loyally. "Anyone can steer, it takes brains to handle the atomics, and guts too. Tell her how you got that scar, Joe."

"Some other time eh, Spike ?" Merrill dropped his hand to his pocket. "Anyone want a souvenir ?"

Within a split second he was surrounded by outstretched hands, the young faces clamouring loudly for the coveted favour.

"Steady," he called, half seriously. "I didn't fetch half Mars back with me, now who wants a genuine piece of Mars stone for their collections ?"

It appeared that they all did. Merrill frowned, he hated to disappoint any of them, but he knew that he didn't have enough.

"Quiet !" he yelled. "Now listen. Some of you have already got Mars stone, how about letting those that haven't get first crack. I'll bring more next time. Well ?"

Greed struggled with self-sacrifice, and several hands dropped. Merrill smiled, slipped his hand from his pocket, and gravely dropped a piece of broken stone into each little palm.

"There you are ! Genuine rock from Mars. I picked it up just before blast-off, I thought that you'd like to have it, now keep it safe."

"Gee, thanks," breathed the pig-tailed girl firmly clutching her prize. "Will you be going to Venus soon, mister ?"

"I'll let you know when he does," Spike said importantly. "Joe and me's old friends, aren't we, Joe."

Merrill ruffled the shock of tow coloured hair. "We sure are, Spike, we sure are."

It was then that he saw the girl.

She stood a little away from the crowd watching him with faint amusement. A tall girl, slender, with a rippling tide of blonde hair streaming over her shoulders. Her brows were thin and arched, her lips red, her cheeks faintly touched with rouge. She smiled as she noticed his stare.

"Hello."

He stepped forward, the children forgotten, the blood pulsing strangely through his veins. "Hello," he stammered, and stood staring stupidly at a loss for words. She saved him from embarrassment.

"You're Joe Merrill, aren't you ?" she smiled, holding out her hand. "My brother has told me a lot about you, he insisted that we meet."

"Your brother ?"

"Yes," she looked down at his side. "Aren't you going to introduce us, Spike ?"

"This is my sister, Joe. Sis, this is Joe Merrill, the engineer off the rocket ship."

She laughed apologetically. "Spike isn't very well versed in the social graces, Mr. Merrill. My name is Susan, Susan Claybourne. I'm happy to meet you."

Numbly he shook hands.

"Well ?" she said.

"I'm sorry, it's just that I never for a moment thought that Spike could have had a sister, especially such a beautiful one," he looked down at the tow-headed youngster. "Why didn't you tell me, Spike ?"

"Aw, Joe, you know how it is." Spike dug his toe into the dirt, wriggling uncomfortably. "Women don't understand these things, I thought that maybe you could talk to her."

"Talk to her ?" Merrill looked blankly at Susan. "What about, Spike ?"

"You know, Joe. About getting me on a rocket." He looked at the trim figure of the spaceman. "Don't you remember, Joe? Last time you was here we talked about it. About how you told me that I should go to navigation school. You know." He blinked hard to keep back his tears.

Merrill ruffled his hair again. "Sure I remember, Spike. Is that why you brought your sister ?"

"Yes. She doesn't like the idea. Talk to her will you, Joe ?"

"Sure," Merrill promised. "I tell you what we'll do. You go home, and I'll take Susan somewhere and talk to her." He glanced at the clock on the administration building. "We should be in time for dinner, will you join me, Miss Claybourne ?"

She hesitated, glanced at Spike, then nodded.

"Thank you, Mr. Merrill, you'll go straight home, Spike ?"

"Sure, sis, but call him Joe can't you ? And, Joe, call her Susan," he grinned cheekily as he vanished in the thinning crowd.

They sat in a quiet booth in the most expensive place Joe had been able to find. He had ordered with an expert's attention, the meal had been an epicure's delight, the wines complimenting the meal as wine should. Now, replete and contented, he leaned back toying with his coffee.

"Tell me, Susan," he said having rapidly adopted Spike's suggestion, "why don't you like the idea of your brother becoming a spaceman ?"

"I just don't like it, Joe." In the soft light the slight shabbiness of her

clothing was hardly noticeable. Her slender fingers, despite careful grooming, betrayed the obvious signs of manual labour, it was not until he had contrasted her with other women in the restaurant, that Merrill had understood her reluctance to eat here.

"Spike is young, his head filled with the thoughts of adventure, the thrill of far off places. I don't want him to waste his life, Joe. I want him to be secure, to have a steady job, a wife, children, all the things that any normal person wants."

"But . . . ?" He forced himself to be calm, not to get excited. "A spaceman earns good money, Susan. He is sure of a job, a pension at the end of it, and a fine life. It takes a man to make the grade. It takes years of study, hard work, single minded purpose. There's nothing to prevent a spaceman from marrying, having children. They perfected atomic shielding years ago, that old bogy is dead."

"I wasn't talking about that, Joe."

"Then what are you talking about ? What's your objection ?"

"Spike is an orphan, so am I, of course, He is all I have, I've brought him up since our people were killed in a helio accident. I don't want all that effort wasted."

"Now I begin to understand," irritably Merrill swallowed his coffee. "You are being selfish. You have your own ideas for Spike, and you don't want them spoilt. Like all women you want security, you forget that a man likes adventure."

"Adventure ?" she shook her head. "What adventure ? I know space travel, Joe. Know it almost as well as you do perhaps. In the early days when each flight was a gamble with sudden death, spacemen were heroes. Now ?"

"They are still heroes," he caught the look in her eye, and flushed. "I am at a disadvantage, it is immodest for a man to praise himself, but even I can see the fallacy in your argument. If space travel is so safe, then where's your objection to Spike becoming one ?"

"I want Spike to live, Joe," she said quietly.

His hard laugh brought the waiter gliding towards them, irritably he waved the man away.

"Are you out of your senses, Susan ? First you want him to have a safe job, then you tell me that space flight is the safest of jobs, then you don't want him to become a spaceman because you want to keep him alive." he gestured impatiently. "For Heaven's sake make up your mind !"

"How long have you been a spaceman, Joe ?"

"How long ?" he frowned. " Fifteen—no, sixteen years. Why ?"

"That makes you about thirty six, doesn't it ?"

"Thirty four. I lied about my age."

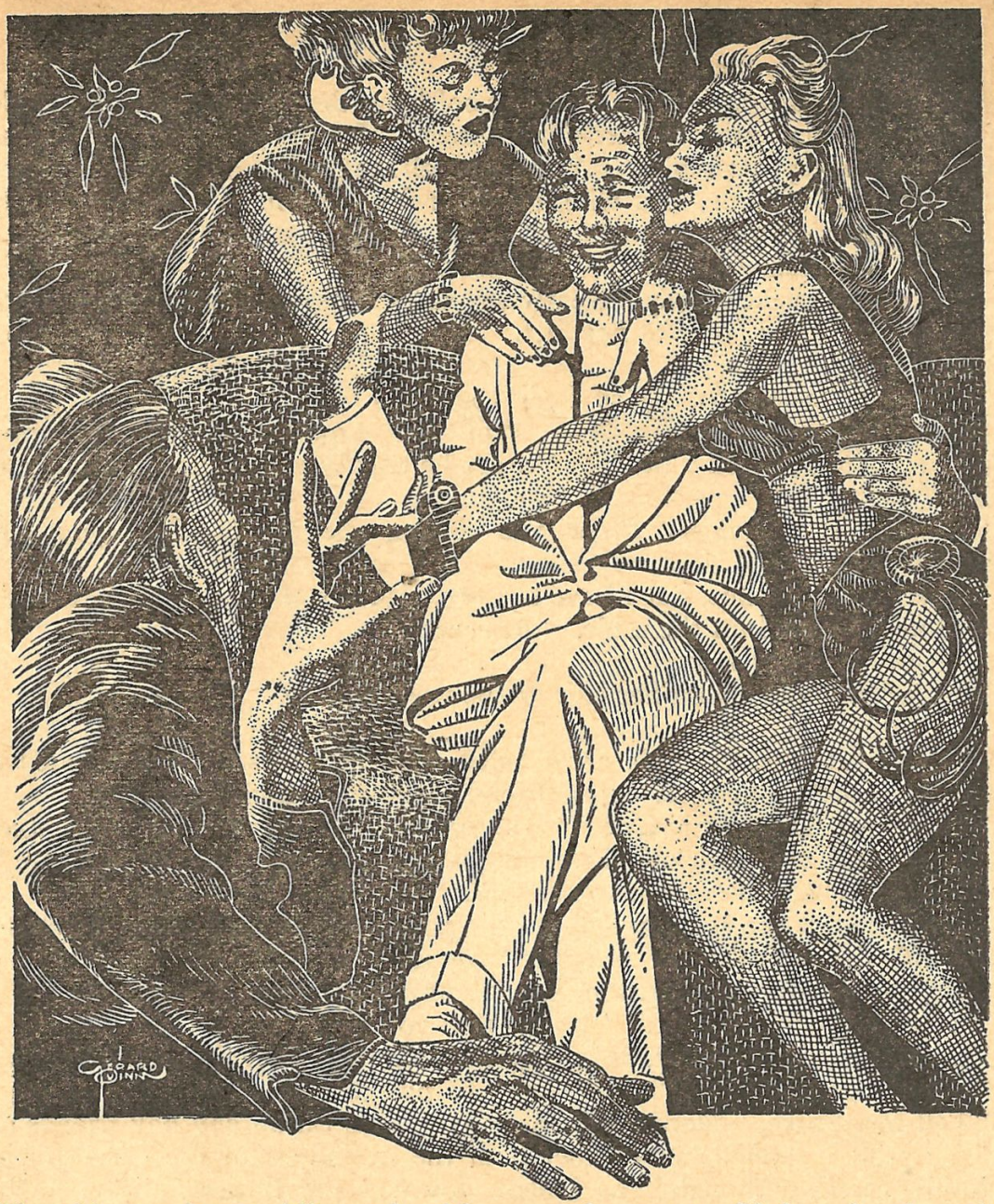
" Thirty four then. Now, Joe. How long leave do you get when your ship planetfalls ?"

"It varies, two or three days, there aren't enough ships to let us have long stop-overs,"

"And how much leave do you get ?"

"It varies," he muttered, suddenly he could see what she was driving at. "Day a month perhaps."

"So. You get a day off a month, plus perhaps two days each several weeks.



The ships can't stay idle, and neither can the crews. If they do, then they may have to wait months for a new vessel, so you take your leave in extra pay. At least half your time off must be taken on a world other than Earth."

"It's not so bad," he defended. "Mars is a good world"

Susan didn't appear to hear him. "In one year then, you can only rely on between six to twelve days liberty on Earth. The rest of the time you are cooped up in the tiny world of your ship. Is that living, Joe ?"

"Some of the men are married," he said stubbornly.

" I pity their wives," Susan said. "Or rather I pity the men. A husband who is only home a few days a year would suit some women I know perfectly. It wouldn't suit me. I don't think that it would suit any decent women. I want Spike to marry a decent girl, not one who plays the wife six days a year, and the harlot the rest of the time."

"That's not fair," he cried, then fell silent, remembering the stony faces and the dull eyes of spacemen he had known who had been married. "Not

all women are like that."

She didn't answer. The lights shone softly on the rippling mass of blonde hair, the delicate curve of cheek and throat. Merrill stared at her, a great hunger mounting within him. A hunger for all the things he had never known, the comfort of a home, of a wife, of children to call his own. Impulsively he caught her hand.

"Susan," he half whispered. "Susan . . ."

"Please," she said quietly. Gently she slipped her fingers from his grasp, gathered her things, rose to her feet. "I must go now, Joe. When do you leave ?"

"Day after to-morrow. May I see you again ?"

"Yes. Spike would like that. Will you come to dinner to-morrow evening ?" She smiled a little. "It won't be anything like this, but will you come ?"

"Of course. Couldn't I see you during the day ? Take you out somewhere ?"

"That would be nice, but I have to work. Have you the address ? Here," she dropped a card on the table. "At seven ?"

"At seven," he promised.

The lights glinted from her hair as she walked away.

He was there at five, his arms laden with groceries. Spike beamed a welcome as he opened the door. Merrill winked conspiringly.

"Susan not home yet ? Good." He dumped the packages on to the table. "Let's surprise her. I'll cook the dinner, while you prepare the table. Here," he took out several notes from a fat wallet, "get some flowers and stuff."

He grinned at the startled look on the youth's face, then alone, he set to work with the rapid skill of an expert. By the time Spike had returned, the dinner was cooking and together they arranged the table.

"Gee, Joe," sighed Spike. "I wish that you could do this every day."

"Couldn't do it every day, Spike," Merrill reminded. "Only between trips."

"Sure," agreed Spike, "but it would be nice all the same."

"Tell me, Spike," Merrill said casually. "Has Susan any boy friends ?"

"A couple," replied her brother with the casualness of the very young. "Nothing serious though," he looked down at the flowers. "You going steady with anyone ?"

"A girl on Mars wants me to marry her," grinned Merrill. "Why ?"

" Nothing," he tore a bloom to shreds. "Do you like Susan ?"

"Yes," Merrill said seriously. "Very much."

Spike grinned. "Good. Now let's look at my collection."

It was the usual array of junk. Fragments of stone from Mars, vegetation from Venus, pumice from Luna. The only genuine things there was a discarded reaction pistol cartridge, an emergency ration can, and a piece of space helmet plastic.

Half-way through their examination, the door clicked open, and Susan stood within the room. Merrill flushed, and made hasty explanations.

"I thought that I'd surprise you. Dinner's almost ready, I hope that you aren't too annoyed."

"So you didn't trust my cooking ?" she laughed. "Let's see if you can do better."

Affectionately she ruffled Spike's hair, smiled at Merrill, and went to change. Heart beating wildly, Merrill worked over the meal, then called her.

"Come and get it."

It was a good meal. Canned oysters, chilled to just the right degree. Dover sole. Breast of chicken. Point steak. Asparagus, mushroom sauce, tiny potatoes, petit pois, and thin tender French beans. A bowl of fresh fruit topped off the meal, followed with coffee and guaranteed pre-atomic brandy.

Over the coffee Merrill relaxed his guard. He had done his best, the rest was up to her. Spike swallowed the last of a giant ice-cream, and smiled happily.

"Tell us about that time on Venus, Joe," he ordered. " The time when you saved the ship."

Merrill shrugged. "Nothing to it, Spike. Besides, I don't want to bore your sister."

"You won't bore me," Susan pressed. "I know that he would like to hear it again, wouldn't you, Spike ?"

"You bet !" the boy wriggled happily. "Joe says that he can enter my name down at the astrogation school. You will let me go, won't you ?"

"There's plenty of time yet, Spike," she said absently. Her eyes met Merrill's. "What is your rank, Joe ?"

"Chief Engineer, isn't it, Joe ?" Spike said impatiently.

Merrill nodded, flushed a little beneath her steady gaze, and launched into the story. He hesitated at first, not used to an adult audience, but as he sipped at the liqueur the words came more easily. Tale followed tale, the lies slipping smoothly from his lips. The scar was explained by a damaged engine pile, only his presence of mind preventing the ship from dissolving into atomic dust. He spoke of mighty brawls in far off taverns, of nerve-tensing strains, of battling the empty wastes. He was clever. He had told them so often before, so often that almost he believed them himself. Adventure followed adventure, each calculated to appeal to a youthful audience. He had told them so often, he was letter perfect.

Susan interrupted him in the middle of an exciting episode, glancing at her wrist. "Is that the time ?" she looked helplessly at him. "I can never be sure of this watch. Do you have the correct time ?"

"Please, Sis," begged Spike.

Merrill flushed. "I'm afraid that I don't wear a watch," he explained. "Weight restrictions you know."

"You should know that by now," snorted Spike disgustedly. "They weigh every ounce on the ships, what would the crew be doing with wrist watches anyway ?"

"Sorry," flushed Susan. She looked at Spike. "You should be very grateful to Mr. Merrill for bringing you all those souvenirs, if they are so restricted as to weight, he might get into serious trouble for carrying them."

"That's right," said Spike. He frowned. "Don't they search you before take-off, Joe ?"

Merrill grinned. "Sure, Spike, but there's always ways for a fellow to help his friends. Of course, if you're worried about it, I won't fetch anymore."

"It's not that, Joe, only I wouldn't want to get you into trouble," loyalty

struggled with greed on the young face. "Maybe if you fetched just a little, eh, Joe ? Just for me, not for all the other kids, it wouldn't be so bad that way, would it ?"

"Now, Spike," Susan rose determinedly from the table. "Bed time, thank Mr. Merrill and say goodnight."

"Please, Susan," Spike started to protest, then grinned slyly. "Goodnight, Joe. See you at take-off," he winked, kissed his sister, left the room.

Merrill felt acutely uncomfortable.

He helped Susan clear the table, sensing an unseen barrier between them, trying to appear casual. Accidently his hand touched hers, almost violently he gripped her shoulders, feeling the thin body writhe beneath his fingers.

"Susan !"

"Please !" Something about the tone of her voice, the look in her eyes, made him flush with sudden shame. He dropped his hands.

"What's the matter ?"

"Nothing. What time do you leave ?"

"Take-off ? About nine. Will you be there to see me off ?"

"I was referring to this evening, surely you have something else to do ?"

"I see," he stood there, numb, misery plain upon his face, "I didn't realise that you hated me so much," he turned, seeking his cap.

"I'm sorry, Joe. I don't hate you, it's just that I'm so afraid for Spike," she took his hand, led him to a chair. "Can't you see what you are doing to him ? Don't you realise the influence you have ?"

He smiled. "He'll get over it, Susan, kids always do. If he didn't look up to spacemen he would hero-worship someone else. It won't do any harm."

"I think it will," she said coldly. "I want to stop it now."

He laughed softly, leaning back in the chair. "You won't find that so easy to do. Spike has a mind of his own, he looks up to me, it will take more than you to tear me down."

"You love it don't you ?" She stood staring down at him, contempt clear in her eyes. "You love to play the hero. To swagger before an audience. You crave the limelight, but you can't get it. What do you think of locked in your little world between landings ? Do you anticipate the welcome awaiting you ? The adulation of children ? Is that all you live for ?"

"Wait !" He reared up out of the chair. "You don't understand, how can you. You have a normal life, you don't know what it is to be alone, really alone. Do you begrudge me the friendship of children ?"

"Their friendship, no. Their hero-worship, yes. You are not worthy of it, Merrill. You are weak, a coward, and you know it. I'm not a child, I can see what they would miss," she gestured scornfully towards the pitiful heap of rubbish that was Spike's collection. "Souvenirs ! Rubbish to bribe your followers. Are you a proud man, Merrill ?"

He flushed, restraining a desire to strike her. Dumbly he scooped up his cap, moved towards the door, hesitated.

"Susan . . "

"Please go now," she said.

"But, Susan—" he took a step towards her.

"No. I can guess what you want to say, but no."

"But . . . ?" he hesitated, read his answer in her eyes.
The door slammed behind him.

The dive was like dives are all the world over. There were places like it on Mars, on Venus, and when man finally reached the outer worlds they would build places just the same there.

For there would always be lonely men. There would always be those jerked from their snug little worlds, with money in their pockets and an ache in their hearts. For such men, places such as these were home.

Merrill slumped in a chair, gestured towards a waiter, and felt himself slip into the old familiar groove. He didn't have long to wait.

"Lonely, big boy ?" the woman who husked the question slipped into the seat beside him, helped herself to a drink, snuggled closer.

He grunted, not even looking at her, she was female, friendly, company of sorts, and that was enough. They drank, laughing over their glasses. Her friends came, clustering around him, eager to help spend his money. The liqour seared his throat with unaccustomed fires, burnt at his belly, sent the blood racing through his veins. He forget Susan. He forgot the life that might have been. He forgot everything except that here he was offered the adult adultation that he craved.

A man breathed into his face, a little black box half hidden in one hand. "Listen to this mister," he sniggered, and thumbed a switch.

A woman's voice whispered from the instrument, breathing endearing terms couched in obscene filth.

"Great, eh ? Let you have it cheap."

Merrill grinned stupidly, reached for money, took the box. "Hello, Susan," he mouthed. "Talk to me, Susan."

The woman laughed, pressed herself closer. "Why tease yourself with a voice, honey ? It's a long time between planetfalls. Live while you can."

"Sure," he muttered. "Sure."

Something dodged at the edge of his vision. A shrill high voice called, and called again. "Joe ! Joe help me !"

"What's that," he slobbered.

"A runt of a kid," snarled the woman. "Beat it you ! Get out of here."

"But, Joe, it's me. Spike. They're hurting me, Joe. Help me."

"Blast-off," he snarled. "You kids, always hanging around a man. Leave me alone."

The young scream was hidden by the drunken laughter.

Merrill reached for the bottle.

Something pressed against his cheek. It was cold, and it hurt. Something dug into his side, and against his face he could feel a wet dampness. He felt sick, his head throbbed and his stomach heaved, he groaned.

"Get up !" snapped a voice.

"What is it, a tramp ?"

"No. Look at his uniform. A spaceman, drugged and robbed, we get 'em all the time. Watch him while I call the wagon." Footsteps echoed along the teeming alley.

Merrill vomited when they picked him up, fouling his already ruined uniform. They weren't gentle with him, tossing him into the wagon, jerking him out, heaving him onto a trolley.

The station doctor was quick, efficient, and remarkably incurious. He emptied Merrill's stomach, flushed it, injected an antidote to the drug he had taken, and promptly forgot all about it.

Merrill couldn't forget. He lay, half conscious, and listened to the voices that echoed around him.

"Why did you send for me, officer ?"

"We found your card in his pocket, thought that you might have an interest in him, relative or something."

"No. He means nothing to me." A pause. "May I ask a favour ?"

"Surely."

"I have a brother, he's only twelve, who I would like to see this man. Would you permit that ?"

"I don't know. May I ask why ?"

"He worships this man. I want to cure him, if I don't, then he will end up the same."

"It's not a pretty sight, miss . . . ?"

"Claybourne. Susan Claybourne. Are you married officer ?"

"Yes."

"Children ?"

"A boy and a girl."

"If they hero-worshipped a criminal, wouldn't you do everything in your power to stop such worship ?"

"Naturally, but I can't see . . . "

"If there is no harm in what my brother believes in, then seeing both sides

of his future life will not harm him. I want him to see the bad as well as the good."

"Well . . . ?"

"Please, officer."

"But . . . ?"

"Please !"

A long silence. Merrill moaned, hovering between dream and reality, clinging desperately to his swimming senses. More voices.

"Joe ! Joe ! Joe !"

"Steady, Spike, he isn't hurt."

"Then what's the matter with him, Sis ?"

"Nothing serious, just look at him, Spike. Your hero, not very pretty, is he ?"

The sound of indrawn breath. "He's all dirty. He's been sick. He's ill, isn't he ?"

A deeper voice. "No, son. He's just drunk. We found him in the gutter with this in his hand."

A click. A woman's voice breathing soft obscenity.

"Officer !"

"Sorry, Miss, but you wanted him to see it all."

A strange sound, the sound of a young boy crying. Merrill sweated, retched, groaned in his misery.

"Joe ! It's me, Spike. Speak to me, Joe !"

"Lemme alone. I wanna die. Lemme die willya."

Merrill didn't even recognise the sound of his own voice.

Morning came and with it sanity. He stood before the station desk blinking beneath the steady gaze of the uniformed officer.

"Merrill, as your ship leaves this morning, we are letting you go. Normally, possession of what you were found to be carrying would mean imprisonment. You will be escorted to the field. That is all.

"But . . . "

"That is all." The officer bent over his papers. Merrill hesitated, then shrugged and joined the waiting policeman.

Together they drove out to the field, Merrill fighting a rising tide of nausea, the officer staring phlegmatically before him. The car swung to a halt before the high wire fence, wordlessly the driver opened the door, jerked his head.

"You needn't come with me," Merrill snapped at the officer. "I can make my own way."

"I'm to see you all the way," the officer said calmly. He stood waiting while Merrill stumbled from the car.

Before them the towering spire of the rocket glistened in the early morning sun. Clustered around the fence the usual crowd of sightseers, thronged against the wire. With sudden hope Merrill scanned the jostling horde of youngsters, he grinned in sudden relief.

"Spike," he called. "Hey, Spike."

The tow-headed youngster turned to face him, then stood staring sullenly at the ground

"Boy, did I go to town last night," chuckled Merrill. "They even gave me an escort for this morning, the old ship can't leave without me you know,"

he shrugged. "Still, that's the way it is. We work hard, but brother, do we know how to relax."

He ruffled the blond hair. "How's Susan ?"

Spike grunted, and wriggled away from the too-friendly hand.

"Why, Spike ! What's the matter, son ?"

"I saw you last night, I wanted you to help me, but you wouldn't," the boy bit his lip, fighting back his tears. "Then I saw you again, you were in a cell, all dirty and covered with sick, and what's more you lied to me. You aren't an engineer, Susan told me, you're just a cook, just an ordinary dish washer."

The tears of broken faith trickled down the young face. "You lied to me, you, you . . . cheat !"

Merrill stood staring down at him, feeling sick. "But, Spike !"

"Don't talk to me, you and your lies. I never want to see you again, and you can take these back too." Sobbing, the boy thrust something into his hand, and pushed his way deep into the crowd.

Stony-faced, Merrill thrust his way through the gate. Numbly he opened his fingers and let the scraps of broken stone fall back to their native soil. Before him the rocket seemed to shimmer, to blur, to suddenly become menacing. It would be his home until he died, it would also be his prison.

There was something wrong with his eyes. Something wrong with his cheeks, behind him he could hear the cruel jeers of the youthful crowd.

There was something wrong, something terribly wrong.

Heroes shouldn't cry.

THE END

CORONVENTIONS – 1953

In conjunction with the Coronation of Her Majesty Queen Elizabeth II, London science-fiction enthusiasts have again planned an outstanding convention for Whitsun week-end, May 23rd and 24th, so that visitors may take in the two events if they wish. This early announcement is so that would-be attendees may reserve accommodation well in advance, as central hotels report heavy bookings for May and June.

Convention venue has been booked for the "Bonnington Hotel," Southampton Row, W.C.1, a compact hotel lending itself admirably to such a convention. Programme will include celebrities, plays, film shows, auctions, and many other attractive items. Admission will be 12s. 6d. for the two days, 7s. 6d. for one day (half-price to lady visitors and teenagers). Registration fee, 2s. 6d. (deductable from admission), and all communications to: The Convention Secretary, c/o The White Horse Tavern, Fetter Lane, E.C.4.

Australia's second convention will be held the first week-end in May, 1953, in Sydney, and interested Australians should contact Mr. R. D. Nicholson, 24 Warren Road, Double Bay, Sydney, for full information.

Just returned from a transatlantic trip which embraced America's three-day annual science-fiction convention (where he was one of the Guests of Honour), Ireland's inimitable fan columnist reports on

THE TENTH WORLD SCIENCE FICTION CONVENTION

Chicago – Biggest Ever !

By WALTER WILLIS

It was fascinating to hear the various comments on the Chicon as it reeled to its chaotic close. It was wonderful, dreadful, exciting, dull, a tremendous success, a ghastly flop, the best convention ever, and worse than the Nolacon (last year's convention at New Orleans). On one thing, however, everyone was agreed. It was BIG. It certainly was. In fact it was so big that everything said about it was true at one time or another, or even simultaneously. For instance, it was the most successful convention ever held in the sense that it attracted the biggest crowd and took the most money, and yet its expenses were so high it made a pitifully small profit. It had the most brilliant collection of names on the programme it was possible to assemble, and yet the programme never quite got over the footlights—in either sense of the words. It brought more interesting people under one roof than ever before, but the roof was so big they seemed to spend half their time looking for the people they wanted to meet and the other half avoiding the ones they didn't.

On the whole, though, I think everyone enjoyed it but the Convention Committee. They must have realised at once what a fatal mistake they had made in choosing that hotel. It was the highest hotel in the world (with prices to match), and it had wilfully scattered the 900 science-fiction conventioneers all up and down its forty floors, all mixed up with the members of the three other conventions that were going on simultaneously. Some of them seemed to be very odd conventions indeed in that the members wanted to sleep nights, and for three days there was uncivil war between fans and house detectives.

But I won't go into all the wrongs done to science-fiction by the Hotel Morrison. One thing they were not to blame for was the delay in starting

the official programme. This was the Committee's fault for doing too good a publicity job. It seemed that everyone in the Greater Chicago area who had ever seen a copy of *Amazing Stories* had drifted along to see what was going on. Over an hour after the programme was due to start there was still chaos in the registration rooms, and the convention had to be opened with two or three hundred people waiting to get in. However, the only spectacles they missed were those of Erle ("I cannot see") Korshak as he peered despairingly about the vast auditorium looking for familiar faces to introduce. The Convention Hall was actually a huge terraced restaurant, with tier after tier of small tables rising in semi-circles from a large stage. One result of this was that even those who were within a stone's throw of the official programme tended to ignore it as if it were a sort of cabaret. This was perhaps fortunate for some of the turns, but bad for the convention as a whole.

The main item that day was a debate between Willy Ley and Ray Palmer about flying saucers, in which Ley explained away facts almost as fast as Palmer could invent them. To the newspapers this was the principal event of the convention. Ley's main argument was that since all saucer phenomena had been observed from below they could be dismissed as atmospheric mirages. Palmer's view seemed to be that as long as the saucer-spotters could keep one jump ahead of Willy Ley they were all right.

Next afternoon there was a discussion panel with the editors of all the main American s.-f. magazines, ranged in strict alphabetical order to prevent any jealousy. Most of them took the line that their magazines were complementary to one another and resisted the temptation to be uncomplimentary to anyone but Howard Browne, who was hauled over the coals for using the infamous Micky Spillane as circulation bait. Browne was nervous but defiant and his magazines emerged still bloody but unbowed.

There was an elaborate banquet the same evening, which Will Jenkins made into a roaring success by the simple expedient of staying away so that Robert Bloch had to act as toastmaster. The guest of honour was Hugo Gernsback who, as the "Father of Science-Fiction," received a really amazing ovation. He then read a speech urging that there should be an amendment in the patent laws to provide for payments to authors who foresaw inventions. The other speakers were Sprague de Camp, who was polished and witty, E. E. Smith, who was diffident and charming, Clifford Simak, who was thoughtful and too short, myself, who was nervous but intelligible, and Anthony Boucher, who was brilliant and unexpected. The last speaker to be scheduled was a negro called Robin Turner—there were several coloured people at the convention—but for some reason he didn't appear.

The Masquerade Ball which followed lasted till dawn, so that many people missed the morning's programme. Another reason may have been that the absolute alcohol served at the ball was spiked with fruit juice.

The first event I was conscious of was a debate in which I was supposed to argue that fandom was a constructive force in science-fiction. My main argument, incidentally, was that British science-fiction as it exists to-day was created by the fans of pre-war years, such as your editor John Carnell, Walter Gillings and Arthur Clarke. I wish I could report that at this news the motion was carried by acclamation, but actually the verdict as delivered

by August Derleth was so ambiguous that to this day no one is quite sure who won. On that particular morning after the night before I don't think anyone believed that there was such a thing as a constructive force anywhere.

The rest of the morning's programme, John W. Campbell's address, was postponed until mid-afternoon, when it was hoped there might be someone there to listen to it. There was, in fact everyone was already there to hear Robert Bloch lecture on "What Every Young Spaceman Should Know." This wildly hilarious half-hour began with Bloch insulting almost every notable in the hall, except glamorous Evelyn Gold and Bea Mahaffey, whom instead he named as the editors he "would most like to submit to," continued with his claiming to have made the first space flight and to have discovered the bones of an extinct Lunar race, and ended with his solemnly presenting to chairman Judy May a "collarbone," which to everyone else looked remarkably like a toilet seat. He also invited Willy Ley on to the stage specially to throw a saucer past his nose. Ley for once had the last laugh by remarking genially that this too he had "observed from below."

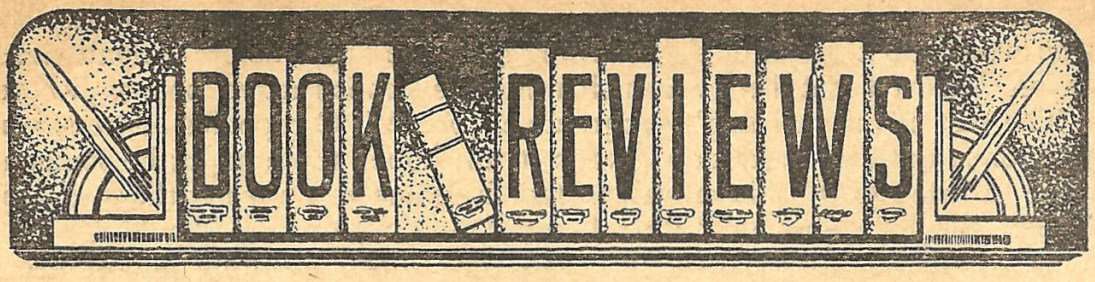
Campbell's speech was on somewhat different lines, but quite as brilliant in its own way. The rest of the programme was a hodge-podge of odd items including several talks, an auction, another panel discussion, a song and guitar recital by Ted Sturgeon, a science-fiction ballet written and performed by fans, two new science-fiction songs, a play, and some TV films. Somewhere among them was a tense two hours of speeches, intrigue and voting for the site of the next convention. There were also some interesting non-scheduled events. The President of the National Fantasy Fan Federation got her head caught in an elevator door and spent the rest of the convention in bed being nursed by co-director Eva Firestone. Several other fans spent part of the convention as unconscious victims of a carboy of American poteen imported by a hard-drinking Southern fan. Publishers distributed large quantities of free books, some out of the goodness of their hearts and the rest out of ignorance of the activities of non-fan gate-crashers, who also made off with several valuable exhibits, a wire recorder, and some of the ballet prizes. On the other hand one of the hotel bellhops revealed himself to be a fan and enthusiastically ministered to our every need free of charge.

The convention did not so much come to a climax as stagger to a stop. With the end of their ordeal in sight the Committee gave up their superhuman effort to control it and the great machine just ground to a standstill, with the last of the films playing to a half-empty hall.

One thing seems to be certain, that there is an optimum size for a science-fiction convention, and the Chicon exceeded it. Like an atomic pile, conventions can only attain a certain critical mass before they start to go off. We may have seen the last of the big conventions. In America, at least, the potential attendance has grown so large that it just isn't possible to put on a convention that will please everybody. What will probably happen eventually is that there will be a large commercial convention put on by the booksellers for publicity, while the inner-circle fans and pros. enjoy themselves in their less formal way elsewhere. Not that they didn't enjoy themselves at the Chicon—I know I did—but they tell me it is possible to have a better time. I can scarcely believe it, but I'm going back there some time to find out.

THE END

CHICAGO—BIGGEST EVER !



Across the Space Frontier. Edited by Cornelius Ryan. Sidgwick & Jackson, Ltd., London. 160 pp. 10 in. × 7½ in., 21/–. Illustrated by Bonestell, Freeman and Klep.

This book, a notable contribution to the literature of astronautics, arose out of a symposium on space-flight which took place at the Hayden Planetarium, New York, in October 1951, and was later featured in a special issue of *Collier's*. It is of importance because, whereas earlier books on the subject have been largely expressions of opinion by individuals, we have here a panel of acknowledged experts all agreeing on the fundamental practicability of space travel, and suggesting, moreover, that it could be achieved in the relatively near future.

Prefaced in the British edition with a foreword by Sir Harold Spencer Jones, the Astronomer Royal (who is, in general, sympathetic to the ideas), the symposium opens with a very clear account by Dr. Joseph Kaplan on the properties of the upper atmosphere. For all practical purposes, he states, space may be said to begin at a height of about 120 miles. Above this altitude even meteors are unaffected by the last traces of air atmosphere.

About half the book is taken up by Dr. Werner von Braun's article "Prelude to Space Travel," which describes the use of a very large three-stage rocket to establish a space-station in an orbit at a height of 1,075 miles above the Earth. From this orbit it would be possible to start expeditions to the Moon and planets, using the unstreamlined, low-thrust type of spaceship.

Von Braun's paper can be (and has been) criticised at many points, but it is a stimulating and clear approach to the problem. Perhaps his most debatable thesis is that the space-station would be of great military value. This has been flatly denied by many, and it has even been suggested that concentration on such a project (at least on the scale envisaged by von Braun) would be disastrous. Nevertheless, this paper is first rate and forms a complete introduction to astronautics itself.

An article by Willy Ley, "A Station in Space," discusses the many problems involved in living aboard such a satellite, and its possible design. After this, Oscar Schachter, a legal eagle from the United Nations, considers the question "Who Owns the Universe ?"—which is already less academic than might be expected. Dr. Heinz Haber writes about the environment of Man in his new surroundings, and finally Dr. Fred Whipple of Harvard, in "The Heavens Open," gloatingly enumerates some of the countless problems astronomers will be able to tackle when they can set up their instruments outside the murk and haze of our atmosphere.

The book is magnificently illustrated, and in Rolf Klep *Collier's* have found an artist who, on the technical side, is in the same class as the incomparable Bonestell. *Across the Space Frontier* is a work which no one who can possibly afford it will allow themselves to miss.

ARTHUR C. CLARKE

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The Committee which will choose the books for the club is headed by **Arthur C. Clarke, B.Sc., F.R.A.S.,** Chairman of the British Interplanetary Society and author of "The Exploration of Space," "The Sands of Mars," etc. His colleagues are **Dr. J. G. Porter, F.R.A.S.,** of the Royal Greenwich Observatory, well-known broadcaster on astronomical subjects, **Edward Shanks,** distinguished author and critic, and **John Carnell,** anthologist editor of British science-fiction magazines *New Worlds* and *Science Fantasy*.

These are the first 3 books

March/April, 1953

Earth Abides

GEORGE R. STEWART. The story of our civilisation, overwhelmed by a tremendous natural catastrophe. Winner of the first International Fantasy Award, this beautifully written novel has been hailed as the most outstanding work of imaginative fiction for many years.
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The Martian Chronicles

RAY BRADBURY. Ray Bradbury's approach to the future has always been from the human rather than the scientific side. This collection of his short stories describes Man's failure on Earth and his new beginnings on Mars.
Hart-Davis, 12/6.
S.F.B.C. members pay only 6/–

July/August, 1953

Last and First Men

OLAF STAPLEDON. The panorama of history for the next 2,000,000,000 years, this famous novel describes the rise and fall of eighteen human races, the colonisation of Venus and Neptune, and Man's last desperate attempt to achieve immortality before being overwhelmed by the detonating sun. (First published in 1930 by Methuen and long unobtainable). S.F.B.C. members pay only 6/–

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