

No. 87 **VOLUME 29**

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THE HIGH ROAD

James White

THE RAILWAYS UP ON CANNIS Colin Kapp

CONTINUITY MAN

George Longdon

Serial

THE

PATIENT DARK

Conclusion

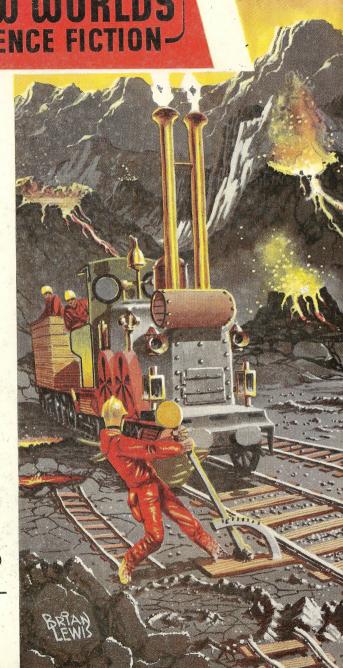
Kenneth Bulmer

Article

OUTWARD BOUND (5)

Kenneth Johns

13th Year of Publication



NEW WORLDS

PROFILES -

James

White

Belfast,

Northern Ireland



"'Tis the Oirish in me," states this 75½-inch tall Belfastonian author (translated from the Gallic) when asked how he continues to think up his incredible plots. Unlike his fighting counterparts, however, this 2914-ounce weakling admits that he is a craven and gets his own back on friend and foe alike by putting them in stories whereby they come to a sticky end. He also modestly states that he is good looking (we have no evidence of this) but that his glasses "are a severe disadvantage when any difference of opinion deteriorates beyond the purely verbal level." He cannot see without them—and with them on opponents look twice as big as they really are.

"The idea for "The High Road," he prevaricates, "came shortly after the launching of the first sputniks, and the repeated failures of the West at that time to put their own artificial satellites into orbit. While listening to the broadcasts of the unsuccessful launchings I felt terribly embarrassed for those technicians and their series of billion-dollar damp squibs. Recently those same people have been doing great things but at that time I felt that they were being dogged by the most incredible bad luck—and I got to wondering what an extended series of such unsuccessful launchings would do to the personalities of the scientists and technicians concerned.

"Naturally," this modern Munchausen concludes, "I have solved their problems for them (in the story) and freely give the formula to posterity so that the name of White shall be remembered for things other than elephants."

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Editor . IOHN CARNELL

Cover painting by LEWIS illustrating "The Railways Up On Cannis"

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Comment from . . .

I have long been an admirer of Australian amateur science fiction circles, primarily because of the tenacity they have always shown in keeping the s-f flag flying "down under" in times of adversity, stress and general public apathy. Even today, when science fiction enjoys a modicum of respectability on their continent and is widely read (and listened to on the radio) the thread is still there, even though the ranks have been more popular there appears to have been a corresponding fall-off in fan enthusiasm.

At such times (and in any country, too) there is always someone ready and willing to tilt at windmills to good effect. From Double Bay, New South Wales, I recently received a most interesting news-sheet from R. D. Nicholson entitled Scausion, in which he devotes much space to local gossip and proves that Australian fandom is not entirely dead. The second half of his news-sheet is devoted to a section headed "Today's S-F and the Reading Of It," which commences with a castieation of the material being published in leading

"Today's S-F and the Reading Of It," which commences with a castigation of the material being published in leading American professional magazines and concludes with the pleasing (to us) remark that "at present only *New Worlds*

holds any promise."

Of far more interest, however, were his comments based upon my own January Editorial concerning the periodic bosoms and slumps in science fiction. He writes, ". (Editor Carnell) fails to comment on what, to me, has always been the most remarkable feature of these oscillations. Why does the quality of the stories fall off so alarmingly in the "lows"? The depressions have always been presented as due to the casual or "popular" readership buying or not buying, with the hard core of fans and authors copping only secondary effects as the field is able, for a while, to support fever magazines. If this is so, standards should rise as it becomes harder for a writer to get published, and editors can, in theory, exert more control on their material. Something here does not check out."

The answer is very simple. As magazines cease publication and the market narrows, authors find that the chances of not selling their stories increases tremendously. Particularly the prominent professionals who, in the boom periods, earn much of their incomes from science fiction. They therefore turn to

. . Australia

other markets where they can be assured of a wide range of publications to which their material can be submitted. The s-f editors then have to rely more and more upon the second-string authors who are just beginning to make a name for themselves, or new writers.

But here, too, the depression period works adversely. Within the limited market newcomers find rejection slips pile up and no further outlets are available. Discouraged, they also move on to the general field. Even if they stay, their earlier stories are not comparable to those of the established writers (it takes about two years for a writer to develop in s-f). Sothe quality goes down.

Take a look at the contents pages of the leading American magazines during the past two years and you will find that the big names have virtually ceased to exist in the short story field. Gone are Heinlein, Bester, Bradbury, Asimov, Williamson, Clarke, Wyndham, Sturgeon, del Rey, Tucker, McIntosh, Christopher, Hamilton, and many others. Gone, too, are

most of the promising newcomers.

During the "lows" the field has to rely upon what it can get and the editors can only shape such material as is offered, or mould such new writers who are prepared to work hard under

uneconomic circumstances.

Finally, an interesting comment from Mr. Nicholson: "The solidity of New Worlds," he writes, "would seem to be entirely due to the vigour and taste of John Carnell. I have often wondered what he would give us if he could draw on the budget of one of the big US magazines. At present he seems to be doing a job in some ways analagous to that accomplished by John W. Campbell in the middle and late thirties. The differences are that Campbell practically invented the present idea of magazine science fiction while Carnell has not added anything distinctly new, and, on the other hand, that while Campbell could develop a writer and count on getting the pick of his output for years to come, Carnell has to continue putting up with seeing his most promising writers move on to better pickings amongst the US magazines."

One of the most discerning statements I have vet read! I

have often wondered myself!

Dr. Conway and the Sector General hospital staff are taking a well-earned vacation at the moment so author James White has himself returned to Earth to recount a story of early spaceflight. There is more than one road to a given goal and it depends upon which one you take to get there first.

THE HIGH ROAD by JAMES WHITE

1

Stevenson would have preferred to stay away from the blockhouse during a firing these days: the atmosphere was anything but pleasant. But as the establishment's chief security officer it was his duty to be present and keep an eye on things. One day, perhaps, he would see something which would explain sixteen failures in a row, something other than carelessness or technical incommetence on the nart of the men.

The countdown marched inexorably into the last second and the towering three-stager out on the take-off apron screamed thunderously and spewed white fire. The flare was so blinding that it made the cold, clear blue of the hour-after-dawn sky seem suddenly dark. Stevenson watched the rocket creep slowly skywards, clear the service gantry and, gaining both velocity and directional stability now with every second which passed, go on climbing.

Then the first microscopic wobble grew quickly into a wild, uncontrollable yawing which sent the ship snaking crazily all over the sky, and the all too familiar drama—or was farce a more accurate word?—came to its usual explosive finale as the Range Firing Officer destroyed it in flight while it was still over

uninhabited country.

In the silence which followed Stevenson studied the expressions on the faces around him: Miss Johns inconspicuous in a corner; Hutchings at the tracking radar; Preston, white-faced and apparently in shock, with his finger still on the button which had just sent half a million pounds up in smoke, and the others. He saw anger and disappointment, and bitter depair hung like a heavy fog in the room. At the moment the psychological climate on the base was such that its top technical brains were fast becoming candidates for a psychiatric ward, yet he was sure that some of the people about him were deliberately assuming these expressions of hopelessness and self-disgust in order to conceal something else.

It was only a feeling, however. There was no proof.

Stevenson turned to the man at the camera beside him and said quietly, "Later I would like to see those pictures."

The cameraman grunted, slammed the protective cover over his instrument and angrily shouldered his way past Stevenson. "You people can hold a wake if you want to—me, I'm going to bed." he growled, and stamped out. The others trailed

to bed," he growled, and stamped out. The others trailed behind, leaving Stevenson alone with Preston and Miss Johns. "George," said Miss Johns suddenly, "will you give me a life ?"

"A pleasure," he said politely. "But what about him?" He indicated Preston who was slumped in his chair staring at the patch of smoke he had made in the sky.

"Better leave him alone," she replied. "He wouldn't be

nice company, even for himself."

Her tone was light but there had been real concern in her eyes when she had looked towards the Range Firing Officer. Those eyes, Stevenson thought, could hold all the wisdom, understanding and sympathy in the world. The severity, calm and tenderness of all the mothers that ever were was in them, too,—just to complicate things—a strong dash of juvenile delinament as well.

Not that there were many people who would appreciate or even notice Miss Johns' eyes—physically she was too unattractively packaged for that. Only someone like Stevenson would look into that shapeless, coarse-skinned exterior for deeper qualities. Despite her youth—Stevenson judged her to be in her mid- or early-twenties—this complete lack of good looks seemed not to bother her, but then as the psychologist attached to the Space Medicine section of the base she was, Stevenson thought, probably able to understand and adjust to her own mobilems.

Altogether Miss Johns was a pleasant, stimulating person and Stevenson still liked her, despite his growing suspicion that

she was a traitor . . .

The chill, early morning air bit at their faces as he took the open car away from the blockhouse. Stevenson turned up greatcoat collar, but chiefly because Miss Johns was sitting on his bad side, and said, "You saw those things the men we fiddling with back there. Can't you do anything about that?" Miss Johns made a noncommittal sound.

"One of them looked familiar to me—maybe I've seen it in a goographical magazine or something." Stevenson went on. "If was a charm belonging to some kind of witch-doctor. Superstition doesn't bother me, within limits, but the men we saw must have gone to considerable trouble and expense to get those thines. Isn't that carrying superstition a bit too far?"

Stevenson had meant to give the impression that he was treating the matter half as a joke, but the harshness of his own

voice surprised him.

"I wouldn't worry about it if I were you," said Miss Johns reassuringly, her tone giving the lie to her eyes; they were saying that Stevenson had her worried plenty. "To men who have been dogged with so much misfortune as them it's only natural for their minds to turn to lucky charms and the like, and it follows that the more expensive or difficult to procure the

luckpiece in question the more potent they will consider it to be. I admit it isn't a nice business, but it's harmless. After all, you can understand what drove them to it . . ."

Yes, Stevenson thought, but what he did not understand was

why it had driven them so far . . .

A little over four years ago, at the time when the Russians had begun putting men in the probes which they were sending around the Moon, this rocket experimental station had been set up. Awake at last to the realisation that the race for space was on and that a runner-up would gain much more in international prestige than a non-starter, the leading technical men of the country plus vast sums of money had been poured into the establishment. The base had been geared to one major vehicle launching every three months, and it had been hoped that if they could not catch up with the Russians, at least hey would be tramping close on the heels of their American colleanues.

The first firing had been a glorious failure, and every single

one since an increasingly ignominious flop.

Vehicles which had blown themselves apart on the take-off

apron, or a few feet above it, or had flung themselves up and then down as though tied to Earth with a monster elastic band. The technical side of the base had been reorganised many times; there had been threats, sackings and investigations—all sorts of pressure had been brought to bear, to no avail.

Such an incredible and persistent chain of misfortune had its effect on the technicians, of course. With each new mishap their feelings of personal guilt over the failures increased and bitter they began to expect failures, and thus helped to produce more of them though sheer carelessness. But the recent, and to Stevenson quite unexpected development, had been that which he had been discussing with Miss Johns-the situation where practically all the top men on the station were fanatically convinced that Tate was against them. Many of them had become jumpy, superstition-ridden neurotics balanced on the thin edge of insanity.

Possibly it was the workings of his security officer's mind, but Stevenson was convinced that there was more than Fate against them. It struck him as odd that while the Russians were making great strides with their space travel programme the West was getting nowhere at all—the Americans were having more than a share of bad fluck' too. So far as lie was concerned there could be only one explanation for that long series of failures. Sabotage.

But it had to be sabotage of the most ingenious and sublet kind, because as yet Stevenson had not a single, solid clue as to how it was being done or who was doing it—merely suspicions. One of these days the saboteur must slip, finesse too much perhaps, and Stevenson would get him. And when it had been demonstrated to the men it was not blind Fate that was against them but a smarter than average saboteur, they would stop being convinced of their own incompetence and really begin to do the work expected of them—and without benefit of charms or other superstitious haberdashery!

"Perhaps," said Miss Johns suddenly, "you are going to pull a Russian spy out of that nice blue cap of yours and cure

all our ills, psychological and otherwise, in that way ?"

There were times when Miss Johns gave him the uncomfortable feeling that she was reading his mind. Ignoring the question, Stevenson said, "I don't want to tell you your job Miss Johns, but I think you should be doing more to kill this jinx idea, to restore the men's faith in themselves. Especially you should stoot those meetings in the Dumm—"

"You are telling me my job!" she broke in, an angry edge to her voice. "I say there is no harm in what the men are doing—it is merely a temporary phase. But you have this bee in your bonnet about superstition..." She left the sentence

hanging, then switched from defence to attack in mid-breath.
"This seems to be a phobia with you, you're so down on it that that in itself is suspect. Maybe you should see me professionally sometime.

"But tell me, George, do you have dream trouble? Something bothering you from the war, perhaps?"

"I," said Stevenson, "sleep like a babe."

He lied, of course, and Miss Johns was probably observant enought to know it, but that did not concern him at the moment. Stevenson was thinking of the psychologist's manner and words. The sudden flash of anger had been completely unlike her and the things she had suggested were rificultous. But if his suspicions regarding her were correct, this sort of approach could be expected...

They were both silent until he let her out at her quarters, then she said, "I've never known you to be so quiet, George. Maybe you'll be in better humour after a good long sleep." Stevenson shook his head ruefully and made himself smile. "There's a new man arriving today," he said, "and being new he's sure to arrive early, so I'd better go straight to the office. Maybe after I've ascertained the purity of his character and politics I'll be able to get that sleep, but I doubt it." He waved and said, "Be seeing you."

Once in his office Stevenson loosened shoes and belt, stretched his legs under the desk and settled himself for a nap. In common with the technicians concerned with this mornings' abortive launching he had not been to bed for thirty-six hours, his clerical staff would not come on duty for another two hours,

and he was very tired.

But it was a long time before he could sleep. His mind kept throwing jerky, fragmented pictures against the blackness of his closed eyelids—pictures of men angry and despairing and abysmally diagusted with temselves, or pretending those emotions. Weariness gave them the fuzzy, confused aspect of delirium before he finally drifted into sleen.

He knew he was asleep because he was dreaming—the same sharp, vivid and unfinished dream which he had been dreaming more and more frequently of late, and which invariably woke

him up sweating.

Fully awake again and with a headache which threatened to blow the top off his head, Stevenson wondered yet again why he dreamt about Dusseldorf when his every conscious urge for the last seventeen years had been to forget all about it. The charge could have been cowardice and desertion in the face of the enemy, but considering his flying record up to then the court of enquiry had been loath to put it into just those words. They had, however, wanted answers to several questions, "Why had his aircraft arrived back so early?" being one of the first. But Stevenson himself had not remembered that trip back very well-this was attributed to the pain from his severely wounded face-and the evidence of surviving crew members and others who had been over the target area was so contradictory that the unspoken charge had been dropped. Subsequently, however, he had flown nothing more exciting than a desk

Stevenson grimaced and began rummaging in his drawer for the aspirin bottle, which seemed to be constantly in use these days. Swallowing two tablets he settled back to wait for the

headache to abate.

П

He was still waiting when Flight Lieutenant Holden was shown in an hour and a half later.

Holden was a tall, painfully thin individual with the unlikely combination of serious brown eyes, a wider-than-average mouth and ears which stuck out. He marched up to Steven-

son's desk and his mouth opened to speak.

"If you call me 'Sir,'" said Stevenson conversationally, "I shall disembowel you with this letter-opener." He smiled then to show that he hadn't meant it—or at least only half-meant it—and added, "And slouch a bit, man, you're supposed to be a civilian!"

Holden slouched as instructed, then produced cigarettes and

a lighter and hooked a leg over the corner of the desk, "Don't overdo it," said Stevenson, still smiling, "Sit in

that chair, smoke if you want to-in fact, give me one-and listen"

The research and technical sections of the establishment were staffed by evidinan, Stevenson explained, with Security and some of the Medical and maintenance work under Air Force jurisdiction. Squadron-Leader Michaels, the doctor in charge of the Space Medicine section, was the only officer not engaged on security work of some kind or another. These men were so well known by everyone that they could perforn little more than routine guard duties, and that was where Holden came in.

With his service experience on guided missiles Holden could pose as a civilian rocket expert, and once accepted could begin reporting on the various strange things which had been going on of late. On the surface these occurrences could be blamed on the incredibly low morale of the men caused by their long series of failures, but Stevenson did not believe this.

"You suspect sabotage, then," said Holden. "Is

anyone special you have in mind?"

Holden's voice was serious and quiet, matching his eyes rather than the comically protruding ears. Stevenson was about to reply when the shrill jangle of the phone interrupted

him.

"That you, Wingco?" said a slow, deep voice immediately recognisable as belonging to Squadron-Leader Michaels. "We've a spot of trouble here—a man called Morrison. It looks as if he deliberately tried to blind himself." There was a

short pause, then : " Ordinarily I would say that this was Miss Johns' pigeon, but you said to call you if-" "You did quite right. Doc." said Stevenson quickly. "I'll

be over directly-"

"No you won't," said the Doctor. "That man is in no fit state to be questioned and won't be for at least an hour-two would be better. You can see him then."

Michaels' tone brooked of no argument.

"I'll do as you suggest," Stevenson said, keeping the impatience he felt from showing in his voice. "But keep this affair to yourself for the time being-and especially, Doctor, don't let Miss Johns near that man until I get a crack at him.'

Stevenson rose suddenly and put on his cap. He felt that physical movement was the only thing which could relieve the tension building up inside him. To Holden he said, "I'll show you around. Nearly everybody will be catching up on their sleep, so we'll be able to talk undisturbed."

The climbing sun had taken the chill out of the air and a faint breeze was blowing across the moor from the five miles distant. sea. Stevenson said very little as he took Holden on a quick tour past the living quarters, engine test beds and the sprawling research and maintenance sections. At the building devoted to electronic guidance systems Stevenson climbed out and led Holden past a series of armed guards in RAF Regiment uniform and into a long, well-lit room containing six desks and two massive safes.

Closely followed by Holden he went from desk to desk opening and closing drawers and rummaging among the books and scratchpads lying on top of them. Suddenly he held up a folder containing five or six sheets of paper covered by mathematical formulae to which was clipped the photostat of a circuit diagram

Slapping it back onto the desk, Stevenson said heavily, "This is marked 'Restricted' but could just as easily have been in any of the higher classified categories. Instead of being locked in one of the safes, as it should be after use, or even locked in a drawer, this was under the desk blotter."

Stevenson was grimly silent for a moment, trying to pick the proper words to describe a situation which bordered on the insane without giving the impression that he might be affected

that way himself. It was very difficult.

"The job of a security officer on a base like this is usually pretty dull and uninteresting." he said finally, "and involves simply a constant checking of doors, windows and desk drawers, keeping track of classified papers or keys to see that they have not been deposited in a washroom somewhere or on top of a picture rail or under a mat instead of with the guard detail, and generally cleaning up after this bunch of lazy, careless or foregeful—or just plant stupid—geniuses we have here. The job also includes reminding them continually of these shortcomings, but in that it is a vain and thankless one which only earns us the reputation of being nagging old women.

"It goes without saying," Stevenson continued, "that all the necessary measures are taken to guard against the ordinary spy or would-be saboteur who might try to exploit these failings. But there is someone operating on this base who is, to put it mildly, extraordinary. He, she or them work tracedone, much less who is doing them. And bear in mind that while a smart saboteur may remain hidden for a while, his methods of working—damage to fuel lines, placement of charges, or whatever—must eventually become plain. With this one we know nothing at all. I can't even prove that sabotage its sking place, it is just a feeling I have."

Holden said, "This Miss Johns I heard you mention on the

phone, is she the one?"

They were back in the car again. Stevenson decided to make

only one more stop before calling on Michaels in the Space Medicine building, even though a good deal less than the stipulated hour had passed.

"Yes and no." Stevenson replied after a moment. "I've

kept such a strict watch on her that she could not possibly have committed a physical act of sabotage during the past eight months, yet three vehicles have blown up in that time. As I see

it she has an important, but secondary, role . . ."

The sabotage was occurring at two levels, Stevenson went on oxplain, and was so subtle and effective as to be almost self-perpetuating. The rockets had been wrecked by some means as yet unknown, but damage of another kind had been duplicated in the minds of the men working on them. Feelings of guilt and inadequacy over the first few failures had been skilfully lopaced upon by an expert until the scientists and upper-

level technicians on the base had become a bunch of shifty-eyed neurotics, or even worse. The wildest and most insane kinds of superstition were rife among them, they formed up into little cliques and secret societies with all sorts of crazy rituals and mumbo-jumbo, and generally behaved in the most childish and insane manner imaginable.

And with every week that passed the situation got worse. When the engineers began wielding rabbit's feet in conjunc-

tion with their slide rules, Stevenson had been inclined to make allowances. But then he had seen how Miss Johns had encouraged them-and encourage them in a most subtle, backhanded manner by telling them not to in just the right words to ensure that they kept on at it. Miss Johns was a nice, sympathetic, ugly girl-and a first-rate psychologist. Those pudgy fingers knew exactly the right mental pushbutton required to gain any desired response.

". . . And the damage being done here is really serious," Stevenson concluded grimly. "Not only are rockets being destroyed, the technical minds which make space flight possible are being wrecked, too. It is only a matter of time before the financial drain caused by these repeated failures brings all rocket experimentation to a full stop and keeps us out

of space forever."

While he had been speaking Holden had watched him closely. His eyes had drifted from Stevenson's face, to the three broad rings on his sleeve, to the impressive double row of ribbons on his chest, and back to his face. Obviously he was weighing this scarred and well-gonged Wing-Commander with the no-nonsense look against the highly improbable tale he was being told, with a view to judging its accuracy.

"It sounds bad, sir," he said finally, then: "Where do I come in ?"

"I want you," said Stevenson seriously, "to join a secret society-more than one if you can-with the ultimate aim of getting some good, solid evidence against Miss Johns instead of mere supposition. And you'll have to appear to be, not exactly off, you understand, but as if with a little coaxing you could easily go that way . . ."

Holden's eyebrows had climbed half-way to his hairline, but he proved that he was not slow on the uptake by saying, "There was a type on my last station who used to think he could communicate with the Cosmic All. That sort of thing?"

"That's it exactly," said Stevenson approvingly. "Just don't lay it on too thick. And remember, you and I are the only two people here who suspect Miss Johns of anything, so

act accordingly."

He saw Holden look at him sharply and wondered if he saw he beginnings of doubt in the other's eyes. Was the new security officer thinking, perhaps, that his chief had a bee in his bonnet and was chasing planatoms? Or was he simply ascribing such thoughts to Holden because in his weaker moments he had them about himself?

They rode in silence after that until Stevenson pulled up beside a tall, barn-like structure whose few windows were positioned at second floor level and above, and led the way in. There were no guards, yet inside, sweeping up from the dimness of the floor like a ghostly grey stalagmite until its silm nose-cone scraped the equally shadowy roof, there stood a three-stager of advanced design. There was a strong smell of paint.

"This building was used to work out the cruder problems of design and placement," said Stevenson impatiently, indicating the conglomeration of half-assembled fuel tanks, structural members and plumbing littered around the floor. "And that thing which you are gawping at is the Dummy. It is a metal framework containing fuel tanks and very little else, used for testing stresses and strains before we went back to simpler designs. Some of the men have spent a lot of spare time on it—the hull, which is painted plywood, and the interior of the nose-come narcularly."

Holden put one foot on the ladder which led up through the hollow shell at the point where engines should have been until it disappeared in the shadows. He laughed suddenly because the inside of one of the very life-like sections of plating had

'Halloween Dance' painted on it.

"It's been painted recently," he said, sniffing. "And look

how clean they keep the floor around here."

Stevenson had noticed that also, and a nagging something in the back of his mind kept insisting that the new paint and the well-swept circle of floor on which the Dummy stood meant something, something other than the obvious meaning he attributed to it as he spoke.

"They spend far too much time on this thing," he said shortly, "and in it. Pretending, playing spaceman when they should be using their brains working on the real thing. It's

childish, criminal . . .'

When they were outside again Stevenson found that his headache had returned. On the way to see Michaels he was tempted to go for the aspirin bottle in the glove compartment, but decided against taking pills in front of Holden.

Squadron-Leader Michaels met them outside the infirmary on the second floor of the Space Medicine building. He said that the patient had settled down and talked quite a lot after learning that his blindness would not be permanent. The doctor had placed him under partial sedation despite this,

because of the rugged time he had given them when first brought in.

"How did it happen?" said Stevenson.

Michaels looked uncomfortable. He said, "It's a peculiar business, this. Very. When he arrived he was confused and badly frightened about his eyes, and kept raving about the Sun . ." The doctor broke off to interupt himself with," It was posted to India once and remember hearing of a fakir who blinded himself by staring at the sun for hours on end—some guff about blindness increasing the vision of the Inner Eye. Anyway, we couldn't make sense out of anything Morrison said until after we had him quietened down. Then he said that he had been staring into a sun-ray lamp without protective goegles—"

"We . . ?" said Stevenson.

"Miss Johns and I." said Michaels, then hurriedly as he saw the look on Stevenson's face, "she came in a few minutes after he did and went straight to him, while I was phoning you about it as a matter of fact. I couldn't very well chase her out—at least, not without a good reason, and you didn't give me any reason at all. Besides, she's a damned good psychologist—she had that man calm and talking rationally in no time at all. And she's a nice person, too..."

"It doesn't matter," said Stevenson shortly. But it did matter, because he knew that the replies he would have received before a visit by Miss Johns would be very different from those he would gain afterwards, and it was answers in the former category which he needed. He added, "I sake with him

now?"

"Yes, but . . ." Michaels coughed, then said firmly,
"I'd like to say something, and I'm afraid it will sound like insubordination . . ."

Stevenson looked at him steadily for several seconds, then: "You've been insubordinate before without confessing to

You've been insubordinate before without confessing to undue anxiety about it," he said drily, "but I can take a hint." He turned suddenly to Holden, who was still hovering in the background and performed brief introductions, then said, "Holden, I wonder if you would leave us alone for a few minutes? Consider that I worded it a little more tactfully and git, like a good man . . ."

When he had gone Stevenson said, "Well?"

Michaels was a big man, with the ruddy features and great, ham-like hands of a farmer—except that any watchmaker would have delighted in the steadiness and sensitivity of those hands. He was the type who never beat around the bush but preferred to plough right through it, usually trampling it into the ground in the process. Bedside manners were something he knew only by hearsay, and Stevenson had the idea that what he was about to hear would be delivered straight from the shoulder and with considerable force.

"I'm not a psychologist myself," said Michaels slowly, "but I can throw the jargon around as loosely as the next man, and even understand what I'm talking about sometimes. I think

you need straightening out, Wingco."

He was silent for a moment, then went on, "You're au odd man. Tough and strict, but in moderation. Psychologically the whole base is going to pot, and it would be worse if it wasn't for your constant sameness. You never have a hair out of place or a button undone, and you're so proper and dependable and so solidly normal that, even if they don't particularly like you, you shame them into behaving themselves. The entire personnel of the base could go completely round the bend without it affecting you, apparently—

"One successful launching," said Stevenson, "will cure

everything."

"Let's hope it cures you !"

"You'd better explain that," said Stevenson sharply.

"I said that the situation here did not seem to affect you."
the doctor went on, "but it does. The way you have suddenly
turned against Miss Johns proves that. I work with her a lot
so possibly I'm the only one aware of it, and I think you are
being blind and stupid.

"Can't you see the physical change in her recently—I'm certain she must be dieting—or the way she looks at you? She's a nice person, George, a real nice person, and when I came

here at first I thought you two were becoming serious about each other—she is just what you need, George. But now because things are going wrong generally you're taking it out on her . . ."

"That's enough!" said Stevenson angrily. "And you're right, Doctor, in saying that you are not a psychologist. Now

I think I'll go in and see this Morrison. Alone."

Ш

All the same, as he silently opened the door of the room where Morrison was being treated he felt very hot under the collar. He would never have suspected that anyone guessed his earlier feelings for the woman psychologist, much less that she returned them. Miss Johns was the sympathetic type; her extra attentions where he was concerned were simply because, with his chewed up face and necessarily emotionally barren life since getting it, she probably considered that he was in need of sympathy and understanding much more than any of the others.

Either that or, even in those early days, she was already

preparing for this moment.

When Stevenson entered Miss Johns was reading in a low, soporfite monotone to the man with bandaged eyes who was lying on the bed. Judging by the even breathing and relaxed state of the face visible below the dressings Morrison was asleep, but still she read on, occasionally darting a glance at the patient which was full of a tenderness so intense that she seemed almost to be sharing his pain. But she was like that with everybody, Stevenson knew; he thought how nice it would be if she could read to him like that, or take him in her arms and make him forget all the worries and compromises of his cold, lonely and frustrated existence. They might not be beautiful arms, but they were soft and comforting and she had so much sympathy to give which was not mere pity. He could be very happy with Miss Johns.

Then abruptly he checked himself. Looking at her coldly and dispassionately again, he thought, Why you lousy, hypo-

critical . . !

There was a war on—a psychological war in which no holds were barred. Its effect on the morale and efficiency of the men in general had been bad despite everything that Stevenson could do, but now it was being concentrated on himself in particular and the method to be used against him was the dirtiest yet. Imagine trying to turn the Doc against him? And cunningly implanting the suggestion that she was carrying a torch for him by the most foolproof method—via a third party! She would know that Stevenson was particularly susceptible to that kind of approach, and she was really going to town on the process of softening him up. The ultimate aim, of course, being to render him as pliable and insane as the others.

Stevenson had no intention of using a sun-ray lamp on his eyes or committing any similar act of insanity, but he was

beginning to get an idea . . .

Miss Johns got up immediately she saw him and came towards Stevenson with a finger to her lips. She said, "I think he's sleeping. Do you have to talk to him now, George?"

Two minutes ago Stevenson had fully intended to question Morrison to within an inch of his life, but now he replied. "I

suppose it can wait."

For the barest instant he thought he saw an overwhelming relief in her eyes, then she sighed and said, "This is a bad business, I can't understand it."

Just a piece of harmless superstition, he said sardonically, but under his breath, then aloud: "Come outside where we can

talk without waking him.

This sort of thing was not in his line at all, Stevenson knew he had the training and routine-indoctrinated mind of a good security officer—which meant that he was little more than a glorified nightwatchman—and he was afraid that he lacked the mental and verbal sleight-of-hand for the job he was contemplating. He was no psychologist and he was pitting himself against one of the best—he was bound to goof at some stage in the proceedings and wreek everything. But it was the only positive action he could take against this double-level sabotage and he had to try it.

"I was thinking over what you said earlier, Miss Johns," he said when they were outside gagin. He had, he hoped, just he right amount of hesitancy and self-consciousness in his voice. "And I'd like your advice on something. It's headaches, mostly, and recurrent dreams—one dream, actually, connected with something which happened during the war. And recently

things have been getting me down . . .

"I understand, George," she said reassuringly. "I'd be

glad to help, of course."

There was concern in her eyes, real concern. Perhaps the feelings she had towards people were real and honest to a certain extent—in fact, Stevenson was convinced that that must be so. And if such was the case, then the plan he was about to try could be given another and more deadly modification.

He had intended playing the part of a harrassed and near-toneurotic security officer, and pretend to go along with her suggestions when, as he knew she must, she began to make them. He could see exactly how she worked and at the same time find out how to negate the damage already inflicted on others. Providing his act was convincing enough, there was the possibility that she might make a slip which would not only prove her own connection with the sabotage, but give him the identity of the other saboteur.

Now, however, Stevenson was beginning to wonder if there was some truth in the Doc's assertion of a few minutes ago. He was tall, his hair was still dark and one half of his face could still be considered handsome—and while he wasn't much perhaps he was the most a girl like Miss Johns could hope for after all, he had entertained such ideas towards her and she was not physically attractive. If all this was true and he pretended to return her affections, then the probability of her revealing something in an unguarded moment was increased many times.

He said, "I won't talk about it now, I'm practically walking

in my sleep. Maybe tomorrow or the next day?"

"Surely," she said. "Any time."

Now that he was really looking for it he did notice a change in her. The blotchiness of her skin was less marked, and while she was still no siren her pudginess had decreased somewhat.

Interesting.

"Thanks," Stevenson said. He smiled what he hoped was a shy smile, though with his face one never knew, and added hesitantly, "I, ah, don't know what you've been doing to yourself recently, Miss Johns, but you keep getting more beautiful every day . . ."

For a moment he thought that she was going to faint. Her face went a dirty white colour and in her eyes as she looked at him was such utter terror that Stevenson could only stare foolishly at her with his mouth open. She mumbled something

about another patient and fled.

Stevenson barely nodded to the doctor as he left and all the warmth had departed from his voice and manner when he gave Holden, who was still waiting outside, his final instructions. He had only pretended to make a pass at Miss Johns, so that while he might feel disappointment that his plan to play her at her own game had misfired, he should not feel so hurt and angry like this over her running away from him. But he did.

Apparently even plain and downright ugly women would

have nothing to do with him.

His utter fatigue was again brought home to him when he banged into the back of the Base Director's car on returning to his office-Stevenson had been certain that he had braked in plenty of time. He fought to keep his eyes wide open and focussed and as he went inside tried to give the impression that he was wide awake, alert and altogether on top line. Probably he failed dismally.

The Flight-Sergeant in charge of the outer office jumped to his feet and said crisply, "Professor Martyn is inside, sir. He

arrived a few minutes ago."

Stevenson nodded and went in, closing the door firmly behind him. He said, "What can I do for you, sir?"

Professor Martyn was the Chief Scientist, an extremely able and intelligent man who-perhaps because he was physically not very strong-was not very good at concealing his feelings. It was for that reason that he had not been present in the block-house during the last three launchings-his reactions to earlier failures. Stevenson remembered, had had a worse effect on the men's morale than the failures themselves. At the moment he was sitting with chin on chest, looking so completely dispirited that the large, grey eyes in his thin-boned face seemed at any moment they would melt into tears. The Professor was a weak man who felt things a little too strongly.

Martyn lifted his head. "Nothing," he replied, and sudden anger kept his voice from breaking. "Not a blasted thing! I'm here to tell you that our spaceflight programme is called off.

We're to pack up and go home.

"Not that I'm surprised," he went on furiously before Stevenson could interrupt. "There's been far too much money wasted here with rockets which just punch holes in the ground! And now the Russians have announced their latest achievement, a manned expedition to Mars-they intend landing on Deimos before returning. The expedition left secretly about ten months ago and now they're expecting news of the landing at any time."

"But that doesn't necessarily mean-"

"Yes it does!" Martyn broke in. "They're giving this expedition the treatment, and when the Russians blow their own trumpet they don't believe in fitting a mute. This latest effort makes us look stupid. Not only that, it has made cut attempts at trying to keep up with them even stupider. So it's all off, cancelled, mit!"

So they've won after all, Stevenson thought sickly. He had not realised that time was running out so quickly. For some obscure reason he thought of the Dummy—they would probably sell it to a fairground—and his eyes drifted to the wall facing his desk. It held a large picture of a section of the Moon taken at a distance of sixty miles—a fuzzy, distorted picture which had been taken by the first Lunar probe. Inevitably, the picture was Russian.

Martyn was looking at the picture, too.

"Can't you hold off for a couple of weeks?" Stevenson pleaded, cursing the tiredness which clogged both mind and tongue. "Even a week? Our men aren't that stupid—there is another reason for the failures, and I've got a line on it—"

is another reason for the failures, and I've got a line on it—"
"I know, I know," said Martyn irritably. "You've told
me a dozen times; sabotage. But you've no proof, no facts.

Who do you suspect, and why? Above all, how . . ?"

"I'd rather not say at the moment," said Stevenson, "but I'll have proof, all right, and soon. The way I see it there are two of them, one working in the open and one . . ."

"George," said Martyn gently, "I think you're chasing ghosts. There are no saboteurs, and even if you proved that there were I doubt that it would reverse the decision."

But Stevenson clung to the opinion that it would. When the Chief Scientist had gone he began telephoning furnously but the departments which might conceivably contain Holden. He had to tell the new security officer that there was no longer time for gentle boring from within—he must act fast and blow the risks! I and when Holden had been given his new instructions Stevenson would have to contact Martyn again and somehow keep him talking about the comine dissolution of the base.

To anyone . . .

TV

He was forced to leave the office early in the afternoon to avoid scandialising his staff by falling asleep on duty. His headache had grown steadily until it felt like a web of red-hot metal laid across his brain. Stevenson called up the Squadron-Leader to ask for something stronger than aspirin, but Michaels insisted on talking like the village match-maker and he hung up angrily without making the request. Shortly afterwards he fell unconscious into hed.

And dreamed . . .

Dusseldorf on a night early in 1943, a night with heavy flak, earchlights, enemy fighters and an atroctiously bright moon. His Lancaster shuddered and lurched to the intensity of the barrage and below him the whole city seemed to be on fire. But obviously it wasn't all on fire because in his phones the absurdly drawling voice of a Pathfinder type in his all-black Mosquito was urging, "Hit the area between the red and yellow marker flares. Disregard the aircraft burning on the ground ..." Close on his port side an aircraft had a near miss which set its starboard inner engine on fire. Before he could blink twice the tanks caught and the plane became a bright orange ball of fire which continued to fly straight and level for all of ten seconds before it gradually slid into a dive.

For the then Squadron-Leader Stevenson, finishing his fourth tour of duty, the pressure had been on too heavy and for far too long. The odd conviction—which he had never confessed to, because in those days he would have died rather than let anyone suspect there was anything wrong with his mind—had been growing in him that all these threats against his life could be shifted into some other system of reality, that the flak and tracer and the palases of his colleagues' when they were

forced to fly in formation without lights could harm him only if he allowed them to.

He was, therefore, neither more nor less frightened than usual as he took his aircraft into its bombing run. All the ack-ack defences of the city seemed to be concentrated over the target area. It was a blinding, thunderous curtain so thick that the very air seemed to be a bubbling, fiery porridge. And Stevenson knew that if he flew into that muck he would not live.

He awoke shivering and with a pounding headache. It was early morning and he had forgotten to close the windows. which explained the cold, and the phone was ringing. It was one of the guards. They had caught a saboteur. Preston.

"Take him to my office," Stevenson said curtly, fighting the urge to stutter with sheer excitement. "Don't let anyone see

or speak to him until I get there. Especially Miss Johns." As he jammed down the phone and began hauling on his

clothes, Stevenson thought that the last few words were becoming a refrain with him.

So Preston was the other one

But when Stevenson questioned the Range Firing Officer a few minutes later he drew a complete blank. It wasn't that Preston refused to answer questions, he could not. The only useful information came from the men who had brought him

Apparently Preston had not left the blockhouse since the last firing and had been found by a security patrol still sitting at his control desk. The chair he sat on was the only whole piece of furniture or equipment in the room, which looked as if it had suffered a near miss by a block-buster. The red button used for destroying vehicles which had gone out of control, together with a three-inch section of its connecting rod, had been clenched tightly in one fist-it was still there, Stevenson could see. Preston had given the patrol no trouble and had done exactly as he had been told with the happy air of an obedient and not too brainy dog.

He still looked happy in a vacuous sort of way, except when Stevenson asked a question in a loud or angry voice, then he looked frightened.

"Take him away !" said Stevenson harshly. "No need to put him in the guardroom, take him to Michaels at the infirmary . . ."

Poor Preston, he thought as he watched the man shamble out, both pitving and hating him because for a few glorious minutes he had allowed Stevenson to think that his troubles were over-In a way he envied Preston, the man who had neatly side-

stepped all his problems.

Steadily, inexorably, the pressure was building up againjust as it had done during the war, he thought-and it seemed an eminently sane and logical thing just to duck out. Certainly it was not sanity to go on battering one's head against a brick wall. He had not accomplished anything in the four years he had been here, and now the Director said that the base was to

close down . . .

The clerical staff had come on duty in the outer office, and someone had turned on the radio. There was still no news of the Russian landing on Deimos, but it was expected hourly. For a moment Stevenson thought of that expedition, of the equipment they would set up on that hurtling, little moon of Mars and of the data they would bring back. Imagine knowing the physical composition of Deimos, not by juggling with high powered math at the end of a spectroscope but because you had brought a piece of it back with you. A great wave of envy and despair rose in him and he clenched his teeth so hard that his jaws hurt. If only he could stand up there, and look at the shrunken Sun and Mars like a big red wall in the black sky—if some of the people from this base could do it, even that would satisfy him.

He had been hopelessly ineffectual as a security officer. Stevenson told himself as his mind returned to earth and present time; he was about ready to admit now that there were no saboteurs, that he had dreamed them up rather than admit that another nation could produce better men than his. His suspicions of Miss Johns must have grown from a subconscious hatred because their earlier friendship had not, as he had hoped, ripened into something warmer. The same harde which he felt towards all women who either stared or pointedly did not stare at the right side of his face.

The sudden ringing of the phone jolted him out of the depths of despair to a small extent, then the fast, excited voice of Holden in the ear-piece pulled him the rest of the way out with

a rush

"Thaven't much time, sir," said Holden quickly, "someone might walk in on me. But I've found out plenty. You were dead right, there's sabotage—maybe as many as ten people involved with Miss Johns definitely behind it. I don't know how it is being done, just that Miss Johns seems to be solely responsible. But it's a crazy busines; there is no indication that they are pro-Russian. They seem to believe that too much physical science is a bad thing and that all rocket attempts here must be stopped—I overheard them talking about a 'low road' which must remain closed to us. The whole thing strikes me as a sort of fanatical, crackpot cult—"

"Undoubtedly a front," said Stevenson, "But go on."

Quickly Holden described how he had hidden himself in the Dummy building the previous night, and how a very thorough search of the place by three men with flashlamps had driven him into a hiding place from which he could hear very little and see not at all. The three searchers had been joined by six or seven others and they had stood around talking and waiting for Miss Johns. Her name had been mentioned several times, in tones of great respect which made him think that they regarded her as a sort of high priestess or being apart, and they had also discussed the lovely way the previous day's launching had been sabotaged-the beautiful touch of allowing it to look as if this time they were going to be successful for all of ten seconds before cracking down, so as to wreck the maximum psychological damage with the incident.

There were a lot of quite innocent types who used the Dummy for flights of imagination and nothing else, Holden went on, but these people had a purpose which seemed to go beyond even sabotage. Next time he was going to listen from a spot inside the Dummy-he had gone through it after they had all left and found the perfect hiding place-when the next meeting took place. It was scheduled for this morning sometime . . .

"This morning . . ?" said Stevenson.

"Yes," said Holden. "They think you are becoming too interested in what goes on in the Dummy at night and might raid the place with a detachment of security men, hence the switch to daytime meetings. They're afraid of you putting two and two together and connecting them with the Morrison accident-though what the connection is I haven't been able to see, either.

" For some reason they regard Morrison as a hero," Holden said, then went on smoothly, "what you see in that Flight-Sergeant is beyond me. Take away the moustache and what

have you got? Now take me . . ."

"Nice work, Holden," said Stevenson and hung up. It was obvious that Holden had been walked in upon, wherever he was.

He spent the next half hour pacing up and down his office wondering how he could assist Holden. His first impulse was to surround the Dummy building with men, but dismissed that idea for the piece of lunacy that it was. Holden alone could do

everything that was necessary—he had already proved himself to be quick, intelligent and adaptable. But he could not help worrying. Supposing the hiding place was discovered. The interior of the Dummy was a rickety, flimsy structure of lightweight girders, ladders and three-ply-an accident could happen very easily, someone might fall and it would be hard to prove that it was not an accident.

If they did anything to Holden . . .

But there was something useful that he could do. Stevenson on his cap, checked his appearance briefly in the glass and saw a tired but spic-and-span Wing-Commander, and reflected that the tiredness could not be helped. Then he left to find Professor Martyn.

It took him nearly three hours to track down the Chief Scientist and wrest the promise from him that he would make no public or private announcement about the closing of the base for at least three days. Stevenson called his office to see if there were any messages, but there were none so presumably Holden was still cavesdropping on the meeting in the Dummy. He had a late breakfast early dinner combination, then decided that there were some loose ends he could tie up while waiting on Holden's report. He could talk to Morrison, the man who said he had been blinded by a sun-ray lamp and who the saboteurs regarded as a hero.

The road from the cafeteria to the infirmary in the Space Medicine building ran past the structure which housed the Dummy, and Stevenson intended shooting past without even a sideways elance. But when he saw the body lying by the side of

the road he jammed on the brakes.

It was Holden. He recognised the sports jacket even before he got close enough to see the protruding ears. The face was unrecognisable. And as the implications of Holden's physical condition sank in, the fabric of reality around him cracked open

and madness gibbered in at him.

Holden was still—just barely—alive. Stevenson half dragged him into the car, wondering wildly as he did so lift the car was really a car and the road a road, or if they would all break up and dissolve if he didn't keep thinking about them. When an event occurs which is clearly, beyond all doubt, a product of madness—a nightmare hallucination so detailed tait it could be seen, felt and lifted into a car—then connected events must also become suspect.

Had he merely imagined that last report of Holden's, for instance, because he wanted so badly to believe something like that? And how many other people and places and incidents was he imagining? The pressure was building up too far, he thought fanatically; it was time to duck, to fly around or to whatever he had done that other time.

You can't fly through that muck and live . . !

He left Holden with Michaels and, ignoring the doctor's shocked, incredulous questions, went straight to Miss Johns' office. She wasn't in. Stevenson stood for a moment in the small, neat room fighting for control. Disregard the impossible, insane things, he told himself desperately; hold hard onto the original idea, the plan for playing Miss Johns at her own fiendishly subtle game. He wasn't equipped to fight this sort of psychological war, less so now that she had begun to use shock tactics, but he could try . . .

Ouick footsteps came along the corridor and Miss Johns entered, a little breathlessly. She looked surprised to see him, also wary and a little afraid. But there was genuine concern in her voice when she said, "George, what's wrong? You don't look well."

"I'm not," said Stevenson thickly. "I was worried. About last night, you-"

Even to himself he sounded incoherent. If only the pain in his head would stop so that he could think. And he had to concentrate on the carpet and desk and bookshelves for fear that he would suddenly find himself looking into the nothingness of the non-existent atomic particles which made them up.

"George, I'm sorry !" she burst out, and hurried across to him. "When I ran away you must have thought that I . . .

that your face . . . But it wasn't that at all."

Miss Johns put both hands on his shoulders and pushed him gently into a chair. Hesitantly, she reached up to touch his

cheek, the bad one.

"I'm a very . . . immature person," she said. "The very idea of war horrifies me, yet I can feel strongly for a man who has fought in one and bears the scars because by doing so he has proved that he is . . . Well, it's the romantic in me, I suppose. And I've been lonely on this job, more lonely than you could ever imagine, George. Your looks don't matter, please believe that "

She was actually pleading with him, Stevenson saw in amazement, and he knew that she meant every word of it. This was going to make his job a lot easier, he thought ; it also made him feel a louse.

Miss Johns turned away suddenly and sat down at her desk. She said quietly, "This recurrent dream which is troubling you,

would you like to talk about it?"

Stevenson told her about Dusseldorf, before and after but not during-the crucial ten minutes over the target area together with large periods of the return flight were a complete blank to him. And because Miss Johns was a top psychologist no matter what else she might be, and because he had been honestly troubled by that business for years, Stevenson waited anxiously for her reactions.

"Protective amnesia, obviously," said Miss Johns. "You had taken too much and just this once you ran away, for which nobody could really blame you. But you blamed yourself so much that you had to forget this moment of cowardice. However, I think that you would ultimately feel better if you

did remember and face up to it.

"What were your feelings and impressions just before the

blank period ?"

"Headache, a peculiar, burning sort of headache," said Stevenson. "Just the same as those I've been having recently. And the idea that things around me were . . . were . . . I mean, that they weren't really real and could be changed, if necessary, so's not to hurt me." He sighed, then went on, "But it wasn't as simple as you think. We returned to base long before the others-which was the reason the enquiry was called in the first place-and the aircraft fell to pieces the moment it touched down and nobody heard us come in until that time. Yet we were seen making the bombing run, so there was no way we could have come home early. Then my co-pilot said that I deserted my position during the ten minutes we were in the thickest flak, and turned up again when the aircraft was badly shot up and rapidly loosing height. But nobody else saw me in the aircraft at that time and anyway, trying to run away inside a bomber at 15,000 feet strikes me as being too stupid an idea even for me . . ."

Stevenson had seen the sudden change in Miss Johns' expression when he had described his headaches, and saw it become more and more marked as he went on talking. He attributed it to the fact that the high and mighty chief security officer was displaying a major weakness which she was already considering methods to exploit. He disregarded the thing like a pencil torch which she took out of her desk, until all power and feeling left his legs and he had to grab the sides of the chair to avoid slipping to the floor.

"This gadget paralyses completely," said Miss Johns in a strained voice. "Its effect wears off in a few minutes, but if focussed in the heart area the effect is irreversible-at least to the facilities available here. I don't want to kill you, George, or even hurt you, but when you can stand up again you'll have

to come with me."

Suddenly she swore. "To think of all the years of training and coaching and bringing along men, men who had to be started at the bottom, from scratch. And all the time you were right here . . !"

She pressed her lips tightly together and thereafter kept them

that way while Stevenson was in the office.

They left by a side entrance and walked towards the Dummy building.

Stevenson said, "There's no sense in pretending any longer. You are the saboteur-or one of them, I should say. Who's the other one and . . . and how the blazes does he do it ?"

Miss Johns could not have been very experienced at this sort of thing, he thought; she was walking so close to him that he could have disarmed her any time he chose. But he wanted to find out all he could now in case she could not be made to talk later.

"Before I answer that," she said, "tell me one thing. Do

you hate Russians?"

"That's a hard question," said Stevenson. "Let's say I admire them for their achievements-especially in spaceflight -but do not like them for the way they're hamstringing us here when they're already so far ahead of us."

"That's the answer I expected," said Miss Johns, looking greatly relieved, " And I can assure you that the Russians are not the people responsible for your troubles." She pointed to the ground a few yards ahead of them and a handful of grave lifted itself into the air. Keeping pace with them as they walked it opened out into a cloud of individual pieces which went into a whirling complicated dance like a swarm of midges then dropped back to the path again. She went on, "There are many delicate mechanisms in a rocket which can be moved at a distance like that, before, during or after a take-off. So I alone am responsible for the sabotage, though there were many people who knew I was doing it, and why."

Stevenson's capacity for being surprised or shocked had been overloaded. He walked on dully, trying desperately to put the possible and impossible into some sort of order in a brain that was one throbbing ache. The only faint reassurance he had was the hope that if things like this could happen then maybe

there was an explanation for Holden.

He must have been thinking out loud because Miss Johns said, "I'm sorry about Holden. If he hadn't been so well hidden it would never have happened. But he managed to kick out a panel before losing consciousness and we saw him and brought him back. We had no transport ourselves and when one of the men, a limited Pre-cog, sensed a car coming in a few minutes we put him beside the road knowing that that way he

would have medical attention quickly.

"I spoke to Squadron-Leader Michaels before seeing you," she continued, "and he said that Holden would be all right. The damage to his lungs was negligible and you saw how tightly his eyes were closed, a reflex action which undoubtedly saved his sight—though there was still a considerable boil-off from his tear ducts. And the swelling and blistering of the skin looks much worse than what it really is. You know, provided on acts quickly enough, explosive decompression isn't nearly so fattal as some people believe.

"And now inside," she added, "You first,"

Stevenson became aware that they were entering the Dummy building. He had not disarmed Miss Johns and now it was too

late to try.

There were eight or nine men inside, all of whom he recognised as being important people in the technical end Hutchings, MacKellar, Roberts and others. Roberts was pale and seared looking and was clutching a floor-brush, but the others gathered round excitedly, throwing incomprehensible questions at each other, Mis Johns and himself—someone

even tried to shake his hand! Then he heard Miss Johns detailing three men to go into the Dummy, and telling the whitefaced Roberts that he need not bother sweeping the floor because after today it wouldn't matter, and then she was pointing to the open end of the steel and hardboard rocket and saying, "After you . . ."

They climbed to the Dummy's control room, in silence except for the soft, tuncless singing of MacKellar. "You tak' the Low Road an' I'll tak' the High Road," he gave out a little breathlessly as he climbed, "An' I'll be in Scotland before you..." It was obvious that the words had significance. Inside the control room Hutchings handed him a high altitude suit. When Stevenson just stood looking at it they took it away from him again and began putting him into it. After that they left him alone while they put on their own suits and he had a chance to look around.

There was a dummy control board with one side pushed out

—where Holden had hidden himself to eavesdrop on a crackpot scoret society—and pieces of netting stapled loosely to
sualls and celling. One wall also held a calendar with a girl on
it—her attractions were such that nobody had noticed that the
calendar was two years old. Nailed to the floor were five chairs
which had straps for waist and antiles attached to them. They
were ordinary wickerwork chairs a bit gone in places rather
than padded acceleration couches, Miss Johns explained when
he saw him looking at them, because there would be no

acceleration.

"I and a few others like me are doing everything possible to check any further technological development by the nations of what you think of as the West," she went on. "Your whole culture is headed into a scientific dead end, where everything is classified and tucked into tiny, rigid compartments and there is only this one unalterable reality. Physical science has an important part to play in your advancement, but it is only a part. It requires similar advances in the purely menta sciences—especially of the type which some of you are already calling psionics—if you are to go to the Stars, or into Time or explore the countless probability worlds within reach of this continuum.

"That is why we are not hindering the Russians, who are doing very well in the physical sciences, and curbing you in every way possible. Your thinking and energies must be forced into new and different channels, and then the two

methods must be merged . . ."

Her tone had been that of a nurse lecturing a backward patient, both loving and severe, but suddenly she sighed and looked appealingly at Stevenson, "I have a plan which will accomplish all these things, and quickly, but . . "She broke off and her tone hardened again as she gave orders to close the suit face-plates, and thereafter it was a toneless, metallic sound coming through the radio which had been fitted to each suit.

". News of the Russian landing on Deimos came through about fifteen minutes ago," she said. "It wasn't altogether good. There was technical trouble . . . apparently they're stuck there without enough fuel to get back. What we have to do is rescue them and make the incident—especially the method used—as public as possible. This will have the effect of shaking alot of physical scientists loose from their needlestly limited concepts, on both sides of the Iron Curtain, and bring about first the branching off and ultimately the merging which is also necessive.

"I'm taking a great risk cutting corners like this," she continued quickly, "but I've been on this job far too long, and certain physical changes are beginning which would soon make

it obvious that I was not of this planet.

"Oh, well, here we go . . ."
Air whooshed briefly through the unglazed portholes and cracks in the plywood hull, and all weight was suddenly gone. Below them stretched a blinding expanse of white that was mottled here and there by hazy blue and green and brown. Stevenson had seen the Russian photographs; it was the Earth from one thousand miles our

Stevenson's mind was too stunned to think about why or how he had got here; his only coherent thought was the wish that the port was bigger so that he could see more of the most

glorious sight he had ever seen.

". . I'm no good yet at moving big stuff," Miss Johns was saying, "and this will leave my brain useless for anything but thinking with for a week. Roberts and Morrison were specialising in this sort of thing and were coming along nicely. But the Holden accident unsettled Roberts badly and on the last training jump around the Moon Morrison was blinded by a dose of unshielded sunlight—the gyro system had broken down and he was outside rotating the ship with a compressed air jet, so that the sun wouldn't blister the paint and cause a certain security officer to ask awkward questions.

"But we're not worried about the paint now, or you," she

ended quietly. "She's all yours, George." Stevenson looked at her blankly.

"Come now," she said impatiently. "You know what is possible, so should no longer be afraid of what seemed impossible. This trip should be easier than the last one, because space is empty and an inch of nothing and forty million miles of nothing are exactly equal. Or fifty lightyears of nothing. Think man! What did you do during the ten minutes you were away from the aircraft over Dusseldor?"

Stevenson heard himself stammering out the story of what he had done, the story which he had steadfastly refused to remember not, as he had thought originally because it was shameful, but because it was insane.

"So at the height of that raid you craved the peace and security of your childhood," said Miss Johns sternly. "You found yourself in your own back garden on a summer afternoon watching a little boy playing. Did you return again to the aircraft before the little boy, yourself, could turn around and be frightnend by your bleeding face, or because you felt that you had deserted your crew, or both? But it doesn't matter—you returned and brought home an aircraft that couldn't possibly fly, fast enough for an enquiry to be called over the incident but not so quickly that you wrecked the sanity of yourself and your crew.

"You're a very talented man, George. Time travel and teleportation. The abilities are latent in most people but require training to be brought out. You developed them inde-

pendently, under pressure.

"But we're wasting time, George. Take us to Deimos." Starled, Stevenson protested, "I can't do that! I mean, I believe now that I must have done it before, but I forget how. And now that you've explained everything, the pressure is off. You said yourself that I needed—"

"Is it?" said Miss Johns quietly. "You're forgetting what I said about using all my psi energy to get us up here, and that this isn't a self-powered vehicle which has been put into orbit.

"We're falling, and at thirty-two feet per second there isn't

much time."

He saw the faces of Hutchings, MacKellar and the other man whose name he hadn't remembered yet all staring at him. Obviously this was as much a surprise to them as to himself, their frightened expressions proved that. But while Miss Johns' face was pale she was not nearly so frightened.

She was expecting him to produce . . .

Because he was their sole means of transport home Miss Johns forbade him to go outside the ship on Deimos, nor did she leave it herself. While Hutchings and the others visited with the Russians in their air-tight but fuel-less ship and tried to explain things with the inadequate vocabulary at their disposal,

Stevenson and his saboteur talked.

The outbreak of superstition at the base had been engineered by Miss Johns, not because it was important in itself but because it helped the breakaway from too-logical patterns of thought. She had been given the assignment because males on her world were noticably different from Human males, and adult females were so strikingly beautiful by Earth standards that it would have been impossible for them to operate at all. Her people were probably more intelligent than the Humans, but no less impressionable—such an agent was bound to be sought after by some Earthman whose feelings she would eventually return. It had happened to her, and she was anything but beautiful! That was why people like herself were given these assignments.

"I see," said Stevenson sympathetically. "Even ugly people have their uses sometimes. Uh, maybe us ugly ducklings

should stick together . . .?"

He saw her start to say something then break off in confusion. Her face was very red and she would not meet his eyes Stevenson found the old suspicion coming back and with it the old hurt. She seemed to be fond of him, but . . ! "Why did you run away from me last night?" he asked sharp.

"Because you said I was getting more beautiful every day," said Miss Johns, shyness and asperity mixing equally in her tone, "and nearly scared me to death! We take a long time to reach maturity, but when we do it happens fast and it's due to happen to me any time. I'm not an ugly duckling—what ails me is our equivalent of freckles and puppy-fat." She lowered her eyes again and ended, "If we could wait a while you'd find me a real nice duck."

He was happily trying to find a suitable reply to that when the six figures, three in suits of unfamiliar design, came halfswimming half-climbing over the hundred yards distant horizon of Deimos, and Hutchings' voice came through their

phones:

"George, for Pete's sake get us home quick. The inside of that ship was interesting enough, but dammit they've been cooped up in there for eight months! Man, the stink! I think if you offer them a bath when we get home they'd tell you every secret in the Kremin!..."

lames White

THE LITERARY LINE-UP

Three novelettes compete for first-place honours next months In addition to James White's "Grapeliner" and J. G. Ballard's "The Waiting Grounds," already mentioned in last month's Editorial, there will be "Aberration" an unusual story concerning a city-wide hunt for one man and introduces two new authors in collaboration—Roy Robinson and J. A. Sones. Short stories: "I Like You." by George Longdon and

Short stories: "I Like You," by George Longdon and "Almost Obsolete" by Donald Malcolm, plus "Outward Bound 6," in the Kenneth Johns' series of articles.

Story ratings for No. 82 were:

Story	ratings for No. 82 were:					
	Survival Problem -					
2.	The Other One	-	-	Brian W. Aldiss		
3.	Count-Down (Part Two)	-	-	Charles Eric Maine		
4 1	The Silver Moons - Confession Is Good -	-	-	 Alan Barclay 		
4.	Confession Is Good -	-	-	Robert Presslie		
P N 02						
For No. 83:						

1	OL	No. 83:			
	1.	Project-Stall	-	-	Philip E. High
	2.	I See You	-	-	Harry Harrison
	3.	Count-Down (conclusion)	-		Charles Eric Maine
	4.	The Outstretched Hand	-	-	- Arthur Sellings
	5.	Searchpoint	-	-	Francis G. Rayer

Children born on a long-voyage spaceship may not be so adaptable to their environment as the psychologists imagine. It depends upon the viewpoint. But there will always be one way of solving the problem.

CONTINUITY MAN

by GEORGE LONGDON

The inter-galactic ship Styria sped like a silver mote amid the scattered suns beyond Capella. Great nebula had dawned ahead, drifted past her ports as fiery gold, and faded into oblivion behind. Old, the Styria was roughened by her long voyage through cosmic dust, and by the impact of uncounted sand-grain meteorites. But now directive equipment on her bow responded to a spectrum it was designed to receive, and an infinitesimal adjustment was made to her course. After three hundred years she was nearing journey's end.
Tony pressed his slightly upturned nose against the port,

Tony pressed his slightly upturned nose against the port, gazing at the stars. As days and nights passed, marked by the automatic lighting of the ship, the constellations had slowly changed, and he never ceased to marvel at them, or at the fiery

and remote suns that grew and waned.

A light step came in the playroom behind him. A little girl,

dragging a battered golliwog on a frayed string, halted near him.

"I've promised Helen I won't do it again, ever," she said

emotionally.

Tony nodded. "That's good, Suzy. It was wrong."

"But you've felt the same yourself, Tony!" Suzy pointed

out quickly.

Her round, clear blue eves were accusing. Freckled, barely twelve, she had a way of digging home her points with disconcerting directness, Tony knew. Though three years older, and a boy, he realised he could not expect to win an argument on

this point. " Maybe I did," he admitted grudgingly. " But that don't

mean I'd really do it."

They stared at each other, silent but understanding. The faded blue garments made their faces seem pale, but both were strong limbed, if bony. Suzy swung the battered doll by its string, whirled it faster and faster round her head, then released it. It stuck the steel wall and fell, grotesque legs extended.

"That's the last golliwog," Tony said severely. "Douglas

told me there weren't any more."

Suzy laughed. The sound was brittle, too loud in the confined space.

"Let's-let's put it down there-" she suggested.

He felt shocked. There was a place they never named a -

hole from which nothing returned. A place of dread. "Our foster-parents will be angry," he objected.

She noted the tone. "You're afraid!" Her freckled nose wrinkled in disdain. "Well, I'm not! I'll put it down myself, if you don't come. I don't want it any more, so why shouldn't

He had to admit there was logic in her words. They went out, squeezing past the door which now never opened properly, and along a narrow corridor where they knew every nut, brace, and hiding corner. At the end was a door with a big black handle and they hesitated. Suzy looked pale under her freckles, her small, round face screwed up. Tony squared his shoulders. He was growing fast and felt he must give the lead to prove he was not afraid.

The door opened at his touch. Near the end of the small room, at floor level, was a round hole two feet across. It was dark down inside, and no amount of fearful peering ever let him discover where it lead.

"Goodbye golly," she cried, and tossed it into the hole. A momentary rumble as of ravening fires reached their ears, far

in the distance, then silence.

Tony stared at the hole, fascinated. It was down there that he had thrown all the broken cups and plates, after he had fought with Douglas four or five years ago, tearing everything from the breakfast table, and dancing on it furiously. Longer ago, almost forgotten, was a day when foster-mother Helen had told him that he would not be seeing his real mother any more. Then solemnly, a long wrapped package had been slid down there. Tony had screamed and kicked, somehow feeling the hole was stealing away for ever a thing he valued, but not fully understanding.

Suzy took a piece of sticky, highly coloured gum from a

pocket of her pinafore, and offered it.

"Don't look so miserable. Golly wasn't much good. Have

some ?"

He shook his head. The sweets Douglas and Helen made didn't taste nice. He wondered if they ever tried them before giving out the ration, then remembered they wouldn't. If they did, they would have a mighty funny idea of what sweets should be like!

"You shouldn't have said you—you'd jump down there, Suzy," he decided. The hole was like a bottomless pit, and nothing ever came out again. "That was wrong, even to

frighten Douglas or Helen."

She looked rebellious. "Well, it worked. Didn't they give me more sweets?" She stuck a piece in her mouth, dribbling pink. "Not that I'm certain sure I didn't mean it a tiny bit. About jumping, that is."

He turned her away and pushed her from the room, closing the door at their backs, feeling anxious. It would be so easy to slip down the hole, or to jump down on impulse, to see what

happened.

She stuffed more gum in her mouth. For the moment she was happy. She wiped her stubby fingers on her pinafore, leaving pink marks.

"You'll be sick," Tony said soberly.

She laughed at him, putting out a tongue red as a strawberry.

"Who was sick last time from too many sweets?"
He shrugged, tired, not bothering to deny it. "So would

you have been, if you'd eaten any. Then afterwards Douglas asked me if it tasted nasty!" He felt scornful.

"They do make rotten sweets," Suzy admitted. She tried to swing on a heel like a ballerina, bumped the steel wall, and

stopped. "Let's go down where the forest was."

He nodded. "If you like."

They walked slowly. Tony knew that if Douglas or Helen saw them going to the forest, there would be trouble. He he had never been a manageable boy, and the outburst with Douglas over breakfast had been only one of many. But he had leave that he never won, and had adopted the attitude that it was silly to fight when you knew you'd be beaten.

"Aren't you just absolutely sick of always having Helen and Douglas hanging about, telling you what to do?" he said morosely as they began to descend a metal stairway. He halted at the bottom, watching Suzy come down. For a moment an

adult, sad wisdom put lines and angles to his boyish face.
"S'pose I am," she said, her tone showing she was not really thinking about it. "But they get our food, and do things for

us. I suppose that's what foster-parents are for !"

"We could do things for ourselves."

"But then we wouldn't have time to play."

He started off down a corridor that was only dimly lit. "Who wants to play all the time? It's stale."

"Playing is fun."

He snorted. "Doing things worth while is more fun, I'd

say !"

She did not reply, but ran on ahead. She was at the end of the corridor, with a big door open, when he reached her. A smell quite unlike anything elsewhere in the ship drifted out. Suzy wrinkled up her nose. "It smells. But let's go in."

They closed the door behind them. The forest seemed even worse than Tony remembered it. Dim lights, high overhead, showed a tangled mass of plants, ozarig out of tanks, slopping over the floor, climbing over each other, and growing out of decayed masses of leaves. In some way a trailing plant had reached the cable of an overhead light, and festoons of pale green leaves, spotted with mould and disease, hung like curtains.

"It stinks !" Suzy said disgustedly. " And it doesn't look a

bit like the forest pictures in the books."

The walked in a little way. Slushly, rotten vegetation was ankie deep. In places great heaps of it had reared up towards the lights and sprinklers. Suzy held up her skirt, wading where the mess was knee deep. She pulled a long, trailing stem, and a tottery mound of blighted, sickly green half as high as the room began to till.

"You'll get dirty, then Helen will know you've been here."

Tony said warningly.

She put gum in her mouth, leaving a smear of green on a cheek

"Let's push Helen and Douglas down - there," she suggested.

He opened his lips to object, saw she was joking, and let it pass. He did not feel like playing. The forest was merely nasty, now, and the smell nauseated him.

"There were more people than just four, in the picture books," Suzy said. She had grown tired of the forest, and stood regarding it with her face screwed up. "There's only me and you, and Douglas and Helen. It - it's lonely, sometimes-"

Tears stood in her eyes. Tony put an arm round her shoulders awkwardly. They squatted amid the rotten plants, her head on his chest, tears coming thickly, red and green from her cheek on his faded blue shirt.

"There-aren't any more people, Suzy," he said gently. "At least not here. Only you and me, and our foster-

parents."

She burrowed her small golden head into his shirt. "Youyou'll stay with me-" " Of course I will."

After a little she grew quiet. She moved her head, nestling

an ear on his chest.

"Funny thing," she said, "when Helen nursed me I didn't hear her heart beating like I can hear yours."

He did not feel interested. It seemed silly to be squatting with Suzy's head on his chest, and he rose awkwardly, pushing her away.

" If you don't wash your face, they'll know."

He felt completely depressed. The forest stank. It wasn't fun. There wasn't any fun, any more. He would have howled, quite suddenly, without knowing why, if Suzy had not been watching him. She wiped her face with the end of her pinafore.

" Let's go. Tony."

Something in her tone said she would never want to come to see the forest again. It had been the same with other things, he thought unhappily. The toys were gone. Douglas and Helen made rotten sweets. There was no one else to talk to

and nothing to do. It was enough to make a fellow sick to death.

"I hate it!" he declared suddenly. "I hate it—hate it!"
Suzy stopped, turning. "You—you won't jump down
there?" It was a cry of anguish. "I couldn't stand it, with

only Douglas and Helen !"

He stared at her, saw her need. His spirit shrank, receding into some remote corner where hope and joy had no place. Yet he could not desert Suzy. She tugged his arm, pleading. "Promise, Tony! Promise!"

"I promise," he said heavily.

They walked soberly along the dimly lit corridor and began to ascend the stairs. They weren't going anywhere, he thought in utter misery. There was nowhere to go. They were simply going away from the forest, because it stank and wasn't fun any more. As he walked tears welled slowly into his eyes. He hated two things above anything. The loneliness. And having Douglas and Helen always watching, always telling them what to do. It was virtually impossible to eat, drink, go to bed or get up, without one of the pair interfering.

Through complex instruments Douglas studied the spectrum of the sun Antaria, comparing the lines with those on an illuminated slide incorporated in the equipment. This was the right sun, and therefore the Earth-type planet, revealed hundreds of years before by the Effermann Test, must soon be within reach of the apparatus. In less than six months the Styria would reach the planet. A further month would be spent in reducing orbit, then the auto-pilot could set the ship down.

Satisfied, he turned off the equipment and left the control room. He had the easy step and features of a young man of thirty. Of moderate height, he did not need to stoop as he passed into a dimly lit corridor, and went from there to the

dormitory.

It was a long room, but only at opposite ends were occupied beds. A graceful figure of about his own age was bending over the nearer bed, her corn-coloured hair hanging in thick curls around her cheeks. She straightened at his step, putting a finger to her lips.

"Suzy is asleep," she whispered.

They moved on down the long dormitory, halting half way under a subdued light. "She was sick again," Helen said. "It was probably the

gum. But she doesn't seem well."

Douglas nodded, "You know another seven months will

see us landed ?"

"Yes. When shall you tell Tony and Suzy?"

"Tomorrow."

They went slowly to the end of the Dormitory. Tony was restless, murmuring in his sleep and moving uneasily. He flung out an arm, but his eyes were closed. They watched him

for a short time, then left the dormitory.

"It's been trying for the pair of them," Douglas said.
"They've only each other to play with, and us." He drew in
his cheeks, suggesting cogitation. "They seem to resent us,
lately. Tony was always a bit difficult and self-willed. It's
still there, though he doesn't show it so much."

She closed the door, giving a last look through its round glass window. "I know. Suzy isn't easy to deal with, either.

They both have these moods. They're nervy, troubled."

He nodded soberly. "When we've landed it should be

better. There'll be lots to do, then."

They went into the large recreation room. Helen indicated a book.
"I've been looking for more sweet recipes. It's difficult,

though, with only the synthetic sugar, flavouring and colour."
"I know"

He left her, going on into the compact, neatly ordered library. There, he settled down to read up on childhood illnesses, physical, nervous and mental, and their symptoms. It was difficult to be a specialist in all subjects, he thought. According to the log, over thirty years had passed since the last trained doctor aboard had died. There had been no replacement.

The lists were long, and though he was a quick reader, with a retentive memory, it took hours before he was satisfied that he could not classify the malady. Numerous illnesses, characterised by raised temperature and other specified and obvious symptoms, he dismissed at once, skipping the detailed explanations. When he put the books away the wall clock showed that it was only two hours to the dawn lighting up of the ship.

Tony and Suzy did not come into the breakfast room until several minutes after the gong had sounded. When Douglas saw their faces, he knew a troublesome day was ahead.

"It's better to be on time." he said in mild reproof.

Tony sat down and Suzy followed slowly. Both gazed with unconcealed distaste at their plates, piled high with a synthetic food shaped like roasted wheat. Helen poured synthetic milk from a jug, smiling.

"Eat it up quickly !" she said cheerily.

Suzy stirred the food with her spoon, then looked at them. eves unnaturally bright.

"Why?" She pulled a face. "I hate it !"

"But it's good for you," Helen explained, patient but worried.

Tony's lips twitched. His face was pale, with hot spots on the cheeks.

"You're always telling us what to do, aren't you?" he stat-

ed nastily. Helen sighed, and Douglas moved closer to the table, "We

like to help you."

"Your way of helping is never to leave us alone !" Tony objected, and his voice cracked on the last word. "We have to do this, do that." He began to mimic Douglas. "Don't go in the forest, it's unhealthy. Don't touch this or that, Don't

stay up reading, it strains your eyes." His voice rose. Abruptly he lifted the plate, turned it over, and dumped it on the table. Synthetic milk swam in a puddle, dribbling to the floor. He jumped up, overturning his seat. "I'm sick of it! Suzy

is sick of it too! It's boring-boring-to be told what to do from morning to night! And when I'm in bed, you come and stand over me. I'm sick of your, and your filthy sweets, and this rotten, stinking ship !" Tears of frustration, anger and misery streamed down his

cheeks. Suzy let out a wail, and stood up, spilling the syn-

thetic food. She stamped a foot.

"Go on telling them, Tony !" she urged. "Tell them how I threw golly down there ! He was rotten, too. There's nothing any good any more. It's all gone, all used-"

She sank in a crumpled heap, wailing, face hidden and her hair hanging over her hands. Tony ran to her, putting a hand on her shoulder

"She means it—and I mean it, too!" he declared flercely.
"I'm sick to death of this stinking place! I loathe and hate it, and everything in it." He drew a deep breath. "Most of all I hate you, the pair of you! Following us, watching us, telling us what to do!" He sought for words. "Don't you see—we want to do things for ourselves! We've got to! If we don't, we'll die!"

Douglas had been frozen with unease. He had not realised

things were as bad as this.

"We do the best for you we can," he said carefully. "If

you want to do new things, perhaps we can arrange that."

"Arrange it !" Tony raised a fist. "Don't you see? That's the trouble. You arrange everything." He stared at Douglas, panting. "Oh! You don't understand. You're killing us by doing everything, arranging everything, and yet you don't understand!"

He pulled Suzy to her feet and dragged her towards the door.

Douglas made a gesture indicating helplessness.

"In time there'll be lots more things for you to do," he said.
"New things." He debated whether he should explain how the
Styria would soon land. Perhaps this was not the best
moment, he thought. Tony and Suzy were too excited already.
"Later we'll see there are interesting things for you to do," he
finished lamely.

Tony paused at the door, baring his teeth like an animal. "You won't arrange interesting things for me to do!" he

stated hotly. "I'm tired to death of it all! So is Suzy. We're through, finished with it all!"

He banged through the door, Suzy after him. The sound of their running feet receded down the corridor.

"I—I think it's best to leave them a while to grow calm," Helen suggested. "Suzy will make herself sick again, if we argue."

Douglas halted, hand on the door. "Perhaps you're right."

Two hours passed. Tony and Suzy did not return. Douglas spent part of the time re-reading about mental stresses, but did not get far. Helen left him, and for a long time he sat in silence, pondering what he had learnt. From the scene at breakfast, it was clear the two were in a very nervy state. He hoped it was not so bad that they would do themselves an injury. He also wished that there was someone of greater

experience, whose advice he could seek. But the Styria carried only Helen, himself, Tony and Suzy, now, Running steps broke in on his thoughts. The door burst

open. Helen held it, eves wide and hair disordered.

"Come to-to the disposal room!" she whispered. He ran, leaving her behind, and unfastened the sprung door.

Two small, neat bundles of clothing stood near the disposal orifice. Each was complete to the final garment, shoes, socks, underclothing. Thus might two children have undressed to dive into a cool pool, swimming deep into forgetfulness.

For a long time he gazed down into the disposal orifice, leading to the ravening fury which heated and propelled the Styria. On each cheek a tear appeared, running slowly down his smooth skin. He had not known it was this bad, he

thought But he had done all he could.

He met Helen as he left the room. She was standing in the corridor, hair disordered, lips shaking, tears on her cheeks,

"There-there aren't any more children in the ship, Helen," he said.

She gazed at him, round eves agonised, "I didn't know they were so unhappy, Douglas. If I had, I could have done something."

He nodded. "Nor did I know, Helen." For a moment he listened to the silence. "According to the log, they're not the

first to take that way out-not by many."

She was not listening. "I didn't realise they were so unhappy !" The voice was a wail. "They're the last two, and they're gone! We could have done something to make them happier. We could have made more sweets." Words began to run together, as if some co-ordinating power had been lost. "We made the best sweets we could. We did all we could. We helped them. I didn't know, and it's too late-too late-"

Douglas reached forward, lifted her blouse, opened the panel, and turned the master switch off. Light faded from the

gentle eyes, the limbs slowly folded.

Yet she was right, Douglas thought. No more children at all, now Tony and Suzy were gone. It had been the duty of Helen and himself to help and serve the children. He had not understood that all the care and attention which would be sufficient for a hundred had been too overpowering, when directed upon two alone. All he knew was that his purpose had ceased to exist. Designed to care for children, to learn to help them, to exist for them, he now had no reason to exist. After long, silent minutes he lifted his shirt, opened the flap, and turned the master switch off. Oblivion was instantaneous, cutting across his circuits, leaving a blank where reason had been.

The Styria sped on, a silver mote amid the stars, her sensitive equipment now homing on the planet circling Antaria. Within months she would go into orbit, losing velocity, spiralling lower until auto-pilot mechanisms could choose a landing site and set the ship down. Already long-range visual analysis showed that atmosphere, gravity and living conditions were as revealed by the Effermann Pets. and ideal for humans.

In the compact library two silent figures lay together under the dim lights, eyes closed as if in sleep. The simulated tears had evaporated from the synthetic cheeks, and the mechanical limbs had folded automatically into a position imitating rest.

The door opened slowly, creaking, and a disordered mop of hair came through. The naked body following was covered

with green slime.

After a few minutes Tony rose, drawing Suzy into the room. Naked, the green on her body testified to the enthusiasm with which she had burrowed into the vegetation of the forest.

"They—they weren't real people," she whispered.

Tony shook his head. "No, Suy. Only made to help us. Now, we'll have to help ourselves. When I fought with Douglas years ago I thought his arms seemed funny, and he didn't howl when I bit, like you do. You know, now, why they made such rotten sweets. They couldn't taste them." He stood more erect, outlined in the glow from the corridor. Already a new self-reliance was coming into his voice.

"It's just us, now, Suzy. On our own."

She looked up at him and grasped his hand in her chubby palms. "I was sick of having them tell me what to do! Now we're alone it'll be fun. Tony!"

He nodded, but there was wisdom on his face. "More than just fun, Suzy. There'll be hard times, failures, work until we

drop, but we'll succeed!"

They turned their backs on the silent figures and went out through the door. A man must be able to decide his own destiny. Tony thought.

George Longdon

Mr. Kapp's current story concerns the scientific ingenuity of Man when faced with an insuperable problem under alien conditions. Unorthodox methods would almost certainly be the only answer.

THE RAILWAYS UP ON CANNIS by COLIN KAPP

"Colonel Relling frowned "Ivan No.

Colonel Belling frowned. "Ivan Nash? I thought he was on Cannis with the occupation force. Anyway, show him in." "Too late!" said Nash from the doorway. "I'm already in.

Can't wait on ceremony, you know. I've got a peace to run."

"Good to see you, Ivan! What brings you to Terra?"

"Briefly," said Nash. "it's the railways up on Cannis."

Belling waved his visitor into a chair and issued him with a drink.

"I fear I'm a little out of touch," he said. "I didn't think railways were quite in your line."

"No?" Nash filled his pipe carefully. "How much do you know about Cannis anyway?"

"Not much. Gravity, atmosphere and climate roughly earth-normal. Population rated human equivalent on the Manneschen scale. Oh yes—and volcanoes!"

"Precisely," said Nash drily. "Let us not forget the volcanoes. Cannis-four is a young world with a very thin crust. Volcanic activity is widespread and generally severe. Fire-blowholes about a dozen metres in diameter can force up anywhere at any time. They raise sharp-edged slag cases from ten to a hundred metres in height. That's why there are no roads on Cannis."

"Quite a place," commented Belling, refilling the glasses.

"Ouite a place and quite a people." Nash studied the ceiling reflectively. "Tough as nails and as perverse and changeable as the hell-hole that spawned them. Considering there's not a two-hundred metre diameter of flat space anywhere on the whole damned planet it's highly remarkable that any form of civilisation ever managed to evolve, let alone one that managed to kick itself into space."

"I had wondered about that."

"Well you might. The Canians are an extremely clever race. They're craftsmen, hobbyists and gadgeteers of the highest calibre. They built up a highly effective mechanical culture by trial and error and empirical method. But they have no true science as such."

"So?"

Ivan Nash paused. "So we blasted the hell out of Cannis during the war and now they don't have sufficient continuity of technology to get back on their own feet. If you knock a cockeyed culture like that to pieces how, in the name of Thunder, do you get it together again?"

"I don't know," said Belling, quite honestly.

"And neither do I. They're a heck of a nice people when you get to know them. The fact that they picked on Sirates to colonize when we real ready there was just bad luck. That's why our presence on Cannis is more of a rehabilitation job than an occupation proper. If we let them down we throw them back a thousand years."

Belling whistled. " As bad as that, eh?"

"Worse. With their present production and distributing capacity they'd have difficulty in maintaining more than twenty percent of their population at a minimum survival level without our help. And help all the way from Terra is a mighty expensive item. We have to stand them on their own feet fast."

"So you want reconstruction engineers?" asked Belling.
"No, I already have engineers. Unfortunately it doesn't

work. Advanced technology is not very suited to patching up

a string and hairpin culture. The gulf between our technology and their technique is too great. What I need are specialists with a peculiar kind of skill. That's why I came to you."

"The entire engineering reserve is at your disposal," said Belling. "You name 'em, I've got 'em. What do you want ?" " My main concern is with the railways. With no roads or

airstrips, the railways alone give cohesion and life to their

scattered society. Without it they cannot survive."

"So you want railway engineers?"

"No," said Nash sadly, "they wouldn't be a molecule of

"How come ?"

"Man!" said Nash in a voice of awe and wonder. "Did you ever see the railways up on Cannis? It's a shunter's nightmare, a plate-layer's conception of hell. From an engineer's point of view it's a complete and utter impossibility." "Somebody must have constructed it originally."

"Yes, a myriad crazy, bug-brained innovators, each working on a separate part to an entirely different specification and for conflicting reasons. It's a completely lunatic system

which breaks every known law of elementary railway technique." "Then," said Belling wearily, "if you don't want engineers

what do you want?" "I want to borrow the U.E. squad," said Nash steadily.

Belling winced. " Are you serious ?"

" Deadly."

"You realize what the U.E. squad could do to a situation like this ?"

"I realize it's a dangerous thing to try, but desperate ills need desperate remedies. It's the last chance we have to save Cannis'

"If I were you," said Belling sadly, "I'd resign."

Lieutenant Fritz Van Noon of the U.E. squad faced his

superior warily.

"I've got news for you," said Colonel Belling. "As you know I was against the formation of the U.E. squad right from the start. I may be wrong but I don't recant. The whole subject of Unorthodox Engineering has never sat very easily on my conscience. However, I think you've won your point. "You mean that Operation Hyperon is going through?"

"Just that, but there is a proviso. You have to keep the

squad in operational trim until Hyperon is ready by accepting assignments outside this reserve. Colonel Nash has already made a specific request for your services." "I'm grateful," said Fritz warily, "but there's a distinct

odour of an ulterior motive here somewhere."

Belling smiled wolfishly. "There is indeed. Tell me, Fritz, do you know anything about railways ?"

"No. sir, not a blessed thing."

"Then you'd better get yourself a book or something. You've just been appointed controller of public railways on Cannis-four. U.E. goes with you."

"Cannis-four? Where in Jupiter is that?"

"It's the only habitable planet in the Cannis sector. It's the closest approximation to hell I've been able to locate."

"I thank you for the sentiment, sir."

"And I appreciate your tact, Fritz. You know, it's no easy task running a specialist engineering reserve. Always you get the one engineer in a thousand who should never have got out of kindergarten, let alone graduated. With a reserve strength like ours it's inevitable that we should have collected more than our fair quota of screwballs. The problem has always been to place them in positions where they aren't actively dangerous. Now I don't have to worry. Anybody who engages U.E. does so at their own risk."

"Which statement reveals a deplorable lack of insight," said Fritz Van Noon. "I devised U.E. to provide an outlet for those engineers whose imagination carried them beyond the

ordinary.'

"I know," said Belling drily, "I've seen some of your extraordinary engineering. I can only assume that taking you to Cannis to rehabilitate what was recently enemy territory is some ingenious form of war reparation. And Fritz-"

"Take it easy on Ivan Nash. He's a friend of mine, and he doesn't suffer fools gladly. Try pulling some of those stunts you've pulled on me and you'll probably spend the rest of your career in a Canian jail-in irons." "You can trust me, sir. After all, U.E. has a reputation to

maintain '

"That's precisely what I was afraid of. Now get the hell out of here, I'm going to have a ball !"

The landing at Hellsport Base did nothing to endear Fritz to the planet. The transfer ferry entered the guiding radio-cage at a tangent, failed to equalize, and bucked and ricochetted from beam to beam until the crew abandoned the automatics and dropped her to the ground under manual control. The ferry touched down with the motors out of synchronisation, spun crazily, and overheated the landing pit before it finally swayed to rest. That meant two hours of waiting whilst the water jets strove to cool the hull and bed-rock of the base.

Jacko Hine, his second in command, met him at the spaceport bar. Jacko and a small contingent of U.E. had been sent ahead to make a preliminary survey of the position. The summary of the reconnaissance was proclaimed by Jacko's crestfallen attitude and by the way his hair began to grey.

"How does it look?" asked Fritz.

Jacko looked at him seriously for a second or two. "Grim," he said. "If I'd tried to figure out an assignment which would prove U.E. to be a bunch of useless, incompetent, layabouts I couldn't have made a better choice."

"I thought that was it!" said Fritz. "Friend Belling was too sugar-sweet on handing out this offering. Anyway this

too sugar-sweet on handing out this offering. Anyway

"Does it? Open your pretty shell-like ear and I'll pour in a few home truths about Cannis railways. Item: no part of the system has been in operation for at least five years. Those parts of the installation which survived the terran 'verter bonds during the war have either fallen down of their own accord or else suffered from volcanos."

Fritz choked on his drink and had to be patted on the back.

"Volcanoes?" he queried finally.

"Sure. Small ones. They keep on coming all the time. Even at the heyday of the Cannis railway approximately one fifth of the total rail length was always out of commission due to volcanic activity. After five years without maintenance or repair the damage and confusion is simply catastrophic. Nash's engineers rebuilt five kilometres of new track and suspension last year and two volcanoes ruined it within a week."

"Go on," said Fritz grimly.

"Item:" said Jacko. "All the new steel has to come from Terra. Delivery delay is a little under two years and a ship can't deliver more than a hundred tons at a time. The Canians have a good malleable iron but it won't harden. It's all right for rails and short supports but the tensile strength is too low to allow its use for major engineering projects."

"Enough!" said Fritz. "The rest of the misery I will discover for myself. All this weeping is playing havoc with the flavour of the beer. I'm seeing Colonel Nash this afternoon, and after that I want to see some railway."

"In that case," said Jacko, "vou'll need another drink,"

Colonel Nash was waiting for him at Cannis H.Q. There was a certain air of reserve between the two officers which Fritz found vaguely familiar.

"I take it vou've read the dossier on Cannis," said Nash.

"How does it strike you as a job?" ...

Fritz shrugged. "That depends on the type of co-operation we get."

"You get whatever you want. This is a last-ditch stand. The rehabilitation is costing us infinitely more than did the

war. We can't afford to play conquering heroes." "What I want," said Fritz, "is simple. I just want that we

should be left alone-very much alone."

"How do you mean? Discipline, administration, or what?" "Everything. Just set us down at a rail point about a

hundred kilometres out and then forget us." "This is damned irregular," said Nash. "After all, you are

an army unit. What about supplies, for instance ?" " We'll find our own."

"And steel-you can't build a railway without steel."

"Lack of essentials never yet troubled an unorthodox

engineer." "But this is ridiculous !" said Nash. "I didn't fetch you out

from Terra just so you could go play cards in the wilderness."
"Look," said Fritz quietly, "you want a railway. You've
proven that orthodox methods can't provide it. Now do I get a crack at it the unorthodox way or do you return to Terra and admit the job has you beaten?"

"Get out !" said Nash angrily. "Get out of my sight as quickly as possible. I'll leave you alone, but I promise you one thing . . . the next time you enter Hellsport it had better be on a train, else I'll nail you for insubordination and bust you so low you'll have to say 'Sir' to a private."

"Thank you!" said Fritz Van Noon. "That's all I wanted

to know "

They came across the structure silhouetted against the orange-vellow sky. It reminded Fritz of nothing so much as a rotting seaside pier propped awkwardly on random legs clear of the broken terrain below. Jacko had a rope ladder tied the structure, since the original sling and hoist access had rotted beyond repair. The two climbed gingerly to the platform overhead, brushing the rusting piles and girders, and beine showered with dirt from the ears in the dark decking.

Above the decks the desolation grew. It was a crumbling grotesque parody of a structure whose impotence in style and form was rendered more alien and yet artistic by the vagaries of slow corrosion. It was like a surrealistic film-set for a comedy of horrors which nobody dared to make. And on the far side, characteristically askew, was a sign board in Canian characters, and after, scrawled in chalk in terran hand, the legend: 'Hellsport Terminus. The end of the line.'

"It reminds me," said Jacko, " of a card house set on a sea

of rusty spaghetti."

Fritz frowned and mooched dismally through the festoons of rusty iron and threadbare cable. "What hit it?" he asked at last

"Nothing." Jacko guided him away from a bed-plate which had rusted to an extent where an uncautious foot might easily penetrate into the depths below. He pointed to a slag cone, now cold, which had burst through the tracks at midpoint across the terminus, ruining two tracks completely and half filling the remainder of the terminus with light volcanic ash. "Apart from the inquisitive volcano everything is just as it was when the last trains went north in the war. Believe me, they'd be using this installation now—only the trains never came back."

"Can't say I blame the trains," said Fritz moodily. "You mean to tell me this rotting junk heap is still in functional

order ?"

"By Canian standards, yes."

"Tell me," said Fritz testily, "did they have remarkably small trains or is this multiple-rail stuff some sort of gimmick?" "I asked about that. Seems that each branch line had its

own gauge and some had several according to who built them.
At a terminus like this you have to accommodate anything which comes, so you run one track inside another nice and tidily. One snag though—you should see what it does to the points."

Fritz shuddered visibly despite the warm afternoon air. "I'd better see the worst. I suppose."

I d better see the worst, I suppose.

They walked out from the terminus to the huge switching grid which served to integrate the various branch lines entering the terminus. There was nearly a kilometre of patch-work mechanical desolation, overhued with rust and complex beyond belief. Gantries and galleries were solid with cranks and levers, bars and linkages, rods, and handwound helding springs. Cloth-covered cables and solenoids had dropped their sickly bitumen under the coercion of many summers suns, and now lay bleached white and ugly across the rotting snans like the bones of some alien skeleton.

Fritz viewed the scene with increasing dismay. Jacko leaned heavily on a stanchion and eyed his discomfort with a

perverse humour.

"We're doing fine," said Fritz. "We've got ourselves a station complete with a volcano, a marshalling yard which shouldn't exist outside of a bad dream, six branch lines which don't go anywhere, and no trains to try out anyway. Add the fact that we can't get any steel and the probability that anything we do build will be ruined by more volcanoes within six months, and I surmise we are well and truly up a gum tree. I don't know whether to blow the whole lot up and start again or to leave it as an object lesson on how not to build a railway."

"Now who's being conventional?" chided Jacko. "I should have thought that this morass of mechanical ingenuity

would have gladdened your heart no end."

"No," said Fritz, "and I'll tell you why. You see, its builders paid no attention to basics. There is a certain idiot futility about building something destined for sure destruction. Even a bodger must work to the principle of the greatest return for the very minimum of effort. That is why the Cannis railway is not only unsound but also needlessly complicated.

"Take this switching grid, for instance. It's not only vulnerable but it's largely nuncessary. It's designed to be completely automatic, self-routing, self-isolating, self-signalling and probably foolproof. Even Terran eyber-controlled railways have nothing to match this except in theory. But the faults result from limited vision. We could have done the whole thing with about a tenth of the parts and twice the reliability."

"We may have to," said Jacko. He pointed outwards across the tracks to where thick motes of dust and cinder were dancing in the sun. "Unless I miss my guess there's another volcano

coming through down there."

"I want," said Fritz Van Noon, "to start about a hundred kilometres out on something nice and simple. We should have both engines and the necessary technique by the time we get back to Hellsport. What type of engines did they use. anyway ?"

Jacko drew a deep breath. "You're not going to believe this," he said warily, "but the engines were even stranger than the tracks. The Juara engine was a steamer run on dried resins. Two locos from Manin were sort of battery-electric jobs. One from Nath came home on some kind of super gyroscope, and the Callin loco was an I.C. engine run on alcohol made by fermenting bean husks. Apart from that the rest were pretty unconventional."

"You don't say !" said Fritz drily. "The Canians seem to have set out to beat us at our own game. Talk about unorthodox engineering! We're a set of ruddy amateurs compared to

them "

"I doubt it," said Jacko. "In my youth I thought I was the worlds worst crackpot screwball. Then I met up with you and found that, in comparison, I was merely a sane, sensible, hardworking engineer. I never got over the disappointment of that hour of realization. I have a feeling the Canians will find themselves in a similar predicament. Under the heavy hand of Fritz Van Noon the Cannis railway will never be the same again."

"Thank you for that sly vote of confidence," said Fritz. "Now this is what I propose to do. I want you to take a 'coptor to the Callin area, find the loco and bring it back to there-" He stabbed his finger on the map. "There's a two kilometre break in the track there where a 'verter bomb caught up with it. I'm taking the rest of U.E. to that point to try and repair the break. I we can, it will give us a workable area down as far as Juara. I want to complete that run before the Callin bean harvest is ripe. That gives us about two months."

"Two kilometres of new track in two months? You're off your rocker !"

" Naturally," said Fritz. " Else I wouldn't be running U.E."

The township of Juara lay on a crest of sullen rock. The

shelf of granite had reduced the volcanic activity of the region to a tolerable level, and made habitation possible at the expense of the fertility of the soil. The railhead was untouched, but as the line swung again north-west and then north of the plateau

it entered a low basin where the slag-cases, dunned with vegetation, stood up thick and tall like armless trees in some fantastic petrified forest.

This was a bad point for the rail. From the air it was obvious by the tortuous twisting of the route that the line had been diverted from disaster and rebuilt at least a dozen times. Occasional sections were completely isolated from the remains of the existing track and lay as forlorn crescents of rotting

railway awaiting trains that could never come.

Six kilometres out from Juara was the break. A 'verter bomb dropped casually in the vicinity by a terran stratocraft had left its usual trademark. The railway had literally been shaken to pieces. For nearly two kilometres the remnants of twisted girderwork and trestles sprawled on the broken ground, tied together with the soft iron of the rails. North again by over forty kilometres lay Callin and the fertile mountains of Cansoon

In the centre of the break Fritz ordered down the 'coptors, and the aero-sleds rendezvoused to drop the heavier equipment. The fragile, alloy Knudsen huts were hastily assembled and staggered, two by two, between the tall volcano spires. Prefabricated workshops were completed in record time as soon as the dino-dozer had cleared a sufficient site. packaged forge and the rolling mill were rolled on air cushions to key points on the site.

Working feverishly and without obvious direction, the engineers of U.E. carved themselves a base on the alien territory and settled themselves in. By nightfall a new functional township had arisen beneath the dark towers of Cannis.

Fritz was well pleased with the achievement. Its success was marked by a subtlety which would have passed all but the keenest of observers. For U.E. was not a team as such : it was a collection of individuals. Nobody planned or directed. except in the very broadest way, but each engineer was trained to analyse the salient points of an operation and to guide his own activities to achieve the maximum effect. It was the myth of anarchy on a practical, productive scale-and it worked The patient genius of Fritz Van Noon had wrought a philosophic miracle.

It was on the first day that Malu arrived. He strolled into the base at the crack of dawn, a thin brown Canian with the dark liquid eves and the quick, birdlike movements that characterised his race. All Canians are inquisitive to a fault. and a casual inspection of any work in progress is part of the scheme of things. After poking and probing into every conceivable crevice he went from hut to hut harrying the occupants with atrocius pidgin Galactea. He found nobody who could understand him until he came across Harris, who not only spoke Galactea but also fluent Canian. Harris realised the worth of the contact and hurried him off to meet Fritz.

"This is Malu," said Harris, "He's a local engineer. He

wants to know what he can do to help with the railways." Fritz smiled acknowledgement. "Can he find me any local

labour ?" Harris translated, and a heated discussion followed. Finally

he turned back to Fritz. "He says that he can get plenty of labour but that the Canians won't work in gangs under direction. They're strictly free-lance or they don't work at all."

"I thought this would happen," said Fritz. " Point out that it's their harvest we're trying to get to Juara. It's no skin off our nose if it doesn't go through. Also they obviously don't have the skill or the ability to do the job themselves else they'd have done it already."

"I already said that, but it's no dice. They're an independent lot of cusses. They'd sooner starve than suffer direction.' "Come to think of it," said Fritz, screwing up his eyes to

look at the sun, "come to think of it, so would we. Hell, I'll take a chance! Let them all come. It may never look like a railway but I guarantee it'll be a lot of fun trying."

By this time Malu had wandered off to examine some new

aspect of the Knudsen huts. He was obviously worried by the alloy hulks, and came back for a long and excited argument with Harris. "He's worried about the Knudsens," said Harris.

we mustn't build directly on the ground."

"Why ever not? There's no flooding hereabouts and the site is reasonably level."

"That's not the point. Malu says the lichen is temperature sensitive. It turns brown where a hot-spot is developing. It gives about a ten hour indication of when to move house. If you build on the ground you can't see the lichen underneath." Fritz relaxed. "We already thought of that. Between each

pair of huts we have a thermocouple buried. The alarms are automatic and don't need watching. Besides which, they're not affected by the sun and rain as is the lichen. Anyway you can't put a Knudsen hut on stilts-it'd fall to bits."

Harris translated to Malu, who shrugged resignedly and

walked away wagging his head from side to side. "He says it won't work," said Harris. "He coined a phrase: 'people who live in magnesium huts shouldn't dare volcanoes !"

" Jupiter! That was all I needed!" said Fritz Van Noon.

Curiously enough the combination of Canian and U.E. personnel worked rather well. The natives knew their own limitations and did not attempt an operation or to handle an unfamiliar tool until they were sure of their competence. The U.E. squad became the lead team, breaking new ground, and the Canians seconded in careful emulation of their instructors.

By the end of the second day a huge stretch of track had been cleared, the rails returned to the rolling mill, and trestles and undamaged span girders stacked ready for re-assembly. Ingots of malleable iron were manhandled down the line from Juara. and the forge and rolling mill worked continuous shifts to shape the soft metal which had to serve instead of steel.

The U.E. metallurgist was going quietly crazy trying to figure out why the Canian iron refused to harden. He finally decided it was due to the perverse allotropic form of the native carbon, and broke down an electrolytic refining cell of terran origin to gain a less temperamental sample of the element. Two pounds of this steel prepared in the laboratory exibited a cold-short brittleness of such degree that it was rendered into iron filings by a few taps of a hammer. Increasing the silicon content and using Canian carbon he obtained a steel of the same tensile strength as lead. At this point he broke down and wept bitterly, then went out and joined in the construction work.

On the fourth night Fritz was awakened by the babble of voices outside his door. He dragged himself from his bunk, opened the door and stepped out. He immediately fell over Jacko who was prostrate on his stomach in front of the threshold probing the ground with the aid of a spot lamp. Malu and two fellow Canians were watching the proceedings from a discrete distance.

"Hell!" said Fritz. "Is this your idea of a joke?"

Jacko rubbed his posterior with an aggrieved air. "Hell," he said. " is an apt description of our destination if we don't leave this spot pronto. Your hut is nicely located on a hotspot."

"What?" Fritz felt a sudden tremor of the ground beneath his feet and caught a wisp of the sulphurous fumes issuing from widening fissures in the ground. They had scarcely covered twenty metres before the hut exploded in a riot of brilliant fire. At a safe distance they turned and watched the point where a new volcano burned live at the very spot where Fritz had been sleeping not four minutes earlier.

"One up to Cannis !" said Fritz grimly. "It's getting to be a personal fight with no holds barred. Well, if that's the way

Cannis wants it then I can fight dirty too."

Jacko surveyed the furious gout of fire before him. "I thought you were fixing a thermocouple alarm?"

"We did," said Fritz. "Platinum, platinum-rhodium couples at three metres depth. That must be where we fell down. Hot sulphur and silicates are poison to a platinumalloy thermocouple. It must have gone open-circuit before it could operate the alarm. It was a mischance in a million but one we can't afford to risk again. The rest of the Knudsens will have to be jacked up somehow."

"Can we afford the time?" asked Jacko. "We have to get the bean harvest through to Juara. Can't we simply use

another type of thermocouple ?"

" No, we tried that. The soil is too corrosive, and a shielded couple isn't sufficiently sensitive. Either we raise the huts or we risk frying in our beds. I don't fancy waking in the morning and finding myself done brown on both sides. And I'm still going through to Juara on time even if it's over your dead body."

"I was afraid of that. By the way, I brought you back an engine. As a prime-mover it would make a very good potting-

shed, but the fuel is simply superb."

"I know," said Fritz. "I can smell it on your breath."

Much of the track itself was recoverable since the low speeds and traffic density of the line would make no great demands on the quality of the rail. A great deal of the girderwork from the spans was likewise capable of reclamation. Only the trestles had suffered badly. Four out of five were a total write-off and, due to the great allowances needed by reason of the poor quality of the metal, rebuilding ate deeply into the available stocks of iron. As the work progressed it became painfully

mind ?"

obvious that no more than half of the break could be completed

because of the lack of trestles.

Fritz refused to be disheartened, and laid his advance plans with a quiet precision and a secrecy which involved the confidence only of Harris and Malu, who were given special missions to perform. Everyone else grew despondent, and even Jacko's customary pessimism seemed justified when the hot-spot appeared.

"Where is it ?" asked Fritz.

"Right," said Jacko, "where it will do the most damage. Under our new track and right in the centre of a span. Three days and the whole lot will be down again. How the heck can you build a railway under these terms?"

"You can't," said Fritz. "That's why we're going to alter the terms. Take my advice, Jacko, never try to buck the

system. If it's big enough to break you, try helping it on its

way."
"Sophistry," said Jacko. "You can't stop a volcano."

"Can't I? Cannis and I have a lot in common. We both think the same way—mean and underhand. It's a policy of kicking the enemy while he's down. That way you get the greatest results for the least effort. This is a personal fight of the common thanks of the property of the common of the Noon."

Jacko shook his head sadly. "Let's face it, Fritz. We're licked. We can't go any further without terran steel and we can't hold on to what we have done. There's no disgrace in

folding up before a physical impossibility."

"Tve told you before," said Fritz sternly, "there's no such thing as a physical impossibility. A limitation is a state of mind not a question of fact. An aeroplane was a physical impossibility until men's minds learned how to tame the concent."

concept."
"Is lack of steel and a surplus of volcanoes also a state of

"Certainly-if you regard them as limitations."

"Very well," said Jacko, "come and prove your point."

By the time they arrived at the span the hot-spot was beginning to break. Even as they watched, the ground belched and broke as the angry pressures blew the topsoil apart. Then came a heavier explosion, the ground flew back and a column of fire spurted irregularly through a spray of liquid, incandescent magma, which congealed around the blowhole to form the foundations of the cone. Not fifteen metres above, the span appeared to dance in the stream of heated gasses, and was blackened and scorched by the leaping blasts.

Ensign Harris came over at a run, clasping a mortar projector to his chest, and was followed by Malu and two engineers carrying a rack of mortar bombs. They set up the projector at a reasonable distance and proceeded to prime the hombs.

" Are you crazy?" asked Jacko.

"Yes," said Fritz. "That's my forte. I want to see what happens if we put a mortar bomb smack inside that crater. You're the weapons expert. Can you do that without damage to the trestles ?"

Jacko estimated the position silently. "The bomb I can manage, but the trestles will be in the care of their own peculiar

The result was even more spectacular than anticipated. The bomb rose in a brief arc and fell with careful precision into the mouth of the flaming cone. A split instant of hesitation and then hell itself was unleashed. The pyramid of toffee magma split wide with a murderous roar; gouts of flame and incandescent lava boiled and foamed high into the air and collapsed into a storm of white-hot cinders and writhing jets of burning gas. At the base, where the cone had stood, the blowhole angrily vomited a widening pool of boiling lava like some grotesque festering sore. " Another ?" asked Jacko.

Fritz nodded. "We might as well be fried sheep as roast lambs.'

The second bomb, too, was carefully placed. This time the lava rose like a living wall and plunged outward, splashing and streaming its magnificent debris up to thirty metres from the seething well. A sheet of roaring flame rose up with frenzied fingers and enveloped the protesting members of the rail-span overhead.

The blast of heat and awesome fury sent the watchers scurrying for shelter, with Harris fearing for the safety of his remaining bombs. Only Fritz stayed put, his clothes smouldering, shielding his eyes with his hands and overcome with the enormity of the havoc he had wrought. Then the flaming torches died and the white-hot spume grew less. The lava pool became a darkening puddle of red toffee, shot with occasional

bursts of recalescent heat and overhung with the will-o'-the wisp of burning sulphur.

"One up to me," said Fritz Van Noon.

By morning the remains of the volcano held no visible sign of life. The lava had spread into a vast rippled puddle of rock, still hot but solid enough to bear a man's weight. Already the lichen was beginning its assault on the cooler regions, eager to begin the symbiosis with the grass to follow.

Jacko had the calculations finished by the time that Fritz was

ready to inspect.

"Fritz, you're a ruddy genius! There's enough material in this puddle to make two average-sized volcances in this district. That means we've cleared it out completely. With a bit of luck they won't have another volcano here for the next sixty years. Unless a volcano happens right under a trestle leg we can treat it the same as this one. That simplifies life no end."

"Precisely," said Fritz. "But it's the trestle legs I'm worried about. Pile-driving those base supports makes the trestles rather vulnerable. What happens to your railway if

your trestles suffer a high mortality rate?"
"I think we quit," said Jacko candidly.

"Not on your life." said Fritz. "We've got enemies. If U.E. goes home in defeat they'll try and break us for sure. Between us we run the largest collection of screwballs and technical malcontents in the whole terran service. Not one of them would be happy about returning to honest engineering while they can stay withus and play forsaken childrens' games under the minimum of effectual supervision. We just can't let them down. Besides which, there's more than the Cannis railway at stake here."

"I guess you're right," said Jacko. "But look at the problem. We can't put a straight track run on the ground because of the cones in the way. Even if we could it would take years to level up the site. Therefore we build on treat and spans over the rocks and smaller cones. That makes sense wen if it looks grotesque. But you can't stop a volcano which comes up under a trestle. Even the Canians never found a way round that."

"I can," said Fritz slowly. "But it's a dangerous thing to try. You see, there is one place on Cannis where a volcano never rises."

" I doubt it "

"But it's perfectly true. A weathered volcano may break and fall, but a new volcano never rises where an old one still stands. Pressure difference, I suppose,"

He broke off suddenly with a puzzled frown.

"I thought I heard a 'coptor. Were we expecting any visitors ?"

Jacko found a pair of field glasses and studied the 'coptor

now visible on the horizon. "Trouble !" he said. "Looks like the administration has found out where we are. That's a deputation from Hellsport

unless I'm very much mistaken."

"Heck!" said Fritz. "Can't you head them off. I've got work to do. I bet it's that lousy planning group come to foul things up."

There were two terran civilians in the 'coptor. The taller of the two was obviously the spokesman, whilst his companion appeared to be some kind of technical consultant. On the way down from the landing raft they made a rather pointed inspection of the piles of girder and angle which littered the camp, and the short man took it upon himself to explain to his companion certain niceties of railway construction which Fritz appeared to have overlooked. By the time they reached the office they were clearly in the mood for business.

"I'm Eldrick, Planning and Co-ordination," said the tall

civilian. "I think you would be Mr. Noon."

"Lieutenant Van Noon," corrected Fritz wearily. "I told you over the radio-phone not to waste your time on a trip out here."

Eldrick smiled tolerantly. "I think you misunderstood our purpose. We are the group which co-ordinates the efforts of all

units on Cannis to ensure that the maximum effort is concentrated in the right direction. We are here to help you." "When U.E. needs help," said Fritz, "it helps itself. That's

the prime function of U.E. We're independent, uncoordinated, unorthodox, and generally fireproof-and what's more I have a certificate to prove it." Eldrick was unmoved. "I still think you're making a

mistake."

Fritz threw up his hands in a passable imitation of a man going berserk. "The whole Cannis episode is a mistake. Even this

misbegotten planet is some blatant cosmological error. If you

think you can create order out of chaos with a slip-stick and a schedule of spare parts then you have no idea of the com-plexities involved."

" Have you?" asked Eldrick pointedly. " What about steel! You can't build a railway without steel. There are priorities to be arranged, specifications to be agreed, orders to be placed on Terra. Organization is essential to the well-being of any major endeavour.

"Organization," said Fritz, "is the last refuge of a tired mind. It's a bumbling, mechanical substitute for initiative. I can't wait twenty months for terran steel even if it is cut to size and neatly drilled to specification. If I haven't got steel

then I'll use something else, never ask me what."

"I regard that as a very foolish and unnecessary attitude." "That foolish attitude of creation out of necessity," said Fritz heatedly, "is the power and the reason that placed Mankind above the animals. Without it we'd still be scratching fleas off each other's backs. Now I must trouble you to leave."

"Very well," said Eldrick, "but if necessity is the mother of invention then you are in for a highly creative time. I've had a look at your constructions here, and if you think you can get a line through to Hellsport inside ten years you're either

a genius or a fool."

"Was that wise," asked Jacko, watching the 'coptor lift-off for Hellsport. "I mean, throwing him out like that."

" No," said Fritz. "But, by Heaven, it felt good! These planners make my blood boil. Civilization runs at a quarter pace because of the blind dictum that everything must be organized according to the book."

'I suppose it has its virtues, though." Jacko was thoughtful. " After all, look at the Canians. They can't muster a suf-

ficiently collective effort to repair their own railways."

"And for why? Because they're running on the wrong philosophy. They can't do it because they're trying to reinstate the railways as they used to be. That's not the right attitude. There is no logic which says a problem has to be solved in the same way as it was done previously. The Cannis railway was a product of its own time-and times change. If you haven't the means to do what the other fellow did, then forget it and try something else,"

"That's what I like about you," said Jacko. "You consistently move in the opposite direction to everyone else. I seem to remember you were about to show us how to build a volcano-proof trestle without actually using any steel." Fritz smiled mischievously. "Suppose we forget about

trestles. Can you salvage enough scrap to manage the spans and the rails?"

and the rails

"Sure. That I can find, but if it's not a rude question how

do you figure to hold them up? Will power?"
"No, volcanoes, dead ones. Lop off the tops and what have

you got? Natural pillars of rock which will last a lifetime. Strap on a yoke, sling the spans between them and you have your railway."

"Crazy like a fox !" said Jacko, "It would work, of course —over a very short section, but I suppose that tired little brain of yours didn't also figure out how to manoeuvre a string of volcanoes into a straight line roughly approximating the way we want to go? Or do we build a crazy zig-zag track and use triangular trains?"

"No," said Fritz, "although the idea did occur to me. Also

a proverb about Mohammed and the mountain."

"Now I know you're nuts," said Jacko. "If you haven't got volcances then you haven't got any, and there's nothing you can do about it."
"Is that so? Then I think you have something yet to learn.

This may not be one of the most brilliant moments of my career but it may well prove to be the most spectacular."

areer but it may well prove to be the most spectacular.

At the end of the line, where the next trestle ought to have been, Harrison, and Fanning, the U.E. geologist, had the mobile drilling rig assembled. Fanning was taking core samples from the drill and shaking his head sadly.

samples from the drill and shaking his head sadly.
"I don't like this, Fritz. We've penetrated to forty metres
and the stuff is coming up hotter than hell. I should hate the

drill to break into a high pressure region."
"How near are we to a molten laver?"

"Can't tell exactly, but the sonic depth-probe puts it at about seventy metres, plus or minus ten."

"Near enough," said Fritz. "If the stuff the drill is picking up is fusible then I think we can stop right here."

Fanning mopped his brow and began to withdraw the drill.
When it was out they collapsed the drilling rig, and the dinodozer hauled it from the site.

Then Harris returned dragging several metal cylinders with bovious caution. Fritz waved everyone away from the drilling, adjusted something on one of the cylinders and heaved it endfirst down the well. Nothing happened except that after about a minute thick yellow smoke began to issue from the hole. Fritz cursed and, approaching warily, dropped another cylinder after the first.

He scarcely got away in time. There was a crack like the voice of thunder, and a ball of violent, sparking incandescence screamed into the sky. Then flames jetted up, a scorching burst of fire leaping from the soil like some fantastic blow-torch. Molten magma, entrained in the superheated gasses, was hurled hish in the air and descended as a scatter of singeing

hail driven on the light cross-winds.

The onlookers fled in confusion far from the terrible well. By the time that Fritz reached shelter his uniform was smouldering in a dozen places and his face and hands were red from exposure to the heat and covered with superficial burns from the searing fall-out. Jacko had fared little better, having waited to make sure that Fritz was able to escape. They sat down on a broken slag-case, dabbing balm from a first-aid pack on their burns and watching the hectic blast as it roared with unimagined ferocity.

Slowly the cone began to form as lava congealed around the flaming throat, and the fiery torch rode up with slow magnificence as the cone became a candle and then a tower with

a bright and angry beacon at the top.

"Voila!" said Fritz. "I give you a volcano."

"Hell, I'll give you volcanoes!" said Jacko, dabbing at his burns. "Next time you try this Guy Fawkes stunt you're strictly on your own. What the heck did you drop down that hole?"

Fritz smiled. "A Kellung super-thermit bomb—and a eyinder of oxygen for luck. The intense heat generated by the bomb just above a bed of active igneous magma was more than sufficient to release the volcano. This time the process we channelled by the bore-hole, so we got a cone instead of a puddle."

"Per ardua ad asbestos !" said Jacko ruefully. "Are you seriously suggesting we do this all the way to Hellsport?"

"Only where we have to," said Fritz. "And even that will take more Kellung bombs than we can come-by honestly. Fortunately there's a way round that. Up on the Juara shelf is the Command weapon stores. They've more Kellung bombs there than we're ever likely to need." "But will they let us have them?"

"No," said Fritz, "but that's never stopped Harris before."

Three days later the new volcano was extinct. A crazy scaffold was set up round the cone and the top neatly truncated with power chisels and pneumatic drills. As a structure it stood supremely suited for its job. The siliceous rock had set like concrete, and had it been cast deliberately by hand it could not have stood more straight or firm. The yoke was placed around the cone top and secured by hooks into the narrow crater. Prefabricated spans were trimmed to length and joined up to the existing structure. The result was the finest trestle that Cannis had ever possessed.

For U.E. it was an hour of jubilation. The forgotten gimmicks and the half-formed innovations suddenly leaped to new promise now it was certain the line was going through. At the end of a three week burst of energy the last rail of Juara was bolted into place. The locomotive returned to Callin with improvised rolling-stock and two days later chugged triumphantly through to Juara with the first load of the finest bean

harvest for years.

Then it blew itself to bits.

"And something else," said Jacko. "They've just arrested Harris at the Command weapons store. So we won't be using Kellungs any more."

It was summer in Hellsport. Flies and dust thickened the air, whilst the humid heat was relentless and intolerable. Even in the air-conditioned sanctuary of the Command H.Q. the dust crept through the filters and the humidity defied the monitors to hold the moisture content and the pressure down.

When the shouting began Colonel Ivan Nash grew irate with this newest source of irritation. He called a native courier to

find the meaning of the outrage.

"They say, Lazib," said the native, with sly humour, "that a train comes in from Juara bearing the greatest man on Cannis."

"Nonsense!" said Nash irritably. "There are no trains left on the Juara-Callin line"

"That may be true, Lazib," said the Canian, with his tongue in his cheek, "but something is coming down the line, Look, you can see it for yourself."

Nash released the clamps and flung open the window, wincing at the blast of dust and heat which invaded the room, He found his field glasses and scanned the railway, which seemed to be dancing in the slow heat-haze. Something was coming down the Juara line, but the distance and the dust conspired to make identification impossible. Only when it grew nearer were the details of the vehicle displayed.

Nash choked and closed the window with a clang. The 'train' bore a curious resemblance to a service troopinghelicopter, minus rotors, and slung on a low truck, the wheels of which were broad grooved rollers. Various items of machinery were slung about the outside of the strange assembly, and in front walked a Canian with quick, birdlike movements, hopping from sleeper to sleeper and carrying a

big red flag.

The train entered the terminus, reversed to another rail, then shuttled back and forwards just to show the proficiency of its roller wheels in manoeuvring on any gauge of line. The Canians went wild with enthusiasm, and shouted and cheered until Nash thought his head was going to split. He was still staring from the window when Fritz Van Noon came into the room

Colonel Nash weighed him up silently. "All right, Fritz, you win-so far. I never thought you'd make it. Too bad you

had to step out of line to do it.

"You didn't exactly help," said Fritz. "I thought we were finished when you had Ensign Harris arrested for stealing Kelling bombs. Fortunately Malu, our tame Canian genius, cooked us up a substitute using Canian rocket fuel."

"I know," said Nash. "I had my spies up there. A very worthy effort. Too bad I have to throw the book at you. Unorthodox engineering I could learn to stand, but brigandry

is a very different matter."
"Is it?" asked Fritz. "I have a warrant here authorising the release of Ensign Harris. It's neatly signed, sealed and

counter-signed by Terran GenCom."

"No dice !" said Nash. "I mean to court-martial Harris good and proper. Even GenCom can't dictate to me on the internal administration of my own sector. With any luck Harris will still be in jail when the sun goes cold. And as soon as I can get evidence of complicity you'll go up beside him. Weapon stealing is a capital offence. Besides which—" he said accusingly, "-vou haven't had time to get GenCom confirmation on a release warrant."

"No need," said Fritz complacently. "Release warrants for Ensign Harris are part of our standard equipment. We always stock up before starting on a mission."

Nash was shocked. "You mean to say that this man's

conduct is officially condoned ?"

"Condoned?" Fritz chuckled. "As far as I am aware the only crime Harris committed was to get caught. For that I will personally reprimand him."

"But this is preposterous!" said Nash. "The man's a

criminal thief."

"Precisely. That's his speciality. It took us a long time to find a crook of his calibre. He's the man who broke the First National Bullion Bank and got away with a quarter of a million

pounds."

"This gets worse and worse," said Nash, his voice rising with disbelief. "Do you mean to say you employ a known criminal because of his prowess at breaking and entering? What sort of trade classification do you call that ?"

"Quatermaster," said Fritz, with obvious enjoyment. "We want equipment and supplies, he has to beg, borrow or steal to provide them. It's a point of honour that he never comes by

anything through the proper channels." "But in the name of Mercy, why?" Nash sensed he was losing ground.

"It's part of the fundamental philosophy behind U.E."

Nash chewed his moustache nervously. "I've been warned

about getting into an argument with vou."

He returned to the desk and poured himself a drink. On second thoughts he offered it to Fritz and poured himself another.

"I don't doubt you can explain," he said heavily. "I don't doubt your ability to talk your way out of anything. I'm just warning you it'd better be good. If I'm not convinced I'll have

every man-jack of yours in irons before the morning." "I think not," said Fritz, "I'm afraid you've been the

victim of a slight deception. That crazy gang of bodgers of mine is not quite what it seems. This may be unethical, but if you attempted to take any action against us you'd be out of the army so fast you wouldn't have time to change your hat."

"I warn you . . ." said Nash grimly.

"Hear me out first," said Fritz. "Have you heard of Operation Hyperon."

Nash nodded. "The deep-space penetration project. Two million light years and no possibility of return."

"Precisely. Well, U.E. is the lead team that's going."

"I don't think I understand. Is this some sort of joke?"

No, sir, very far from it. You see, in a deep-space probe you can't afford to carry anything but men and the very minimum of equipment which will ensure survival. There are no supply ships. no machine shops, and no reference libraries

at two million light years from Terra.

"So what type of men do you send ? Physicists who are lost without a laboratory? Engineers who can't obtain any steel? No, you send the men who can make a plough out of a tre-trunk, a stone and a length of creeper. You send the men who have made a lifetime's habit of turning anything they could lay their hands on to their own peculiar advantage."

"And that's the philosophical concept behind U.E. ?"

"Just that," said Fritz. "Ours is an age of highly complex technology. Specialization and standardization are the keywords of our civilization. But as the starships spread us further across the galaxies the strings which tie us to the centres of order and knowledge tend to become a bit tenuous. You can't take your technology with you. Things come unknit."

"A masterpiece of understatement," said Nash. "Even on Cannis we created a technological monster. We tried to apply terran know-how without having the facilities to back us. It

didn't work."

"Just so," said Fritz, "hence U.E. This is an experimental team chosen to a pattern decided after years of psychoresarch. It's a completely flexible approach with no precepts sacred except that the end justifies the means. We have built a team which can construct the nucleus of a functional civilisation out of bits of string and matchsticks if necessary. Our coming to Cannis was simply an exercise."

Nash picked up the phone and dialled a number.

"Bring Ensign Harris to my office immediately—and forget the guards. I'm ordering his immediate release. That's right, you idiot, I said 'release'! Oh yes, and bring up another bottle of Scotch—no, make it a crate. We're going to have a party."

"Thank you," said Fritz Van Noon, bodger extraordinary.

In this latest article on Man's effort to get into space, Kenneth Johns presents two important factors along the road—the second one will undoubtedly surprise many of our authors and we can assume that there will be considerable changes made in fictional spacesuits.

OUTWARD BOUND

by Kenneth Bulmer

5. Behind The Scenes

Man hopefully samples a little of the fantastic energies that criss-cross space and under certain conditions he deduces that such and such an event gave rise to an observed blur on his camera plate. Alongside experiments, meetings are held where the world's leading scientists gather to discuss what has been done and what are the next steps.

But still the vast forces of the cosmos race blindly on, ignorant of the proud pygmy whose aim it is to tame the Universe.

1958 was a monumental year from the viewpoint of outwardbounders. Amid a welter of publicity in the lay press for IGY, Sputniks and Vanguards, Explorers and Pioneers—all smart eye-catching news "—the background work went patiently on. This month "Outward Bound" takes a look at two separate incidents that each, in its own way, furthers our march into space.

One event which received little publicity, but which was as fruitful as most of the previous rocket and satellite trials, had no particular project name. It began with a small, somewhat battered landing-ship slipping out into the Pacific on a scientific mission.

The ship was U.S.S. Thomaston; her target E-day. There was to be a total eclipse of the Sun on 12th October, 1958, visible only from the Pacific and, to tie in with their other solar measurements at the peak of sunspot activity, the Americans wished to make as many eclipse observations as possible.

There were few islands in the eclipse path and five other countries were sending expeditions to the area, so the Americans picked on Danger Islands as their land base. Unfortunately, the Danger Islands are only coral atolls and have not harbours and the sea bed slopes off so steeply that there is no narhorage; the result was that U.S.S. Thomaton spent of the months continuously steaming backwards and forwards a few miles off the islands so as to maintain station in one place.

Motu Koe was the island picked for ground observations and the scientific staff were ferried to and from the island every day by boat or helicopter, using the landing ship as a floating

hotel.

However, when E-day dawned, squalls and thunderstorms completely eliminated all optical observations. If that had been the whole of the story, it would scarcely have been worth recording in "Outward Bound"—but, as the Moon prepared to cast her shadow 150 miles wide along a 9,000 mile band, the ship's scientists had another card to play. U.S.S. Thomason had sailed 10 miles from Motu Kue. Six Nike-Asp rockets were readied on her deck by Naval Research Laboratory scientists and the idea was to fire them so that at least two were above the absorbing layers of the ionosphere during the whole of the total eclinise.

Since the total eclipse was to last only four minutes and each rocket was five minutes above the ionosphere, this was not expected to be too difficult. Two rockets were to be fired just before the eclipse became total, two more before that during the first partial eclipse and the final two after the total eclipse had ended. Each rocket carried instruments to measure had and soft X-rays and ultraviolet light from the Sun—none of these normally reaches the ground since they are absorbed in

the ionosphere.

The Americans were particularly interested in these experiments, for the gradual shadowing of the Sun's surface would enable them to connect intense areas of radiation with active

sites such as sunspots on the solar surface.

In addition, it is known that the ionosphere, the absorbing layer around the Earth, decreases in density but does not entirely disappear during an eclipse and it was hoped to find out whether this is due just to the slowness of the disappearance of the ionosphere or due to radiation leaking around the edge of the Moon from the Sun's atmosphere.

Alas! All did not quite go as planned. But the major part of the rocket experiment was successfully carried out. Five Nike-Asp rockets were launched during 38 minutes; four of them on schedule. The vibration of the launching of the first four shook loose the connecting plugs to the remaining two—the result was an eight minute delay whilst this fault was traced and the fifth rocket got away. The sixth was kept for the

following day.

Radio antennae mounted on the three-inch guns of the

telemetered from their instruments.

The picture given from the telemetered information seemed simple. The ultraviolet radiation from hydrogen appeared to come only from the disc of the Sun, whilst X-rays came from

an X-ray emitting halo around the Sun.

The sixth rocket was fired on 13th October and, as luck would have it, it was telemetering when a solar flare was seen on the Sun. The results showed a strong increase in both soft

and hard X-rays but not of the ultraviolet light.

Tying with this work, the Russian results from an annular celipse of the Sun seen in South China on 19th April, 1958, point to there being strong radio-emitting zones some 25,000 miles above sunsports. And the U.S. Navy carried out the strategier of the Sun. Shots taken from a rocket-mounted camera showed up two new features—two white parallel lines on the surface and an odd-looking lump protuding from the Sun's midsection. What these details are has so far not been ascertained—in fact, astronomers were jubilant that they had been represented with such brand-new information.

The basic lore of science fiction has been built-up so slowly and so surely that, at times, it is difficult to distinguish between science fact and fiction. Take space suits for example. This brings "Outward Bound" to the second background detail without study of which man just isn't going to get into space.

Any reader worthy of his salt knows that to step outside into space without a spacesuit is courting death, and that the slinky, transparent spacesuits exist only in the minds of artists. So he takes for granted that a tough resilient suit, suitably protected against extremes of cold and heat, radiation, internal pressure, starfishing, and the idiosyncrasies of men will be developed to enable spacemen to work out in space.

Of course, it would be uncomfortable-even unpleasantbut it would function. Small rockets could jet him around as he worked on the building of a space-station-so the magazines

and books say, and so most readers accept.

Yet this is far enough from the truth to be almost a travesty

of the facts.

Luckily, the technologists and space doctors concerned with space travel are taking nothing for granted and are checking each point, each 'well-established fact' as best they can before men go out into space and stake their lives on some preconceived notion that may well have originated in an author's fertile mind. Much of the new work and critical analysis of the old is discussed at symposia on space flight and space medicine.

It was at the October, 1958, Symposium of space medicine in London that doubt was cast on the ability of a man to work whilst floating in space. Any movement of leg or arm would tend to set the body spinning or tumbling and it would be an almost impossible task to use manually controlled rockets to correct for such erratic spin. In addition, a fictional spacesuit would not give anti-shock protection during moderate collisions

No! It's beginning to look as though the spacesuit of tomorrow will be more of a massive tank-like affair than a zip-on coverall. Heavy gyroscopes will have to stabilise it to prevent spin and tumble, heavy batteries will power the gyros, whole-body harness will protect the occupant from impact from any direction, whilst fuel storage, rocket motors, and guidance and air purification systems will make it virtually a self-contained spaceship.

Spin and tumble can be killers. The worst damage to aircrew falling from great altitudes, even in up-to-date escape capsules, has been due to undamped spin and tumble and the resulting high-g from centrifugal force. This hazard has been specifically guarded against in the escape capsule of the X-15. If a spacesuit takes up this spin in space, the natural resources of a man's senses my very well not be equal to the task of sorting out the correct halting procedure, especially as, as far

as he is concerned, there just isn't any up or down.

Another factor not fully considered is vibration in rocketships. As most hi-fi fans know, it is extremely difficult to prevent low frequency resonance, that is, vibration at less than 100 cycles a second, in loud-speaker cabinets. Consider a spaceship as a giant loudspeaker cabinet with vibration from rockets and motors during flight and from air resistance during re-entry.

The vibration level in the ship's framework could build up by resonance to intolerable levels-and, being isolated in space,

it would be difficult to damp out the vibration.

Below 10 cycles per second, rumble is enough to shake and disorientate pilots and destroy all but the most rugged electronic equipment. It would be similar to sitting in a tank subjected to the pounding of a thousand pneumatic drills. Much of the sheer shock of a naval battle in hammer blows of projectiles against armour plate accounted for the demoralisation of some crews in action; but it is conceivable that an armoured, hollow ship subjected to continuous battering would pick up resonances that would lead directly to the near-insanity of the crew.

From this mal-function of the physical environment, space doctors turned to the mal-function of the human body in unnatural conditions

Even when coasting in free fall in space, too little is known about an astronaut's reactions to this condition. To be sure, the doctors considered that vital functions such as breathing and eating will undoubtedly be relatively unaffected; but the more subtle nervous and muscular patterns may be altered. It may take time for mind and body to adapt to the new conditions of weightlessness so that a dial or lever can be reached and precisely changed with one fluid flow of fast movement.

Such disorientation has been reported by pilots flying parabolic zero-g paths; but their evidence has been criticised on the grounds that they were first subjected to high-g before entering the zero-g flight path and that they were also subjected

to angular acceleration during weightlessness.

This whole question of disorientation during free fall is also tied up with loss of a visual reference, extremes of light and the mental concentration needed to keep complex machines under constant control. The American approach is to mate the man and the machine senses as much as is physically possible, using all of his senses to register information instead of overloading his vision with a multiplicity of dials, needles and gauges.

Thus speed may be indicated by an audible note, rising in pitch as speed goes up, whilst another factor of information could be presented by varying vibration felt through the seat.

And if in a future spaceship a sudden smell of sulphuretted hydrogen fills the control cabin, the pilot will know that he has omitted to shut the airlock valves; or has forgotten something else of dire consequence.

It is clear from these two examples of different yet allied work that the problem of space travel is being tackled today on all fronts. Man is going out into space; but there is far more to it than watching the spectacular rise of rockets carrying satellites and space probes far out into space.

Kenneth Johns

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Was Z1 Day to be a reality or a legend? That was the vital question facing Rupert Clinton as the hypothetical day-of-uprising for the human race drew nearer. If a reality—how could it possibly work?

THE PATIENT DARK

by Kenneth Bulmer

Conclusion

FOREWORD

In 1975 Man reached the Moon and was preparing for the impn to Mars and Yems when the alien Shangs arrived from outer space, apparently peaceful visitors. It looked as though star travel instead of interplanetary travel was to be Marls good fortume, but the cliens gave little away in the first thirteen years. Then from 1991 to 2025 they unsteathed their claws and completely took over the Earth, making it a vassel state to their galactic Empire. Earth's punitive revolt in 2025 was ruthlessly crushed and no further scientific advances allowed.

Two hundred and forty seven years later the status quo was still unaltered, except that many hunnan beings were actively collaborating with the Shangs. Foremost among these were the Wasps—the World Alishang Police—whose duty it was to uncover any attempts to overthrow the Shang's rule.

In 2072, Colonel Robert Ney was chief of the Homicide Bureau of the Wasps at their HQ in what had once been the United Nations' Building in New York. He was also one of four men who had been entrusted with the secret of ZI-a mysterious symbol handed down through the years purporting to be the signal for the planned uprising and overthrow of the Shangs. Man's nature being what it is, this longed-for hope had almost passed into legend, but behind the scenes the Four Who Knew controlled a resistance movement known as International Intelligence-Double-I-members of which were continually sabotaging the Shangs' rule and eliminating sympathisers.

Ney meets his three colleagues in the Earth Resistance Council on a househoat on the Thames-Steeger, responsible for all Asia, Horner in charge of Europe and Asia, and Cromwell, head of Double-I, an old man dying of cancer who is determined to live long enough to see ZI Day. Ney informs them that Rupert Clinton, one of his Double-I operators using the assumed name of Harris, has apparently killed a Shang sympathiser named Burgess and in trying to evade the Wasps has been seriously injured about the head when his escape car crashed, Operated upon by a brilliant female surgeon, Dr. Elizabeth Eddington, his life has been saved but Wasp police are waiting by his bedside to interrogate him when he recovers consciousnessand Clinton subconsciously knows something vital concerning ZI day.

As Clinton is being moved from the hospital to the local Wasp HO the ambulance is attacked and he is rescued-Ney having to sacrifice the lives of his local police chief and several loval men for the purpose. Clinton is taken secretly to Cape Town to recover and then to a secret hide-out in the Antarctic. Meanwhile, Dr. Eddington has disappeared and it is feared that the Shangs have taken her into custody.

Horner visits Clinton in Antarctica and informs him that he will be going to the Shangs' home world of Alishang to join the underground movement there. Rupert arrives safely in London and meets Horner (who has brought him up like a son) and his aide Bennett, who is expecting to join the Council when Cromwell dies. They leave by car to rendezvous on the househoat but are

trapped by Wasps.

During the ensuing battle Clinton manages to escape and hide in a farmhouse but is later captured by a local resistance group led by Diana Napier, daughter of the local squire, who mistakes him for a Shangsyc. He finally proves that he is anti-Shang and joins their group but on their first large-scale ambush, after Clinton has killed a local Shangsyc, the party is trapped by a superior force. Diana hides Clinton in a 'priest's hole' in her house and goes to

bluff it out with the police while her father philosophises with Clinton. As they talk they hear Diana scream in agony.

Meanwhile, Dr. Elizabeth Eddington and her colleague Dr. Henderson have taken refuge in a mental asylum but an informer puts the Wasns on their trail and Colonel Nev is instructed to apprehend them. Nev decides they will have to be eliminated if necessary and instructs Grandison, one of his aides, to this effect. Grandison attempts to get the two doctors safely away from the hospital but the party is caught by Wasp police and Grandison is killed before he can harm his charges.

The Four Who Know discuss their plans for commandeering Shang spaceships on Earth, filling them with commando crews and sending the fleet off to Alishang. Bennett, not yet a Council member, points out the impossibility of maintaining supplies for the invading force over such a huge distance, but before he is told how this may be done Cromwell rallies from his coma and warns the Council members against revealing any ZI secrets.

XIII

The sliding panel refused to open.

Rupert Clinton battered it with his fists, pressing in desperation at its smoothness in an attempt to open it. Gone for him now was any thought of the rights and wrongs of killing Wasps. Gone was any thought of his duty as a Double-I man, which told him he should break away from this little local fracas and take up again the problems confronting him in the wider world.

He could hear, ringing over and over in his mind, that single, agonised scream. What they might be doing to Diana . . . "Here. Let me."

Diana's father leaned past him, his shoulder pressing in hard leanness against Clinton. A click. A faint, barely audible

squeak. The panel slid aside. Clinton was out into the corridor, running down the stairs long before his brain and scheming mind had caught up with his thalamic impulses. The house was in darkness. A single

strip of light glowed beneath the door of the lounge.

"Aliens come barging in here from the stars, telling vicious types of men what to do, messing up our lives, torturing girls-" Clinton was mumbling in a low vicious monotone to himself as he raced down the stairs. He was aware, in some

remote, detached part of his mind, that he must be insane. The ordeal of being confined with a corpse, coming on top of all the other ordeals and trials he had been through these past months must have unhinged his mind.

Not that he cared, right now.

The automatic, fully loaded, was in his right hand. His left grasped forward for the door knob. Then he paused. No

sound penetrated now from the room within.

He knelt quickly, hearing his knees crack, and peered through the keyhole. Brightness blinded him. When he could see, the room seemed empty. He swivelled his eye and head, trying to peer round corners. A man's leg and hand. The hand holding a club. Black trousers with vellow stripes.

Very good. The other side. Back of a chesterfield. No-one -ves, the flicker of a man's face, smoking a cigarette. The face vanished, the cigarette held in one negligent hand took its

place. Very good.

His training as a Double-I man was spurting back now. beating down the black tide of anger welling from his emotional glands and channelled by his thalamus past his higher brain centres. Now his mind was taking over; being committed, it began to think.

He had forgotten Diana's father. He wouldn't help, anyway. At least two men. More likely more. No more screams, so Diana had fainted Time Just a little Time to trick them.

He went quickly to the front door, eased it open-the chain was wrenched off-and peered cautiously out. At first he could see only black branches and leaves, stabbing the stars. Then gradually things became clearer. He could see no obvious guards. He leaned farther out, looking along the wall.

The oblong of light, crossed by the window frames, lay warm and mellow on the grass. No shadow moved in that patch of light. Very good. He'd been bodily through a window before—he knew the trick.

Back to the lounge door. On a side table a vase of flowers.

Pick them up, toss them aside, heft the vase. Suitable. Back to the front door. Clinton took a deep breath, lifted

the vase in his left hand and hurled it full force against the lounge door. Then he sprinted outside, shut the door as quickly and as

quietly as he could, sprang down towards the lighted window.

He remembered to keep his eyes half closed, his arm up, head down, breath sucked in and held, rest of body limp, as he went through the window. Glass, wood, metal smashed, splintered and buckled around him. He landed a fraction unsteadily, let his left leg carry on bending and went over with it, his left arm outflung along the carpet. His right hand, with the gun, seemingly of its own volition was up and pointing and the gun went off twice, deafeningly.

He squeezed the trigger twice more, to be on the safe side.

Both Wasps had their backbones shot through.

Clinton saw Diana.

She was stretched out on her back across an armchair, her clothing torn and dishevelled. Her hands were bloodless. The cords around her wrist were barely visible in the ruff of skin and flesh around them. Her eyes were closed; but she still breathed, long, slow breaths that tightened up all the skin along her bare sides. Her chestnut hair was hauled back from her face-and the hand that gripped that hair was thick and coarse. with black hairs of its own sprouting along the fingers.

Clinton looked at the hand. He followed the arm along, came to a singlet, followed a thick curve of shoulder to a red-

dened neck and so, at last, looked at the man's face.

The face was that of a vokel, a country bumpkin-a type rare in the country, all too common in the towns-a man who could be told what to do and then shown how, before you did it vourself. His eyes were enormous. The look of terror on his face should have filled Clinton with horror; he could feel nothing but an overwhelming joy at that sign of abject fear. Clinton held the gun on the Wasp. He walked forward four paces and brought the gun down in a slashing stroke that flaved the Wasp's face. Only then did he shoot him.

He stepped back panting as though he had run ten miles without halt. Bile rose in his mouth, gagging him.

No other Wasps in the room. Probably more outside. Have to hurry.

He bent and slipping out his knife, rapidly cut through the ropes holding Diana's feet. Cutting those around her wrists was an awkward job and he drew blood twice before the ropes fell free. She was completely out, a limply unresisting body in his arms. He lowered her into the chair.

Before he could make another move footsteps sounded from the garden path and two men stumbled in. They were not wearing Wasp uniforms. Clinton had the automatic centred between them as they stood, blinking.

"Fight," gasped one. "Down in the village." Then they

saw what had been happening in the room.

The other stretched out his hand, not believing, "Miss

Diana?" he quavered.

"Make it snappy," Clinton said curtly. "There's work to be done. First of all clear those Wasps out of it. Dump 'em in the quarry-"

"I don't think that will be necessary !" said the voice from

Clinton turned slowly, expecting at any moment to feel the

tearing impact of bullets chewing at his side.

The Wasp who stood there, negligently cradling the Tommy gun, personified the type in Clinton's eyes. Tall, broadshouldered, lean-legged, rangy. A craggy face, with two deep creases running vertically down his cheeks, one on each side of his nose. Light-coloured eyes, slightly protuberant, almost maniacal. Crisply smart black and yellow uniform. A World Alishang Policeman.

Inevitably, Clinton tried.

Even as he dived, across the warm body of Diana, he triggered his last shot before the automatic spun out of his hand, his arm going numb with the sledgehammer battering of the shot. The two men from the village were cut down in their tracks

And, as inevitably, he failed.

He dropped short of Diana, rolled from her legs, seeing them receding like luminous marble columns above him as he fell flat on his back on the floor. His right arm was useless. He squirmed over onto his side, moving like a rat in a trap, struggling to reach the gun with his sound left hand.

"I wouldn't if I were you, sonny boy."

He stared up at the Wasp, standing over him, booted feet thrust arrogantly wide apart. Through the arch thus formed, he saw Diana's father walk in the door, cradling an ancient shot-gun in his arms.

A chance, then !

Clinton reacted correctly. To give the shotgun a chance he rolled waspishly, hooked his arm around the Wasp's booted feet, heaved with muscle-cracking desperation.

The Wasp crashed down. Through the sudden thunder of blood in his ears, Clinton heard the parallel beat of running feet. Friends or foes? He did not know; he had to deal with this one, writhing like a tiger on the floor. Clinton cracked the edge of his left hand down on the side of the Wasp's jaw. He felt something snap. For a moment he wasn't sure if it was hand or jaw.

He heard Diana's father saying something. "This must

end. This disgrace cannot be borne under my roof."

Clinton, panting, peered upwards through the hair fallen over his forehead. The unconscious Wasp lay dog-like at his feet. Clinton stared—and went mad with fear.

Diana's father, mumbling about shame and disgrace and trouble-making, was clumsily pointing the shotgun. He worked the hammer mechanism, his face alight with an inner conflict that told Clinton to to truly that at last the mind bedind that smooth facade had finally broken free of its moorings, was adrift on the seo of insanity. He pointed the gun, held now quite steadily, he pointed the gun at Diana—and as Clinton surged surgisht; Diana—and as Clinton surged surgisht; Dianabeth of the surgest of the surgisht of the surgest of

And in that instant of strained rising from the floor, the unconscious Wasp, snatched up by muscles quite beyond any physical restraint, was hurled by a frenzied Clinton directly into

the bellowing gun.

The upper part of the Wasps' body disappeared.

Clinton didn't know what he was saying. He was shouting and sobbing and beating the old man with impotent fists. Dreadfully, he turned to look at Diana. Blood shone balefully from her body and clothing. Wasp's blood? Clinton didn't know—in a spasmodic revulsion of feeling he dropped the unconscious body of Diana's father, flung himself on his knees beside the girl, saw with an unutterable feeling of thankfulness that she was still alive.

Then, in noise and savagery the Wasps charged in a solid phalanx through the shattered window. He fought them, then,

like a wild beast.

He tore with teeth at their jugulars. He kneed them in any groin that came too close. His knuckles dripped blood. He was shouting. His face was alight with the despairing joy of a man who has travelled beyond all normal problems, until he has come to face with the final meaning of existence. He had much his moment of truth—and knowing the outcome could sail struggle out of a simple desire—pitiful and childish and quite unsophisticated—not to go down without attempting to prove his manhood.

But, as it must, the end came. Rupert Clinton was tapped on the head by a gun-butt, and fell asleep on the carpet, at the feet of the woman who had seduced him from his duty.

The Wasp leader, nursing a shattered kneecap in foul-

mouthed agony, was vengeful.

Before he passed out from the pain, he said: "It's him all right. Harris. The tip-off was kosher. Now he's being sent to Alishang, along with this woman of his. Let the Shangs work them over."

And when the news was brought, via channels, to the houseboat moored in an English river. Horner straightened up from

the bunk where Cromwell lay dying.

"Cromwell slipping away without telling us what he means about Bennett so we cannot trust our shadows. And the girl, Elizabeth Eddington, taken by the Wasps. And now Rupert Clinton too, and the girl he's mixed up with, captured. Because of her. captured."

"And Rupert carries the secret that can destroy Alishang —or Earth—locked in his brain, unknowing. And the doctor, Elizabeth Eddington, has heard enough to form the clue to get the secret out." Robert Ney looked at the others, standing under the smoke-blackened shield with the symbols ZI deeply incised into the ancient wood.

"We've only just begun to fight," said Horner softly.

"We've only just begun."

XIV

Afterwards, Rupert Clinton, knew, he would recall the journey to Alishang and remember its glories and terrors. He would see again, with the clearer sight of a maturer wisdom, the slow procession of stars and the incandescent splendour of the sun. He would feel once more the shackles of gravity fall away and again he would experience that frightening—and yet so funny—loss of perception and orientation that attacked a man in a freefall.

Knowing all these things did not make them true.

Rupert Clinton went to Alishang stuffed into a cell aboard a hyperspace starship and the only stars he saw were those that sparked before his sight as his captors callously struck him about the head to move the faster. The odd feeling that troubled him came merely from fear and hunger and lightheadedness. And the incandescent sun that glowed upon him was the spot-light that gave him no rest day or night.

He understood quite clearly that this was merely the overture to the treatment he would receive once he had made planetfall. On Alishang there awaited him only a prolonged and painful

death.

Which suited him right down to the ground.

He could not explain that feeling; he wondered if he would be shaken from it before they landed, or if he would still be moved by the same emotions the day he finally died. He had assumed, as soon as he had regained consciousness, that Dian was dead. She wouldn't have been important to the Wasps, and so they would have killed her. So that aredually made it

clearer to him why he felt the way he did.

He thought of Diana only once after that. He saw her clearly, trimly erect, standing by the courtyard gate, her limegreen sweater and jodhpurs alive against the old wood, smiling at him as he stamped his legs to feel the hot blood running through his veins again. Sensations like that piled up. They stamped a moment out of time, dropped the shape and feel and smell of the incident into his mind and fastened it there, immovably. Diana . . That was how he would remember her; not as he had last seen her, sprawled bloody and beaten in the chair with her unconscious father at her feet.

And after that brief backward glance he did not think of her

again until it was forced upon him by necessity.

He supposed this calm acceptance of what might befull him was not in any real martyred sense an atonement; rather was it a break-out of masochism, engendered by self-hate and self-repugnance, a suppuration of the buried knowledge that he had failed all round, had brought death to friends and had put into greater danger the widening ring of contacts spreading from that enormous blunder in the manor house in Sussex.

Whatever it was, it made little difference to him now. He was never sure when they made planetfall. It could have been at any time during the weeks that passed between being marched into the starship and being marched out again. He

assumed that the Shangs wouldn't waste time.

He might have gone on like that, a walking zombie, callously indifferent to his own fate, if he hadn't been forced to see and hear the girl. Marching in close-packed ranks of Shangs—strange, how he had at last met a genuine alien and how little the meeting now meant, how trivial that awe-inspiring thought of alien confronting alien had become—marching down the ramp with the bodies pressing in on him so that he could see nothing beyond but a segment of blue sky far above, he heard the English words cried out in pain and anger. Not fear. He liked that brave note. Not fear.

Of course, it wasn't Diana. How could it be?

"Take your hands off me! I can walk out alone!"

Clinton squirmed, trying to see past the bodies of marching guards, trying to find a cranny in the moving ranks.

"Hullo, there!" he called. "Who are—"

A Shang reached out, easually, clipped him alongside the ear. Head ringing. Clinton fell back into step with the aliens surrounding him. He'd bitten his tongue and the quickreaching pain stimulated him. Damn these aliens! The attempt to see, to contact, the girl had been his first independent action in weeks. It marked a turning point.

Rupert Clinton had been meticulously trained to live on Alishang. To pass himself off as a Shang. There had been only the eager fun in it before, the desire to please old Cromwell and Horner, his guardian. It had all been very genteel and schoolish—except for the unarmed combat, of course. Now.

he began to take a more personal interest in it.

He looked at the Shangs. They were so ordinary appearing that it was almost funny-until he remembered. One had a receding chin, a couple had bulbous noses, another bags under the eyes, whilst the Shang who had struck him was wall-eyed. Just like men. Which, so Clinton evaluated in his growing awareness, just made them that much more dangerous. He had never bothered much with the various cosmic theories broached to account for the decided similarity between earthmen and aliens from a star seven light-years away. The theory which stated that under similar conditions evolution would produce a similar product seemed to him as valid a point of view as the theory which stated that at a time long buried in the past a vast Galactic civilisation had sprawled among the stars only to come to ruin and final break-up leaving scattered fragments of itself to grow up in ignorance of their mighty past upon isolated chips of worlds.

Maybe. Realising where he was, understanding that his feet trod soil that had never come from Mother Earth, breathing air that had never breathed over the familiar fields and seas he knew, seeing by the light of another Sun, Clinton gradually drew his scattered senses together and began again to think like a human being.

That, in itself, was a first magnitude task. Earth was seven light-years away. Incredible. To his mind now, the world where he had been born, that had contributed its stint of atoms and molecules to build his body, was now no larger than one of those atoms. It had shrunk, receded into blackness, was less even than the tiny dot of light that was the Sun. You just couldn't appreciate those concepts; they shrivelled the heart in your breast. Clinton walked stoldily on, and as he walked he began to think and to plan but he would not think of Earth and his past life and he refused to hope.

The manner of his reception to Alishang ways and his rapid incarceration followed a familiar pattern. He tried unavailingly to see again the Earth girl who had cried out. There was an air of bustle, of expectancy, about the Shangs in the spaceport buildings. Clinton saw many different uniforms and now that he was taking a note of these things again he began to recognise many from the charts and pages of notes that old Horner had briefed him on in the days when-anyway.

he recognised the Shang organisations.

Alishang itself appeared much like Earth. Gravity was perhaps a trifle less; it made little difference and should not betray him. The air smelled sweet and fresh. The sky was blue. Birds-or some alien form of life-sang in the upper currents. This could have been a good world. Then Clinton paused in his thoughts. To the Shangs it was a good world.

Sohering, that reflection,

To those of the aliens who spoke to him in their own tongue Clinton returned an idiotic obtuseness, a carefully calculated play at pretending he did not know the language. He could not recall having used it previously; he might well have said something in answer to a query before he'd got his wits back. but by their irritated manner and quick calling in of a Shang who spoke English he guessed that at least that was a secret he had kept.

Once he had been placed in a small, temporary lock-up, they left him alone for an hour. The room was plastered, woodendoored, single electric light hanging from the bare ceiling. A single wooden three-legged stool was its sole furniture. Clinton sat down. He realised that he was waring a pair of blue slacks and a blue shirt, open at the throat. Leather sandals on his feet felt slightly litchy against his bare soles. That was all his clothing. He began to mull over his situation, vaguely wondering why he had been brought to Alishang. It was not unknown—important men had been taken to Alishang before. Usually there had been some good reason, some reason out of the ordinary and beyond the powers of the Wasps on Earth or their local Shang masters to deal with.

So he was an important person, was he? Why, he had no

idea.

The door opened and three men came in. They were Shangs, well-fed, arrogant, smooth and moving with a brisk purpose that told a suddenly watchful Clinton that they meant business and were used to having their own way. He did not get up.

One spoke in Alishang. "Get up! You are coming with

us."
There was over-riding authority in h

There was over-riding authority in his voice, an assumption of instant obedience. Clinton just sat.

The second man—Clinton had no thoughts of oddness in

thinking of these aliens as men—moved forward, leaned down and caught Clinton under the right armpit. He jerked upwards. Obediently, Clinton rose.

The alien said: "You must come with us, Harris. We wish

to ask you questions." He spoke English.

"Why not ask the questions here?" Clinton said.

No-one bothered to reply. The third man took Clinton's

left arm and together they went from the room.

For some odd reason, Clinton felt impelled to bid a mental good-bye to that room. He had sat in it a matter of an hour; yet he thought quite rationally: "I shall never see that room

again."

What he expected in the way of alien architecture and town planning and any of half a hundred matter-of-fact details of ordinary living he did not know. He was in a curious state of exalted disinterestedness, where everything that happened to him had the quality of a dream experience and could not touch any part of his inner being. He merely awaited what would happen; he expected nothing.

At any rate, the road outside the spaceport building looked ordinary enough; white concrete, edged with blue-green grass and a tiny, starred flower of purple petals. The road was a two-lane highway, and the centre was partitioned by a series of upright white posts, each with a red reflector. The sun struck glints of ruby fire from the reflectors between itself and his observing eye. The car was normal, too—and then Clinton recognised it as a current model Earth-type saloon. Of course; the Shangs skimmed worldly production; they would have Terran cars and refrigerators and radios and all the parapheralia of good living. Transport in the neglied driven starships was cheap enough, too; commodities wouldn't cost a lot here. Especially when the Shangs never paid Earthmen.

They entered the car. A Shang sat on each side of Clinton in the rear seats, the third sat beside the driver. The car moved off. As they rolled along, Clinton caught a glimpse of a second car following them, and then his car had straightened up on the hishway and the following car was lost.

There was little traffic about. All the vehicles that passed were patently made on Earth. The drive went on for two hours. In that time they passed two garages—modelled on Earth designed drive-ins—and a clustering group of grey and green houses. No sign of a town broke the flat horizon of trees and green fields. Agriculture, too, seemed non-existent.

It was like driving in an immense park.

No-one spoke in the car. The confinement was subtly nerve-shattering; it was like the silence of a master before he chastises his pupil. Clinton recognised the psychological pressures being put on him. His mind, which had withdrawn itself from the outside world of reality, now spurred by the brief angry exclamation from an unseen girl, spoken in English, began cautiously to think about what lay ahead. The Shangh ad been after him on Earth; that much he knew. Horner had sketched in a few of the details. But his guardian's attitude had changed markedly, almost impossibly, since he had visited him in the hidden base in Antarctica. Something must have happened there, Horner must have been told something—by that young doctor, probably—that had made him change his mind about sending Clinton to Alishang.

But Clinton was on Alishang now. Force majeure had moved Horner's hand. And there was that following puzzlement of why the Double-I men had received orders to kill him

on sight.

Rupert Clinton slowly came alive, sitting there in the back of a Terran-made car, speeding along the broad highway over an alien planet. He gradually awoke to what might have been going on around him whilst he had recuperated in the menor house in Sussex and had begun a tentative friendship with the local affairs of a little anti-Wasp underground. Had the station master relayed his resentful message? Did the man's superiors, and eventually Horner, now know that Clinton was entirely innocent of any reason to be shot down in cold blood?

Clinton's head was buzzing. He had a quivery feeling that perhaps it didn't matter how overtly innocent he might be, the Double-I men would kill him out of hand the moment they

caught up with him.

The car turned off the road. Clinton completely missed any roadmarks or signs of where they might be, so completely had he been engrossed in his own tumultuous thoughts. The car

stopped.

Herded out, with that same firmness that brooked no argument and no delay, he was matched briskly into a long low white stone building, taken into a small room and thrust onto a chair. He looked around, still wrapped in his thoughts taking in his surroundings with only faint interest. What he was finding out in his mind had more impact—now it was too late—than any alien posturing around him could ever have.

It seemed to him that if the Double-I men were right—and he, from his own experience, knew them to be seldom wrong—then there must be a very good and solid reason for them to want him dead. That he did not know the reason did not enter the argument. International Intelligence had not existed for two hundred and fifty years of underground activity without learning to be right about most thins it touched.

He had been ordered to Alishang, then Horner had been told something by the doctor, and he had then been diverted from going to Alishang, had been told he was to meet Cromwell, the leader. And then, when an accident had prevented that—had put him outside the immediate jurisdiction of International Intelligence—the order had gone out that he was to be killed on sight.

And the doctor had been with him when he was in his deepest moments of unguardedness, when he was unconscious. That doctor could have heard anything. He had been talking in the hayloft, he recalled.

There was only one answer. But-more-there was only

one thing he could do.

As the Shang in the white coat came towards him, the hypodermic in his hands a gleaming sliver of light, Clinton came to his decision. He must kill himself. It was the only thing he could do.

It was quite clear. For the safety of Earth, for Earth's eventual salvation. Rupert Clinton must die.

XV

"Rupert Clinton must die!" Steeger fairly spat the words. Old Horner pressed his hands to his head, leaning his elbows on the table, and could not reply.

Robert Ney walked slowly up and down the short length of

the houseboat's cabin and knew that he hated it; hated its curving mahogany walls, hated the low overhead, hated the soft lighting, hated—most of all hated—the untidy bunk with the sheet covering the still and lifeless form of Cromwell. After Steeger had spoken there was an unusual hiatus, a gap

in the orderly progression of things. Ney had only just returned from seeing about a precipitate and typically Latin good-natured rising against the Wasps by the bolas twirling gentlemen south of the border. The cabin had been tidied up in time for this hastily convened meeting and the pale blond unres's unconscious body had been lodged at her own hospital. It was hoped that she would live. They all knew, standing there with Steeger's words falling like pebbles into still water, that they could not linger here. The echo, the widening impact of Steeger's hoarse words and what they meant spread and broke like little waves of unreason on the shore of sanity. Ney paused in his slow pacing and put one hand on Horner's

Ney paused in his slow pacing and put one hand on Horner's shoulder. He did not say anything. Both because there was nothing to say and because he couldn't have uttered human

words just then, anyway.

"Well?" Steeger prodded, standing straddle-legged against the rising and rolling movement of the houseboat. "Well, what do you have to say, Horner? Do you agree?"

"Clinton had nothing to do with this." Ney gestured round the cabin, his arm jumping as though released from

unnatural strain. "Someone—someone—came in here, like a crawling murderer, and killed Cromwell. Someone." He looked at Steeger, not seeing him. "But it wasn't Clinton."

The storm brewing outside in the leaden sky tested its strength against the scraps of boats lying in the dull backwater; it sent rolling water hills in hurrying procession, rocking the boats in an increasing agitation, like powdered women nodding

behind their fans as the dancers twirled.

"Maybe not Clinton here," Steeger said. "Someone murdered Cromwell. But Clinton's on Alishang, with the secret." He shivered. "We must deal with him first. Do you

agree ?"

Horner lifted his head. His hands remained balanced in the air before him, forming a cup where his face had lain. In that position he seemed to be proffering something—a sacrifice, a gift, maybe—and he did not appear to be aware completely of his surroundings. "Agree, Steeger?" he said at last. "Agree?" His face was grey, as grey as his moustache, as grey as his eyes. His fips, bloodless, wrinkled, moved a little, rolling distressingly one against the other. "Where do you think Bennett is, at this moment?" He moved his head from side to side as though suffering from a stiff neck. "So much killing, so much death. I thought I could last knrough, could take anything that came my way in following my duty. But Cromwell, murdered—but I can, I suppose. I can." His eyes flicked to the scuffed briefcase lying on the table, meticulously positioned before him.

"I can. But that I had to order the death of my son—no, Rupert's not my son by biological fact, but he is as much my flesh and blood by emotion and training and affection as any spirit born of my loins. And I had to order him killed, ruthlessly, with my eyes open. To be shot down in cold blood without so much as a word, a gesture of explanation, of

atonement-just to be taken out and shot."

Steeger ignored his emotional remarks and went straight on. Ney knew the man was seared, was mean-spirited, was all the things that he himself was frightened of becoming. But at least the man was following his duty, as he saw it, of a high council member of the government of Earth—the Terran government —and a Double-I man. He was consistent.

Steeger said: "What do you mean, you've already ordered

it? Bennett? He's in Sydney, isn't he?"

"No. Bennett is on his way to Alishang."

Horner saw his hands, cupped in the air before him. He pulled them smartly into his sides and stood up. He staggered with the movement of the boat. "Storm coming," he said. He looked closely at Steeger, thinking back to the friendships that had existed, the old familiarities, the old enthusiasms. Work and strain and continuous pressures twisted a man's work and strain and continuous pressures twisted a man's you wanted to go, and you hesitated, and were suborned along pathways that you had no right whatseever to be anywhere near. "That's right, Steeger. Bennett under his cover as an exporting manager is en route to Alishang. As soon as he arrives he will take over the machinery that is already in motion to silence Rupert Clinton." He straightened his spine, fighting his tiredness, fighting his dissillusion. "It's very simple, really."

Ney allowed himself to relax a trifle, to withdraw that careful, anxious watch over old Horner. Probably, there had been no real acute danger: but

"I still don't like it," grumbled Steeger. "You know we

never got a good hold on Alishang—"
"Good Lord!" Nev said, annoved, "What do you

expect? A full-blown underground on an alien planet seven light-years of? What with the shipping lines held down to a minimum with the few ships parsimoniously allowed us, strict supervision of all travel to Alishang, and even stricter control of Earthmen there—really, Steeger, you can't expect to set up a secret organisation just like opening a new shop."

"Lknow all that." Steeger was not one to back down in an

Arknow an that. Steeger was not one to back, down in an argument. "Here on Earth we have the cell system, developed by Cromwell from work already done by his predecessors. We have thousands of men and women organised, trained and ready and waiting. Under an alien domination it was inevitable, easy and right that an underground should develop. But on Alishang—"

"Precisely. We have our undergrounds on Earth because conditions call for them. Occupation by superior forces almost always brings to life opposing bodies formed in secret—it's amazing what can be got away with if the people are on your side—and our underground with world-wide networks, jet-aircraft, secret bases in Antarctica is quite normal to us—even too weak and prone to accident—but it would have been an

eye-opener to those old underground fighters of the Terran internecine wars—" Ney was warming up, now. "So-that's all true. But on Alishang you have a stable culture, their well-known life of pleasure, with a few Earthmen allowed there to carry on the business of importing and to do a tithe of manual labour. Okay-so you try to start any underground on the scale we're used to, any sabotage, and where do you get? Dead-and quick."

"All this means," Horner broke in fretfully, "is that

Bennett has gone to do the job himself."

"Not necessarily, Horn. There are agents on Alishang. Alverez-"

"Oh, yes, those. I doubt if they'll want to move that openly. Especially when they are aware that things are brewing up."

"They've had orders. This is an emergency."

"Emergency!" Steeger said. "What do we train them for,

teach them to speak Alishang?"
"Emergency," said Horner. "Hark at that wind." A gust struck the boat, heeling it over. The tide flowed in strongly, lifting the houseboat to float free of its restraining mud.

Steeger stared at his two associates. Then he nodded

meaningfully at the bunk. "What about him?"

Immediately, Robert Ney took control. It was something he had to do, something he owed Horner, "Just let me sniff around. I'm supposed to be a detective-Homicide-and this is my job. We don't know why Cromwell was murdered in just these circumstances." He smiled-a grimace, rather, of distaste. "You'd think they'd have been waiting for us. If they could find this place-"

"I don't think it was the Wasps," said Horner.

"No? Well, maybe you're right. I suppose, really, you must be. Anyway, we can't meet here again-and we'd better clear off quickly. You'd better fly back to London, Horn, I'll make an excuse to see you there in a couple of days. Steegeryou've a hell of a lot to do. I suggest you return to Shanghai at once." He gestured round the cabin. "Say goodbye to the houseboat-and Cromwell. Horn is the new leader. We'll await your orders, Horn, on the new meeting place. Right ?" "Right, Bob." Horner walked across to his outer

clothing and began to shuck on his zippered airman's suit. "I'll wait your contact. Probably meet up again as a council

in Africa. Nice and quiet there, still."

Steeger, after a momentary hesitation, crossed to his own suit, began to put it on, fumbling. In silence, the two men went out. In the silence, Robert Ney was left with the dead body of Cromwell.

He looked down on that wasted yellow face for the last time.

Then he exhaled a sigh and did what he had to do.

A half an hour later he walked briskly through the darkness towards his aeroplane. As he climbed in and began to check the controls in an automatic reflex, he reviewed what he had discovered. He sat there, walting, thinking that no Wasp would have done the murder just like that. He knew, didn't he? He knew how Wasps thought. Horner had taken Cromwell's sculfed briefcase with him; the other records had not been disturbed, and had been taken away by inconspicuous Double-I men; Wasps would have ripped the whole houseboat to pieces. Money had gone—that might mean something. The nurse, struck down, remembered nothine.

Ney sat there in his aeroplane, waiting, thinking-and then

the glow began to suffuse the sable sky.

He looked through the canopy. A single shaft of fire ascended from the muddy river, painting the rushes and flats a lambent orange. The sky was stained with colour, putting out the stars and flushing everything with rose. He could hear nothing of the roar and crackle of the conflagration; but quite clearly in his mind he could see the bunk and the still form of Cromwell and the leaping flames dancing and closing in around him.

When the houseboat was a glowing coal, and not until then, did Ney make any move to start his engines. He pushed the split oaken shield with its incised ZI more firmly down behind his seat. As he took off he was thinking that it had been a

fitting funeral pyre for old Cromwell.

Ninety-nine years old, fighting against approaching death to last out the two remaining years and see the fruition of a dream That, surely, had been a natural impulse? Just to live long enough to see a lifetime of effort at last rewarded? And then, just at the last, to be struck down by an unseen, cowardly hand. At least, the old man was beyond all worries and cares now, all Earthly roblems.

A fitting funeral pyre. Suitable for the Viking spirit of the man, launched upon the dark river in his boat, wrapped in a

winding sheet of flame.

XVI

With that slowly matured but instantly hardened resolution in his mind, Rupert Clinton jumped upright from the chair.

For the good of his own soul—for his own selfish ends on that he could sleep at nights—he must die. Whatever undvolseeret it was that he possessed, a secret that he recognised now he must have buried in the inner recessess of his mind, whatever it was, he had no living consciousness of it. But he felt absolutely certain that it could blow apart all the work that his guardian. Horner and Cromwell, the leader, had put in over lifetimes of devotion.

And—he'd been trained as a Double-I man, hadn't he? He knew about these things, about killing people quickly and quietly. Well, then, he ought to be able to kill himself that

much more efficiently.

As for Diana and the girl who had been brought with him here aboard the spaceship—they must take their own chances; if they weren't already dead, as, surely, they must be. He felt sure they would approve of his decision.

The white-coated Shang appeared in no way discomfitted by his sudden movement; the hypodermic glittered balefully. Clinton stared around him, quickly, furtively, like a fox

sniffing the hunting morning.

"Stand quietly, Harris," the Shang said peremptorily.

Clinton didn't bother to reply. The room was square, yellow-walled, without windows and with purplish-blue fluorescents above that flickered badly out of phase. There was a narrow door through which he and the Shan head entered. There were two folding doors opposite, shut now, and with a new and shiny lock deamins mockingly up at him.

No way out, then, except past the Shang.

Clinton sprang. His feet pressed the floor, his heels lifted and his arms raked forward. After his first spasmodic plunge, he had not moved; he was standing ridiculously poised on his toes, half crouched forward, both arms fatuously extended.

He was glued to the floor.

"That's better, Harris." The Shang approached quite calmly. With a shock like that of breaking ice Clinton realised that the Shang's manner was that of a doctor or nurse cajoling, jollying along, tactfully handling a difficult patient.

But he couldn't move !

"That's right," the Shang said. "Just a little stasis field to hold you steady while we roll up your sleeve—so—and then we pump this in—just a prick—that's right—now relax, take it

easy, that's better, relax-relax-"

Clinton heard that meaningless mumble and then he realised that he was on his back, staring up at a white ceiling. The next thing that occurred to him was that he was ravenuously hungry, A voice, outside, it seemed, his own head, said: "He's coming round. Strap him up."

Quick efficient hands looped him with leather bands. The touch of those swift impersonal hands summed up the horror of it all to Clinton. Since landing on Alishang there had been no violence—the blow on the head had been from a ship guard—there had been no brutality, no threat or hint of torture. Just a calm methodical routine, an almost borred following of custom. He had been taken from the spaceport, brought to this place, doped, and now, in coming round, was methodically being restrained in case he should become awkward. The chilling mechanics of it all perhaps seared him most.

The voice—why had he thought of it as coming from outside his own head? Did voices, then, normally sound

inside his head?

He recalled as through a vague and pressing mist the feeling —the touch—of voices inside his brain. It was though he had been listening, half awake, to a gramophone record and had awoken with the melody irritatingly lodged in his mind astubbornly refusing to depart. But what that melody was, what the voices meant, he did not know.

"Swing him off the table. That's it. Dump him on the

bed."

The movements followed accurately. Clinton found he could bend in the middle, could flex an arm against the leather thongs. He slumped on the bed and rolled onto his side. Now he could see the room—and the Shangs.

There were three of them. He felt that one must be one of those who had come to fetch him in the car. The other was the doctor with the white coat who had given him the hypodermic.

The other was different.

As a boy, Clinton had been shown examples of great paintings by Horner in his guardian's hoarded collection, the last depository of the world's treasure house of art. Before the Shangs had finally over-run the Earth, men had collected the finest of their treasures, representatives of the culture of three thousand years, and hidden them against the day they could once more grace the galleries of the museums of the world. He thought of some of the lesser works he had seen now. He thought of the Kings, stiffly comparisoned men in hose and doublet, or half-armour, or in pseudo-classic robes, with the Garter encircling one plump leg; or of the long-since dead great of the world, carved from marble, enshrined in oil, staring down at him with disdainful eyes. He could see their curved noses, their lips which, at once thick and sensual were yet thin and firm and arrogant. The consciousness of power; perhaps that was the greatest single fact of existence and knowledge shared by all those men who had ruled over other men.

This Shang had all that. Clinton did not for one moment believe that the alien was a King—the conception was archaic, But the outward physical symbols of that spiritual understanding that a single man—by Divine Right—ruled, the fleshly kingship incarnate, sat upon this alien and set him apart from

all others that Clinton had ever known.

The melancholy of power stamped the alien's features.

All during the brief interview that followed this alien remained silent. It was as though he could not bear to sully his mouth with the words and that he graciously allowed his minions to work for him for his greater glory.

"Rupert Clinton," the doctor said. "You have been very

co-operative. We hope that the next session will be even more rewarding."

That they now knew his name meant little. Dying, he would

cheat them yet. The problem was, how was he to manage to

kill himself?

"You are not surprised we know your true name?" That

was the big bulky man who had been in the car.

Clinton licked his lips. They were speaking English. That might mean they still hadn't probed him with their third drugs and their techniques for stripping a man's skull off his brain that he could speak Alishang. Well—it was a sull point; a very minor cutting of losses in the face of over-whelming defeat.

His silence was needling them. The thick man said, sharply: "We have found out a great deal, Clinton. We know a number of your associates—General Kane will be greatly pleased to act on orders now being transcribed to him." The alien's smooth face indicated that he was giving up this "like line of high-flown talk. Clinton expected the bludgeon, now. "There is a block in your mind, Clinton. We have skimed your memories; but we need to know more. You will now tell me what I want to know."

Still Clinton did not speak.

The alien went on, holding himself to that pre-arranged plan of smooth authority, that brooked no failure. "You will tell me, now, what these lines of light mean to you. Why are you frightened to remember beyond the time you saw them?"

Clinton said, moving his lips painfully: "If you can make me speak under your drugs, then you can find all that out

yourself. I don't know."

The thick man said: "Why do you think you were brought here, Clinton? We bring prisoners to Alishang only if they have information of the utmost importance. We have the evidence of others that you did speak of the lights when you were so baddly damaged that you might have died—you would have died had not the Earth doctor saved you. If you cannot answer our questions then we must, by drugs and other means, bring you back to death's threshold again." His smile was quite embty. "Then you will remember."

"Lights," Clinton said. "Highway lamps seen from a car when I was frightened, just before I crashed. How can they be of such importance that you bring me across space to ask me questions about them? What's special about me, anyway?" "Special, Clinton? Nothing, apart from the trouble you

"Special, Clinton? Nothing, apart from the trouble you were causing on Earth to our men."

were causing on Earth to our men.

Clinton couldn't believe that. He tried again. "You know that my own friends tried to kill me. You have found out the information I have on Earth underground. But you imagine there is more, you dream up fantastic notions—lights—and are so frightened that you must dig deeper and deeper to uncover threats that just don't exist."

"The elaborate pains taken by your friends of Earth to keep you from talking, to shield you, and then, when you were beyond their jurisdiction, to kill you, convince us that you know a great deal more than you think you know. More trouble was taken on your behalf, and more trouble was use caused

by you, than would have been the case in anyone not of supreme importance to the rebellious elements of Earth."

"And," the other alien said. "We are going to drag that

information out of you if it kills you."

The kid gloves were getting sweaty, Clinton noticed.

A buzzer sounded and the thickest alien grunted angrily and disappeared from Clinton's sight. When he returned, his face held a look unfathomable to Clinton—he thought, in that instant, that alien expressions were not necessarily the same as

humanity's.

"Something new and vitally interesting has just come up,"
the alien said. "Records on the line." He was speaking now
directly to the kingly Shang. "Sir—the name of an ambas-

sador from Earth, who disappeared in space without trace

about twenty years ago—was Rupert Clinton."

The kingly alien stood up. He spoke for the first time, receding from Clinton's view. His voice was as flat and cold as a serpent's hiss.

"Rip open this alien's mind-to the foetus."

XVII

As soon as the kingly alien had left, the double doors whooshing together behind him, the two remaining Shangs began a rapid conversation, speaking Alishang. Clinton caught disconnected fragments.

". . . seems to think the job's easy . . . deep down . . .

mind will probably-no, certainly-give way . . . "

The other voice, from the thick-set alien. "You'll have to do it, and hang the Earthman's mind. You heard what His Excellency Targanna said . . . must be important . . "

"No good here . . . equipment for primary study only."
They moved towards the door. Clinton strained to hear

more and heard only: "Shift him as soon as we can."

The doors whooshed together again. Clinton carried out a perfunctory check of his leather bonds, and realised that he would not break out of them. These aliens were no TV villains, who invariably tie-up heroes carelessly. Clinton was tied-up—and tied-up he would remain until someone untied him. He lay back, made himself comfortable, and tried to plan what he would do when he was released.

In the event he was spared that problem. The stasis field that had held him paralysed was brought into operation again. Standing on feet he did not know he possessed, with the portable field generated from the metal-boxed contraption running on rubber wheels, he was placed on the platform and wheeled, stiff as a board, through the doorway. They offloaded him and as soon as the power cut, when he staggered and would have fallen, they led him the last few steps into the waiting car. There must have been some inkling of his purpose—perhaps the over-riding rhythm of his brain—picked up by the Shangs. They had given him no chance at all to kill himself, or to do anything silly and force them to shoot him.

The car started with a scattering of loose gravel from its tyres and Clinton had the feeling of dream sequences being repeated. There was even the same glimpse of a second car following.

He sat in the back, between two guards, the leather bands gone from his ankles and only loosely connected between his wrists. The aliens evidently understood the problems of blood-circulation. The ear debouched onto the highway, picked up speed, and headed straight into the dawn.

Dawn! Clinton was alive enough to feel surprise. And his

hunger came back and woke him up even more.

So that, when the car halted and a quick conversation ensued between the driver and another Shang outside, he leaned forward. He was thrust back. Immediately thereafter, the rear doors opened, the Shang on his right pulled down the two folding seats facing the rear and a girl was forcibly helped in. She bent her head entering, and was curtly told to sit on the far folding seats. There was an unexpected air of strain in the air; the Shangs spoke sharply, as though unsettled. Clinton did not look at the girl.

When the second girl was likewise thrust in and abruptly ordered to sit on the second folding seat, Clinton found his emotions, his thoughts, his entire being in a roaring turmoil. Through the thunder of his own wild fancies, he heard a Shang outside say: "Car broke down. Most odd. Dammed

slipshod Earth workmanship, I suppose."

Clinton just sat, staring with head bent, staring at the two pairs of trim slacks, one on either side of him. He could see the brown leather sandals, a glimpse of white skin, and the blue linen slacks. Four times. Four legs. Two girls. He could not raise his head. "A nuisance; but we can cope," a Shang said, the words

drifting in remotely.

Clinton's head and neck and entire body ached. A gaoler? A woman guard along to look after the Earth captive? Hardly, She would not be dressed in the same way as her charge. Who then?

Diana?

That second car that he caught glimpses of from the corner of his eve-that car had been carrying the captive Earth girl he had heard cry out descending from the spaceship. Had itcould it-have been carrying Diana also? Tremulously, Clinton decided that he could bear to raise his head, that he could stand the shock that lay before him. He lifted his headand the light dimmed and died as the car entered one of the landscaped forests.

Something uncurled in Clinton. A glow began in his stomach, drowning his hunger, stilling his unlooked for wild elation, sending the blood pounding in his body and shrilling a warning in his ears. He flexed his hands, moving on the seat in the darkness with only the green gloom beyond the moving windows to show him the shadowy shapes around. He smelled danger.

The car stopped. Jerkily. A voice raised outside. The driver said, in Alishang: "The rope! Across the road!"

Shots sounded. Glass smashed. The two guards drew guns and the one on the off side opened the door and jumped out. Glass rained in an avalanche on the other side and the Shane sitting on Clinton's left hand said: "Ulp!" and coughed blood. He toppled forward, slid emptily down the car door.

The girls moved instinctively aside. A car engine revved maniacally behind them and a machine gun cut lose. Clinton said, fierce and low: "Get down!" The two girls sprawled to the floor. In the strong pungent blood smell Clinton drew in the sweet, warm scent he knew. So it was Diana. Why hadn't she spoken? No time for that now. Had to get out of here. He reached out, slid the gun from the dead Shang's fingers. He peered from the opened door, where the Shang had jumped out. The alien lay, dying, in the white dust of the road. Clinton looked back along the road.

A car had halted a dozen yards off. Shangs were spraying bullets from it into the woods bordering the road. This Terran trap, then, had misfired. He thought he caught a glimpse of figures running in the woods; but as soon as the machine gun ceased fire, silence fell. Noise echoed from the other side, where the driver and his comrade were firing heavily. The assaulting party had been disposed of, this side, Clinton surmised, by the surprise appearance of the following Shang car. The girl-not Diana-leaned over and said : " Are we being rescued ?"

"I doubt it." Clinton said, not looking back, "An attempt to finish me off, most likely." Putting it into words like that made it appear ugly. The girl breathed deeply, leaning on him;

but there was no fear in her voice.

"I suppose they'll kill this girl, and me, too."

Someone threw a grenade. The car shook.

"Why?" Clinton said. The hand holding the gun shook. "I really don't know."

The whole course of affairs seemed wrong to Clinton. That he should be put out of the way, he could understand; that

International Intelligence should wish to kill these girls as well smacked of twisted values. He made up his mind. Looking back to make sure the Shangs were fully occupied-

in the dimness under the tunnel of trees everything appeared blurred-he jumped out, his hands still bound by thongs, the gun awkward in his fist. He crouched, shouting back at the

girls. Without question, they followed.

Doubled up, they sprinted across the road and flung themselves into the woods. Only when they were a dozen yards into the woods, already stumbling and pitching over creepers, did they relax and fall to a rapid trot. Clinton fell full length three times, his tied hands wrenching together. But he kept the gun. He could see, now, that Diana was in a state of shock. At least-she had power over her own voluntary actions and she obeyed him or this strange Earthly girl without question. He felt a profound wave of pity for her engulf him.

Running deeper into the woods, and telling the girl to free his hands, he knew that feeling was not pity. Diana had never had need of pity; now, least of all. It was far stronger, far more potent, this feeling he had. The job of untying him was finished by the time they had run clear across the woods. Coming out from the fringe of trees, they saw immediately below a narrow road, white under the sun. "Too busy fighting it out to catch us," he panted. In that quick glance before bolting he had seen the white-haired man-certainly without a monocle and too far away to see clearly if he had been wearing contact lenses. But if Alverez had ventured so far into the open as to stage this daylight attack, first sabotaging the girls' car to get them all in one vehicle, then the Double-I men must be desperate. The job had been smoothly planned and that unexpected arrival of the second Shang car with the machine gun must have been shattering to the Terrans. The Shangs had played it very cleverly indeed.

"What do we do now?" the girl asked, patting her hair.

Despite himself, Clinton smiled. The feminine gesture could not be cowed, even by the most outrageous events. He cupped his palm under Diana's face—she smiled at him and said: "Hullo. Rupert. Father's about—I think I'll make some tea."

"Do-" said Clinton unsteadily.

"You know her?" The girl looked sympathetically between them. "I've been trying—accustomed—she'll come round by degrees." Her face was drawn, strained. "It's a mess."

"A short time ago I was contemplating ways and means of killing myself," Clinton said gravely. "Now, with you two

along, and a measure of freedom—I don't think I will."
"That's good," the girl said practically. "I'm sure we'll

get along better than I would alone."

"Hum," Clinton said. "Child-like trust or deep psychology?" He stared at her, hard. "Name?"

logy?" He stared at her, hard. "Name?"
"Elizabeth Eddington. You may under the circumstances, call me Liz."

" I'm-" he began.

She said, smiling: "I know. Harris."

"Harris. I see. Harris what?"

"All I heard you called was the murderer Harris."

That shook Činton. He rubbed his chin and took his eyes away from the empty road, studied this girl, dressed—like Diana—in thin blue shirt and slacks that did things to their figures that were barely decent. "So you heard I was a murderer? Well, that part of it was wrong. I didn't kill the woman's husband. She killed him herself. But—"

"But," she interrupted. "Don't you think it would be a good idea of we all sort of moved along, instead of standing

here exchanging pleasant chitchat ?"

"I'm waiting. I'm innocent of that murder to which you refer; but I shall commit a murder shortly." He pointed.

A car was driving along the road, leaving a fine white plume in the hot air. Clinton realised suddenly that it was a fine day. He was not sweating; but everything around him was sharp and fresh under the sun. Liz said : "I see."

"Get out on the road and stop him. Do you speak Alishang?"

"Yes-but-"

"Show him your leg."

"In slacks? And perhaps the Shangs don't—"
"Stop him!"

Liz stopped the car simply by standing in the road with her hands raised. The car halted and the Shang inside put his head

out and said : " What's the trouble ?" Carefully, so as to avoid unnecessary staining of the car, Clinton shot him. He tumbled the body out and then dragged

it into the woods. He came back, breathing hard. Liz was very white, her pallor vivid below her hair. Diana smiled, staring at the car. He got in behind the wheel.

"Come on, Help Diana, That poor chap's lack of suspicion is a good sign. We want to put as much distance as possible between us and them, though."

As he finished speaking another car passed them. "See what I mean? This is obviously a little-used secondary road and yet eyes are everywhere. If that driver remembers us

and this car-" He let in the clutch.

The pattern of their days thereafter followed closely the template of that first act of violence. They found maps in the car and worked a fair fix on their position by the way they were folded and the pencil route-line sketched by the dead man. Small towns were scattered all over the area; these they at first avoided. Only when, after a number of more carefully arranged holdups had clothed them in smart Shang outfits, had fed them leanly on the gay contents of picnic baskets and had provided them with money, did they venture to stay at an hotel.

They bought an inconspicuous car, holding their breath over their credentials which showed Clinton and Liz to be honeymooners-with Diana, gradually recovering, discreetly in the background-and slowly made their way towards the capital. Clinton was beginning to question some of his most cherished beliefs; living like this-the honeymooners had upset them all at the time-like criminals on the run, did nothing to help him. The girls, whose Alishang daily improved, understood that Clinton had been trained to work on Alishang and they took this to mean that he expected to go on living on the alien planet. He warned them that there were very different areas on the globe, completely unlike this Earthly paradise in which they now prepared for the future.

Liz was marvellous with Diana. Diana responded, and very soon it was Clinton and Diana who were the honeymooners, not Clinton and Liz. Liz said: "I never did have much time for men. When they saw me they all seemed to want one

thing."

thing."

Clinton acknowledged that Liz was just about the most luscious—and lush—female he had ever seen. But beside Diana—and yet—if they had been alone . . . It was no clear-cut feeling, no quite inevitable choice.

Liz told him that she had been the doctor who had straightened out his skull, and, listening to his ravings, had thereby been put in danger of losing her life. "The Shangs kept asking me what you'd been saying. They knew you had some vitally important information and they were worried by the Earth people's attempts to silence you. I couldn't tell them anything. All you babbled about was strings of light."

"Just like you did in the hayloft, Rupert," said Diana.

"I don't even know myself." Clinton told them what he knew, filling in the meagre details; there was no danger in that now. As he said: "We're on our own, Diana, Liz. There is no underground to whom we can turn. We must act like criminals."

" Always on the run, Rupert ?" said Diana.

"No!" He was angry. "No. We are an invading force from Earth. We attack. We take what we want, and live well."

Between them, they had run the gamut of so many emotions that the right response to new stimuli was difficult. The day Liz found a compact in a dead Shang woman's handbag was brighter for her and Diana for that—and yet there were dead people—admittedly alien; but still people—lying in the wreck of the car. It was a question of viewpoint. Whilst they could continue to live, that was the most important fact of all.

They moved about the country and by this time they made the vidences of the hold up were buried deeply. The girls had continually to be reassured by Clinton that the easy way they could travel, without hindrance and check-ups, was a way of life on Alishang

-it had been a little like that on Earth, once-and that the strict supervision of Earth did not apply here. The Shangs were a pleasure-loving people, indolent, hedonistic to a degree, and by taking what they wanted from their subject worlds and by maintaining a strong mercenary army and selfseeking scientific staffs, they were able to live off the fat of many lands and solar systems and live the life sublime.

Very often, in the months that followed, Clinton and Liz discussed his mental quirks and problems. Clinton was understandably intrigued by the secret he—apparently possessed. He could not imagine what it might be. Liz sought to unravel the inner recesses of his unconscious, sure that most of his nervous instability and sudden fretful lapses from grace could be traced to that shattering traumatic experience of his childhood. Like Shirley-and Diana-it was

therapy for her as much as her patient.

At first, the beauty of Liz was a mere accompaniment in the background to violent actions in the foreground of Clinton's life. But, gradually, the allure of her, the sheer overpowering womanliness of her began to drown him; and that old magic propinquity played its usual subtle part. Yet through it all he was sensitively aware of Diana, fighting to be once again that vital and buoyant sprite he remembered so well.

It might have been a very strange menage a trois, if it hadn't been for Clinton's humorously old-fashioned ideas. One day, in a small hotel in the shadow of gigantic, orange-red mountains with the ground rippling in gentle, soothing waves so that the trees sighed in the calmness, and where the air

was very sweet. Diana said seriously: "We can't go on living

for ever like this." Liz nodded emphatic agreement. Clinton wanted to say: "As soon as we get back to Earth, we'll be married." But he couldn't-they both had a claim on him now. "Let's worry about that when we get back to Earth," he said at last, unable to condemn his own weakness.

"Dolt!" Diana said. "I mean-how do we get back? We might go on tramping round Alishang for the rest of our lives, stealing when we are in need, doing and accomplishing nothing. That's no good to me-perhaps you and Liz might be happy like that." She took her head. "Not me. And I don't think any of us three were cut out to be failures."

"No. And we won't be." Clinton rustled the map on the bed. "Look-here is a large town, sector capital. Spaceport,

Now, if we make friends with the right people, we can buy a passage to go sight-seeing. The Shang grand tour."

"I see," said Diana. "Holidays on Earth, eh?"

"That's right." Liz said. "Only it'll be one way." "Back to Earth, I suppose," Diana demanded, "that you two know what tomorrow is? I wouldn't have known—but I had more things to catch up on in my blank period."

"Tomorrow? Let's see-Thursday, isn't it? On Earth." "Tomorrow is the anniversary of our landing on Alishang."

"A year!" Clinton was bemused. "So it is. A whole year." He looked at the Alishang calendar on the wall. "This confounded Alishang year mixes me up. Don't even know when it ends."

Liz said: "Three months time, I think,"

"That's right," Clinton said, flicking the calendar over. "Three months time is the New Year. That'll be 2274, won't it 9"

"I wouldn't worry about Steeger, Horn," Ney said authoritatively. " Now that ZI is so close he's rallied himself to the understanding that, by golly, it's here."

"But when we tell him about Bennett-" Horner smiled

faintly at Ney's studiedly authoritative manner. Good old Bob Ney! Trying to heal over the wound left by Clinton's loss. "I still find it incredible-and dismaying." "So do I." Ney glanced up at the photo-electric tell-tales.

Outside, the African sky over their new headquarters was dark with cloud, and the air was full of moisture. "Here he is now."

As Steeger walked in, shivering in the sudden warmth and shedding a tingling odour of the out-of-doors brought into a smoky room, Horner said casually to Ney: "We'll have to tell him that Palmgren is the new man. He might-"

"Palmgren?" said Steeger, looking up, half out of his flying

suit. "What about him?"

" Palmgren is to be the new member of the high council. Steeger. He'll join us, and become the fourth of the Four Who Know. I trust you've no objections ?"

"No. No objections." Steeger flung his suit into a corner and crossed to the liquor. "Need a little pick-me up. So—and

this means, I suppose, that it's been proved beyond all doubt

that Bennett got killed on Alishang?"

Ney raised an eyebrow at Horner. Horner said: "Not quite, Steeger. You might say that the person we knew as Bennett died on Alishang. Poor old Alverez and his group were badly shot up. Bennett died with them."

Steeger drank gratefully. "It's bad, I agree. What news

of Clinton? Nothing fresh?"

"No. Nothing fresh; if he's dead or alive, we don't know."

"Well, what's this heavy atmosphere of mystery-?"

Horner, feeling every millisecond of his age cairned on him like a pile of rocks, said: "Bennett is still alive. Only Bennett isn't—never was—Bennett. The person we knew as Bennett is a Shang."

A girl in silver-spangled tights slid laughing and disheveled down the crystal antigrav chute and pirouetted among scurrying robowaiters, jecting up at her companion. He gave a merrily menacing shout and dived down the chute, clutching for the girl. Gigdling, she evaded him and disappeared into the throngs of whirling, cavorting dancers about the soating central columns. Music buffetted the scented air. Giggle-gas balloons popped everythere. Globes of light dangled from the hazy ceiling and every thered baleony was crowded with tables and chairs, filled with riotous, excited, frenzied diners and dancers. Wine flowed in cataracts of colour and bouquet, wine that had been shipped in from ten subject planets and four subject staellites.

"There's our man," Clinton said, and draped his scarlet cloak across his left arm. Liz and Diana put up their masks. Diana's body was encased in golden scales, skin tight, hypnotising, demure. From the waist up, Liz wore transparent black mylon through which her flesh glowed, at once cool and warm; from the waist down an immense, bouffant skirt billowed, rippling in ever changing colours. The girls were quite stunning—and yet prudishly modest compared with those around.

"He looks an ugly customer, Rupert Can you trust him?"
Diana laid a hand on his arm.

"I think so. We're moving in the smart set of Alishang society now, darling. No-one trusts anyone. But I think friend Matras can be handled. With the right currency to speak for us." Clinton smiled. "Gambling isn't quite the same here as it is on Earth."

"You skinned him yesterday," Liz said with satisfaction.

Clinton walked up to the shipping line owner, smiling, greeted him. Matras nodded his head in acknowledgement. He was indeed, as Diana had said, an ugly customer. For a Shang he was bulky. His mouth would have been handsomelike the rest of his face-had the lower lip not been so full and curled and repulsive. That was his misfortune-Clinton wondered idly why the man had never bothered to have the plastic surgeons trim it. Perhaps Matras just didn't realise. Some people were blind in these matters.

"Come to let me win my losses back ?" Matras asked.

"If you care to hazard a game," Clinton replied, casually. Matras's money had certainly been a handy addition to the payroll Clinton had taken on its way to this very restaurant. On Alishang crime was almost non-existent, the parasitic higher classes had no need of it, and the lower levels had no inclination and no brains for it. Petty law breakers were punished with a savagery that was not human.

The role of master criminal suited Clinton ill; but he played that part with all the force and verve of his character. The girls supported him, as, he thought, no other women could have done. He had no fears of discovery as he stood talking to a shipping magnate in the city's largest, most exclusive and most abandoned restaurant. Just to enter those closely guarded portals demanded a poor man's wages for a year.

"Before we go through to the rooms, Dascobar," said Matras. "I have to meet a man—purely business. Perhaps you would care to join us in a drink?"

"Charmed," Clinton said. He smiled. Matras did not wish to lose sight of his prey—especially when that prey had proved itself tougher opposition than he had expected. They moved to an antigray shaft and were wafted upwards to alight on a thinly railed balcony, swaying high under the roof. Mists and scents swirled below, and looking down was an experience of vertigo and immense exhilaration.

Those antigrav shafts were adapted from the negfield drives of the Shang starships. Clinton felt a queasy unease at thought of being so near a closely guarded Shang secret. Wine

spurted in controlled measures from delivery tubes.

Drinking, keeping up a flow of bright conversation, Clinton reviewed his next moves. They had nearly enough; tonight, with luck, should see the balance in the kitty. Tomorrow—tomorrow, he decided, they'd book three passages for a sight-seeing tour of Earth. Then-tally-ho | for home.

The man who joined them was clad in the purple of the Shang Space Guards. He and Matras immediately fell into an acrimonious wrangle. Clinton listened awhile, and then, satisfied that it was a mere business deal, he turned his attention

to his surroundings.

Diana was vivacious and gay, laughing, her eyes sparkling and her cheeks hot. Her hair, Clinton saw disapprovingly, was silvered and gold-dusted. The natural glory of that auburn mass was hidden. But against the flame that was Liz, Diana seemed a teenage giggler. Around them people laughed and shouted and drank and played idiotic, supremely funny games. This was a palace of the gods. This was a Nirvana for the starved of colour and spectacle, a Valhalla where those worn out by the day's hard duress and business worries could relax and give themselves up to heclonistic luxury. And all, Clinton thought savagely, builded upon the sweat and misery of planets like Earth held in ablect slavery.

That wasn't quite true, of course. But the contrast between places such as this restaurant and the hovels of the Terran poor stuck in his throat. The Space Guardsman was talking more

freely now, and they were drawn into the talk.

Eventually, they veered round to the Guards' favourite topic —spacewar. Clinton assumed the mental mask of Dascobar, a good Shang. "But surely, captain, spatial war is impossible? We all know it. No other planet could invade us."

"Of course not, whilst the Spaceguards stand duty."

What Clinton did not dare say, Matras boomed with a belly-laugh of mockery. "Even without you young popinjays, no one could invade Alishang! The distances are too vast. To put an army on a panel from an extrasolar source, and then to keep that army fed and provisioned and ammunitioned—logistics would strain all my fleet—yes, and the fleets of half my competitors, too."

"We smashed Kooralie," the Guardsman said, vexed. "And Earth and Sha'durango. We landed invasion forces,

and-

" And then lived off the land. But can you imagine any of

the planets you mention sending an army to invade us—"
The Guardsman laughed. "Those whipped curs! Why,
they couldn't even make a landing. And if they did, they'd

they couldn't even make a landing. And if they did, they'd have no weapons of our calibres, no missing, no nothing. And you've just said they couldn't supply themselves—they've no shipping. And, even if they had a thousand starships, they would be insufficient." Very cocky, very flamboyant, the space captain.

It nettled Diana. "So Earth—and the others—could never

invade ?"

Clinton looked at her sharply. Her face was smiling and radiant; but he didn't like the set of her mouth. He decided

to get her out of this, quick.

"You want it proved to you, madam?" The Guardsman's greedy eyes had seldom strayed from Liz once he had seen her beauty. Now he stared arrogantly at Diana. "Why, even the public Central Library can give you that information."

"Thank you, captain," Clinton said, standing up. "I think my wife is a little unwell-excitement-you know-" He

winked. Liz put a hand on Diana's arm.

The Guardsman sat back baffled. Matras, his thick lips slobbering, his fat face wreathed in smiles, said: "Oh, good, Dascobar! Congratulations!" He was beamingly fatuous Liz let her stole drop lower around her shoulders. "Think

I'll wait around, there should be some fun later."

Clinton couldn't argue. Anyway, Liz could take care of herealf. Girls built like that usually can. He got Diana out of it somehow, through the noise and confusion and flashing limbs, promising to return to give Matras his revenge. Everything had gone over Diana's head. She submitted to being taken out, sat in the cab fifting over the city's lights silently, said not a word as they entered their hotel room. Then she said, suddenly: "I didn't like that space captain. Too brash. Hope Liz clips his wings. And I didn't like the way he looked at me. This damn gold sheath is too tight, any way." She looked at Clinton, puzzled. "But why was old Matras so happy to see you leave when he wanted revenge? And what was he babbling about?"

Clinton said: "I told them you weren't well."

" So ?"

[&]quot;I suggested, delicately, that you were enceinte."

"You—did—what?" The tape recorder, although small, made an enormous sound as it flew past Chitnor's head and shattered against the door. He laughed and seized her and showed her he meant what he said. Only when Liz came back, very late, very flushed, very excited, did he recall what the space enardsman had said about the public Certart Library.

Liz was babbling about meeting a most marvellous Shang who, for a change, was a gentleman. "Not like the usual Shangs, at all, Diana. You know, I think—but that's impos-

sible. Not with an alien-not with a Shang !"

Thoughts and memories began to clip into a pattern in Clinton's mind as the girls prattled on. As he was going to bed, methodically checking his gun, he worried it over. As he lably dropped off he made up his mind to visit the Central Library and try to find out the secret of being Rupert Clinton.

The next morning, Liz said: "I don't like it, Rupert. Suppose a librarian wants to know why you're snooping around this old Rupert Clinton accident?"

"I'll be careful. You've made up your mind then?"

"Yes. We'll wait. But don't be long !"

Laughing, Clinton rode by flitting-cab to the centre of the city, paid off the cab some blocks from his destination, chillingly aware of just what he was doing and allowing his Double-I training to take over. The Central Library bestrode four blocks, a colossus of stone and marble, glass and plastic. Riding up in the lift, he made a quick calculation on their current financial position. Operating on a shoe-string in haunting the Shang night-spots, they must either leave to-morrow, or spend more time—making—fresh money.

The librarian, a gentle soul with contact lenses that made

Clinton think of alien monsters—and recoil shockingly from the idiocy of the thought—the man was an alien !—was courteous in putting the facilities of the library at Clinton's disposal. He spent an hour in his cubicle, pressing buttons for general information, glancing perfunctorily at the reading matter and pictures thrown up on the screen. Casually, he

pressed for data on Ambassadors.

The Ambassadorial system was an archaic hangover, maintained by the Shangs as a sop to their consciences, and also as a convenient method of having a whipping boy on call to transmit their orders with the weight of native fear. Clinton went through the ten subject planets, carefully, realising fully

that anything he might call for would be monitored below. He could not just dial for 'Rupert Clinton, Earth Ambassador.' Shortly after doing that a squad of Shang police would

enquire his business-ungently.

An hour later he was scanning the Terran lists. The average length of residence seemed ten years. The current incumbent had taken up his post in 2270 and the man before in 2260. The man before that had arrived in 2251 and his predecessor had taken over in 2240. Clinton paused.

The names meant nothing to him—he knew that of the present Ambassador—Perring—but there was an odd one year hanging unexplained. He dialled to check on that and found the ominous warning glowing on the screen before him.

RESTRICTED

It was time to think. He knew his father had been an Ambassador—the kingly Shang had said so. The name of Rupert Clinton did not appear on the lists. That could mean only that his father had never taken up his post, and Clinton knew that he had been lost in space. Half an hour later he had checked through accidents in space and again that RESTRICTED sign mocked him from the screen.

He went at it again through starshipping statistics and again came full tilt against RESTRICTED covering the short period from early 2250 to late 2250. Somewhere in that period of time his father, en route to Alishang, had been lost in space. Clinton tried four other possible leads and every time was baulked. He sat back, noticing the lapse of time, wondering if his continued interest in a single fact of history was having repercussions down below. For all he knew a Shang police squad was on its way for him now.

The marvels of the machine he was using were lost on him. If he wanted information on any subject he had merely to dial for it. The key groupings by subject were there in the instruction manual—the catalogue. In the vaults of this mightly building millions of facts were recorded magnetically, electronic circuits flamed into brief life, and what he wanted to know was throw upon the screen.

Everything except what he wanted to know.

He tried again. He recalled Matras's indignation over some Shang thief who had broken out recently. The case had attracted attention by its rarity. What was the fellow's name? Ah, yes—Gurnala. Clinton dialled. The details of the case and the grisly fate of the prisoner flashed on the screen. Clinton noted the reference numbers, checked back and dialled for a list of criminals. The name of Clinton stared back at him,

in strict Shang alphabetical order.

He reached out—and then withdrew his hand. That way, he was sure to alert the hidden watchers. That they were there he felt sure; the itchy feeling down his spine had been growing stronger, minute by minute, until it demanded all his willpower to remain seated. He thought desperately, trying to find a way through, over or round this impasse.

The words someone had said a long time ago floated back to him now. In his hour of need they rang again in his mind. "No culture. Rupert, is entirely bad, it wouldn't last if it was."

He smiled, gambling ; decided, and dialled,

He found it under 'Rescue Operations, subsidiary, children.'
He read quickly, and the more he read the more he knew he had

walked straight into the Shang trap.

"Date—Fifteenth May, 2250. Subject—Rupert Clinton. Son of Rupert Clinton. Earth ambassador to Alishang. Starship Queen of Austerlitz sustained severe damage to negfield drive necessitating emergence from hyperspace into spacetime normal. All crew and passengers fatal casualties. Rupert Clinton Junior launched in Lifeshell, Child, Mark III. Picked up ten days later by Terran starship Navarino. Child was on last reserves of air and auto-fed food. Distress signals picked up on—" the report then went into technical details of wavelengths and equipment used. Clinton noted down the spatial co-ordinates of the rescue and then at once cleared the screen and set up another report at random.

He stayed in the cubicle, feeding in information to the screen, quite at random, trying to obliterate the interest he had had in the Clinton child, and feeling the hot breaths of the Shang police on his neck every second. It took a great effort of will-power not to jump up and dash from the library. It was as tough a quarter of an hour as he had ever spent. He thought of the dead Wasp in the priest's hole, and shuddered in remem-

bered horror.

So all the people aboard Queen of Austerlitz had died, save the child they had managed to thrust into one of those tiny lifeshells. Then the child had been picked up ten days later, when its distress call had been recognised. Very lucky for the kiddie, that. Who knew what the child had experienced, what its baby eyes had seen during that time when it had floated, alive by the grace of modern machinery, lost in the night of space? Who could tell which way it had been going, how much space it had covered, just what had happened during that time? That sort of experience must have been shattering, must have been traumatic.

No wonder he couldn't remember anything about it.

At last, Rupert Clinton stood up, switched off the library screen, and went downstairs. The gentle old Shang librarian hovered around him vaguely. Clinton sensed the man's uneasiness. He asked if any phone calls had been made for him.

"Dascobar?" The contact-lensed eyes would not meet his.
"No-o, I don't think so." A check of the robophone revealed

no incoming calls for any Dascobar.

"Thank you." Clinton went out into the sunshine. He felt hot and sticky. The slightest thing, he thought, would upset him, make him sick. He was on the verge of collapse; he was frightened for Diana, and for Liz.

As soon as he reached the hotel he told Diana: "We're

moving. Get packed. Where's Liz?"

"That boy friend from last night called up. She's having a

drink now-

"Get her up here, fast !" Clinton blazed. Diana phoned. Clinton was jumpy. He told her what he had discovered. "That hedge of restricted notices was put there to see just how determined a person had to be to find out more about Clinton. The way I found out was through a loophole—and the Shangs are too thorough, too meticulous, to leave loopholes."

"A trap then?" Diana was quite composed. She was a different woman from the one who had come to Alishang.

"Yes. A trap. And I had to walk into it to find what I wanted to know." He held her shoulders, looking at her. "But I was wrong. I had no right to involve you and Liz in more danger when we were on the verge of going home. And where is Liz?"

"Nonsense! We're in this together. And however old and tired that may sound, it still means something to me. See?"

"I see." He kissed her and then released her just as Liz came running in. "And now-get packing. We're on the run !"

Liz said, cutting over their explanations: "Tm on the run, uman! That Lothario warns me to take a nice quiet hitle jaunt with him to far distant lands. Huh! Tve had experience of his type back on Earth. One track minds." She flung her coat on the bed. "What's the excitement?"

They told her. Her face had lost its smile; but she was as determined as Diana, and refused to allow Clinton to blame

himself. Then she chuckled.

"It's a pity we're leaving. Lothario owns a space yacht. Wants to take me off, away from it all. I'd just like to take him for a ride in it. Boy—wouldn't that be fun!"

"Wonderful," Diana said mockingly, tossing things into a case. "A long romantic cruise. Just the two of you, with all

of space to play in."

"He's the most handsome man I've ever seen," Liz began hotly—and both Clinton and Diana laughed at her abrupt, stammering confusion. Then Clinton sobered. He stood rigid, a gaudy orange and green doublet hanging creased in his fists.

"You know, Liz darling, you are rather beautiful. Enough to be able to turn a simple Shang's head. You could—I believe the term is 'wamp'—you could vamp him into taking you aboard his space yacht for promised fun and games and soar almost anywhere." He lowered the doublet. "Negfield?" The query was diamond hard.

"Why, yes." Liz was puzzled. "I don't think you could

persuade him to chance the trip to Earth."

"No. Somewhere else." Clinton flung a look of apology, a self-confession of weakness, at Diana. "Liz-ring him now

and start vamping! Lothario is now working for Earth!"
So that, when that afternoon a simpering Liv was escorted by
a peacock-strutting Space Guardsman in his purple uniform,
he was met by the gun muzzle and grim determination of
Clinton. They stood by the spaceship, towering and silver, and
Clinton locked and locked and could not believe.

The Shang smiled with cold self-assurance.

"Hullo, Clinton," he said. "Took me a deuce of a time to find you. But I did, through your little lady friend's trap. Didn't expect to see your old pal Bennett, did you?" "Bennett," said Clinton, dazed. "A Shang!"

"My dear fellow! An Earthman—a Double-I man—working with you. Now let's get off this alien planet, shall,

we ?"

XIX

"We'll get away, of course, provided the Shangs don't catch up with us. Then they'd shoot us out of space like targets in a

gallery."

The space yacht ran smoothly through hyperspace, every minute defying various weighty laws of space-time and appearing not the whit troubled by them. Clinton held his gun on Bennett; both the girls wore guns strapped to their waists. A puzzled atmosphere of waiting smelled in the shir

"Why don't you give in, Bennett?" demanded Clinton.
"Why keep trying to put yourself over as an Earthman? None
of us believe you. And, anyway," he finished with sombre
regret: "If you were a Double-I man, you'd want to kill me

just the same."

"Look, Rupert—how can I be a Shang? Didn't I get blown up with you and Horner in that car? Aren't I on the high council of Earth?" Bennett's tones lacked the bite, the despration, the sheer force of conviction, that they should have possessed; should more particularly have possessed if he was an Earthman—and yet, wouldn't they have been drivingly pleading if he was a Shang? Bennett's facade had crumpled.

And everywhere that Liz went in the control cabin, Bennett's eyes followed her like a sick spaniel's. Clinton thought, with urgly satisfaction: "He's got it. He's got it bad. And Liz is

the right bitch for him. Shang !"

Bennett tried again. "The Shang's'll knock us cold."

" And that doesn't make you afraid?" asked Liz.

"Of course. I'm scared silly. But there's not much I can do with your guns on me—except talk."

"Brave man," said Clinton admiringly. "But we shan't kill you unless circumstances force it. I've had a bellyfull of killing. God—I hate Shangs—but I've satiated my desire to kill them. I wish—I wish—"

"Yes, Rupert?" Bennett said eagerly—and cringed quite involuntarily as Clinton's gun jabbed forward.

"Why don't you admit you're a Shang?"

"We'll be coming out of hyperspace any minute now."
Bennett checked his controls. The radio lay smashed. "A
Shang?" He checked the controls again. His hands were
unsteady. Mositure filmed his skin, beaded on the wrinkles in
his forchead. "If I said I was a Shang you'd forget your petty
seruples and null that trieser."

"We need you to run this boat. Can't you see, Bennett, it's a matter of knowing? It twists in my guts. The thought of

you, sitting with Horner and Cromwell-"

Bennett's body folded. The yacht came out of hyperspace. Bennett's face was mashing the chrome of the control board. His shoulders shook. Great wracking, tearing sobs burst from him. It was embarrassing. Clinton felt hot shame flood him. He had no time-in that supreme instant-to take in the glory of space flaming about him. Bennett had completely broken down

The man's handsome face, ravaged by his emotions, lifted, His hair fell over his eyes. Diana and Liz and Clinton stared at him: the guns suddenly childish lumps of metal in their hands. Bennett's tear-streaked face, swollen, lumpy, quite shockingly,

and for the first time, human, filled their attention.

"Yes!" he said. "Yes! I'm a Shang! A Shang! But I've lived on Earth for years. Best part of my life. And I mean the best part. I had a job to do. I did it. I did it damn well." He was shuddering great indrawn breaths now. "I had to find out what ZI meant. I had to penetrate to the high council and find the secret. And I would have-I would have."

Someone said: "A miserable spy."

Bennett laughed. "A spy! Sure, that's me, a spy. I would have spied well, too-a classic in the galaxy. But-but something wouldn't let me go on. I couldn't take it any more. You wouldn't understand. Not an Earthman. You wouldn't see how the sly business sickened me. I killed Wasps-they were only Earthmen, at first. And then-then I thought of them as my enemies."

Liz said: " A simple case of transferred emotions."

"Not so simple," Clinton said. The feeling of embarrass-ment crippled him. No man—Earthman or Shang—should have to bare his soul like this. "Why did you break down, Bennett? What did we say that got to you?

"Cromwell," Bennett whispered.

" Cromwell ?"

"He was dying. He was dying, you understand? You believe me? I had to do it-he stood in the way-gone, the secret must have come to me. For God's sake say you understand !"

Clinton's reactions came back, filled his mouth with bile. "We understand. You murdered Cromwell-is that it?"

" Not murdered-only nudged."

" Nudged ! Nudged-a scheming Shang spy, murdering the

Terran leader, and you patronisingly say nudged-"

"I'll do anything. Anything. You've seen how I feel about Liz. That was the finish. That was the last ounce that killed the jets. I'll repay. Anything. Atone. Only I must be able to

live with myself again-"

Clinton might have done any number of things then. He thought of the trail that had started when he had fled from Sheila and her dead husband, Frank. It had led a long and tangled path to this space yacht among the alien stars. He took Diana's arm. He smiled at Liz. "I need to check space a while. I'm looking for something all tied up with what

Bennett has been telling us."

He thought of that long, twisted trail. He remembered what Diana's father had been saving; of there existing different values in the Galaxy, more humane, understanding ways of treating the clashing conflicts of human and alien relationships. Bennett's breakdown was quite genuine-if Liz was convinced of it, then that was good enough for Clinton. It could prove a starting point for a new beginning. "Liz, darling," he said. " Talk to Bennett, will you?"

He watched them go out, Bennett stumbling as though under a five gravity load, Liz wearing a new, strained, apprehensive little smile that wrenched his stomach. Was she going out there with Bennett as a doctor, a scientific prober of his mind, ready to strip and evaluate what she so coldly found? Or was she going-for the first time in her life-warmly, as a woman,

first, last and all the time?

Around them space was empty. Ali gleamed, a beckoning dot. "Nothing here, Diana," Clinton said into the stillness.
"We must search closer to the sun. When Liz has found Bennett some self-respect again-and whatever those two poor devils find together-we'll jump through hyperspace nearer to Ali "

"Whatever you're looking for, Rupert-you'll find it." "I'm only just beginning to understand what I am looking for"

Diana came close to him. "Whatever it is, I think you began when you chose to understand Bennett, to believe that he desires friendship with Earth people." She had no hesita-tion in finishing. "And whatever it is you're looking for, Rupert, always remember that I'll be here, with you, when you find it."

"Thank God," Clinton said tenderly, "For someone like you."

XX

On the morning of New Year's Day, 2274, the tiny starship popped from hyperspace, the negfield engines died to quiescence, the ship orbited Solterra once and then made a perfect and unobserved landing on the night side.

Two hours later Steeger pushed through into the African headquarters and headed for the liquor. With a glass in his hand he turned to face old Horner, Robert Nev and Raoul

Palmgren, and said: "All there. And so, ZI dawns."

"At last." Horner, still sitting stiffly upright, still brusque and grey, felt the wave of emotion go over him, recognising it for what it was. This was the last time. The Four men—the Three Who Knew and the fourth, who was to be inducted this night—found seats around the oak table. The walls were mostly covered by maps and charts and photo enlargements of Alishang's moons. The ceiling light was restful. The carpet was thick. Air conditioning made a lazy, restful background lullaby.

Easy enough to guess what Palmgren was thinking. He eased his big bulk, smiling with pleasant, nervous apprehension.

Robert Ney said softly: " And so ZI dawns. At last, at long

last, Earth can fight back for freedom."

"Big words, Boh," said Horner. "Words that have become almost meaningless over the years. Who, now, really believes there is such a thing as abstract freedom? Who would willingly hazard his life for any hazy idea?" He smiled, not tiredly, but as a man smiles who through infinite patience at last sees his goal and with quaking awareness realises that he must now perform in fact all those deeds he has rehearsed and dreamed in secreey and stealth.

"I believe Earth has had a raw deal," Ney said stubbornly.

"And so do you and the rest of the council and so do the free

fighters waiting to board the starships."

"Now they're going to have their chance to prove it when

they start fighting on the moons of Alishang."

Horner looked up at the old smoke-blackened ZI shield and chuckled. It was a sombre little sound. He busied himself as reports and orders flowed into the recording machines. Soon they would induct Palmgren. There was no rush—now.

At last they got to it.

There was no hurry over this. This had become a ritual over the centuries. No man was lightly told the greatest secret in the galaxy. When a man was told, a little grandiloquent morale-building was not out of place.

Old Horner cut through all that this night,

"You know what the emblem we use stands for, Palmgren. ZI. You can see the Z, with the I a single upright stroke falling from the diagonal and crossing the lower horizontal? Well. that means something else beside ZI. Something quite else." Palmgren, his robustious Viking's laugh silent was serious

and attentive.

"There's a little story that is told on these occasions," Horner said. His own thoughts went back to the time when Cromwell had inducted him. A long time ago. Oddly, a disturbing thought of Rupert Clinton obtruded itself. He sighed. Palmgren was a good man, one of the best. It was no use wishing that fate could reverse itself. He roused himself.

" Briefly, when the Shangs began to take over Earth in their second phase, the phase where they gradually tore off the mask of friendship, there were men who saw the inevitable. They recognised that Earth could not fight Alishang here on Earth. They knew-mark you this well, Palmgren-they knew through their own horse-sense and their computers, that the Shangs would eventually subdue Earth. So they determined to arrange a surprise for them. They saw at once that the only way to conquer the Shangs was by putting them in the same position vis-a-vis Earth as Earth would shortly be vis-a-vis them. They decided to carry out their own invasion."

At this Palmgren began the usual remonstrance. "But vou can't invade an extra-solar planet without tremendous

reserves, starships, supplies-the logistics-"

Normally, the initiate was allowed to go on. Horner remembered his own indignant denials, and Nev's careful analysis proving that invasion would demand supplies just not possible for a starship fleet to carry-a starship fleet, that is,

currently possessed by Earth.

Now, Horner cut Palmgren off, politely. "The picture was this, Raoul. Earth had no starships, no method of shipping supplies through hyperspace in quantities that would materially affect the battles consequent upon invasion. The Shangs made very sure we never did have such a fleet. So-the men of Earth in those days decided to use ordinary rockets."

"Impossible-" Then Palmeren fell quiet. He was

beginning to realise that this was the Secret.

"Men worked for twenty or more years. They constructed huge ships, ferried out on space platforms and satellites and constructed in space. This was kept from the Shangs-we could control our own industry in those days, you understand. They worked hard. Many men sacrificed their lives so that the project should go through. Gigantic carriers without power were built. They were stocked from the arsenals of the world. All the hate that had existed between nation and nation and which had led to the piling up of vast arms reserves now played an ironical part in the ultimate freedom of mankind. Abombs. H-bombs. Banned cobalt bombs. Guided Weapons Missiles. And huge quantities of smaller armaments. Food, Clothing. Medical stores. Supplies. The whole quartermaster corps for an army of ten million men for a period that might run into five years. A tremendous amount of material."

"And all," Nev burst out, completely unable to control himself, his eyes blazing. "All ferried into space."

"All ferried by ordinary rocket into space," Horner nodded. "No faster-than-light drives were available to mankind. So mankind used his native ingenuity and guts and found a way round the problem-as he always has and always will." Horner was gripped now by the magnificence of that old dream; it had power, always, to make men drunk on its own grandeur.

"But that is not all. Do you recall, Palmgren, that research which was being carried out by a misguided group into suspended animation?"

"I remember. I had to turn it over to the Shangs. Invention

Control is a stinking sort of job."

"They were working along lines that had already been covered. Hormones from bats. A certain doctor Ghananamba had developed successful techniques for putting people to sleep, in suspended animation, and then keeping them in that condition for a considerable time." Horner smoothed his moustache. "There were many volunteers."
"You mean that men-too-"

"Men-and women. The great rocket ships were filled with fighting men, armed and accoutred, lying in long ranks, all

asleep, all awaiting the day of awakening.

Palmgren licked his lips. Horner smiled and leaned forward. "We are not crazy, Palmgren. This is the secret which has been kept for over two hundred years. The keeping of it has been easy, sometimes. And sometimes difficult. There was a man called Bennett—Cromwell, our leader, knew, even in death, how to keep a secret. But there has been an unbroken chain of men, knowing, connecting you directly with the planners of the great armada."

"And then, what-?"

"And then, when everything had been done, the armada was started on its long fall through space. Rocket tugs built up the speed. Oh, a pitiful speed, when you compare it with the flashing superlight speed of the Shangs! A crawling, almost hopeless, plodding sort of gait. Starting with only a few miles a second, and then, gradually, as the atomic jets fired against their loads, growing, pling up, increasing, pushing faster and faster. Only ten thousand miles a second would have done the job; but we managed to crack on more than that—"

"But at those speeds, with deceleration as well, equal time-

Alishang—seven light-years. Seven light-years!"
"Seven light-years," echoed Ney. "And time."

"Seven whole light-years." Horner sat back. "The great day was reached at last. The truly stupendous armada set off. The day was January the fourteenth, 2021. More or less. An approximation only, it took weeks to move the whole twenty years of preparation. And then, four years later—"

"The Twenty Five! The first Twenty Five!"
"Only four little years between the fruition of a dream and

the event that could have smashed it forever."

Palmgren was stunned. As they all were at thought of the work, the devoted preparations, the secrecy, the opening of the hate-filled arsenals of the world. He licked his lips again. "But it would take years, hundreds of years. The planners would be dead—"

"It was calculated that it would take two hundred and

fifty three years to reach Alishang."

All eyes—including Palmgren's, drawn by sheer physical attraction—turned to the battered ZI shield.

Horner said softly: "Not ZI, Palmgren. 74."
"This year," Robert Ney echoed. "2274."

There was a quiet, hushed waiting after that. It was as though they were all remembering the history of the years, the devoted men and women, the blood that had been shed, the dark times with the brief, lund flicker of the Twenty Fives slashing through like lightning strokes. The misery and the soulcor, the traitors and noaid acents, the cowards and all the

untold and unsung heroism that had gone to make up that waiting time of two hundred and fifty three years. The time that must, by all the laws of celestial astronomy, wait until that silent, ghosting Armada from Earth could cross the gulfs of space and bring, at last, man's retribution upon those who would seek to conquer and enslave him.

They went into details, at last, speaking quietly, unemotionally. The whole concept was so vast that any declamations after the fact had been made known would have been worse than superfluous. They would have been like ants beating their chests in face of the coming avalanche. What those men

of the past had planned, that would come to pass.

It was written in the stars.

And, seven light-years away, a space-vacht came out of hyperspace. Bennett and Liz stood very close together. Clinton and Diana, waiting for what they might find in the deeps of space, were aware of a warm, friendly atmosphere in the ship. They stared out into space.

And then Rupert Clinton knew the meaning of the rushing streams of light he carried as a memory buried in his mind since childhood. And he knew, too, that he would go with those swarming lines of light, riding down onto Alishang with the men of Earth. The long waiting was over and the patient dark could vield up its ancient secret.

Kenneth Bulmer



Dear Mr. Carnell.

Surely science fiction should always have some basis of scientific truth behind it and not go directly against simple known facts? This is why I am astounded that you, as editor of the foremost British science fiction magazine should have accepted the last instalment of "Count-Down," or even the whole MS. if it comes to that

Mr. Maine's education in basic physics is either very elementary or entirely forgotten. His most glaring mistake is to assume that, since the vehicle in his story is no longer influenced by gravity, i.e. it has no weight, it will therefore have

no inertia!

As to the anti-gravity drive, there are some unexplained and other odd ideas in this theory, too. Either the mass of the ship is "cut off" from the G-field of the Earth, in which case the only forces acting on the ship would be possibly the gravity of other planets, notibly the moon, and centripedal force; all of which would give an acceleration of only a few mm/sec. Alternatively it could be reversed so that the ship would be repelled by, and repel the Earth with, a force of one-G. Unfortunately, this gratifying acceleration does not last very long—ast gets further from Earth the acceleration decreases—the maximum speed being that of 'escape velocity, 'which any rocket-powered ship would easily reach; would have to reach if it was to leave the influence of Earthe conomically.

M. Kingsley, RAF, Leuchars, Fife.

Dear Sir :

Mr. Kingsley is probably correct in assuming that my education in basic physics is either very elementary or entirely forgotten. Indeed, my main interest these days is largely confined to plot mechanics, as applied to scientific thrillers. "Count-Down" is, of course, a novel of that category, intended to cover the largest possible readership embracing both the science fiction and thriller fields, with an eve to library

sales. To the layman the science is probably plausible enough, and if the storyline holds his interest, then the book has served

its purpose.

At the same time, while bowing to the evident ascendency of Mr. Kingsley in matters of basic physics (bearing in mind that "Count-Down" was written as a novel rather than a text-book) I fail to see how a vehicle which is no longer influenced by gravity can be shown to have weight, since weight is essentially a function of gravitation, and is measurable. Under conditions of nil gravity, how can weight be measured, other than in terms of centrifugal force, which is a purely arbitrary scale? Inertia I wouldn't really know about, except that I, personally, possessel slot of it.

So far as reversed gravity is concerned, I cannot really see say, a field of 100-G in reverse, or even more; in any case, such a hypothesis is pure fiction in this age of summit conferences and the cold war, and, in truth, there have been more

outrageous fictions in the field of science fiction.

Candidly, I do think that the science fiction writer's job is to tell a story rather than wrap fictional candy-floss round accurate and verified (20th-Century terms) scientific fact. The sugar-coated scientific pill is outmoded. "Count-Down" was essentially a new look at the Ten Little Indians: why dig deeper?

Charles Eric Maine, Stanmore, Middlesex.

Dear Mr. Carnell,

First place to "Count-Down" is given on the basis of a good story. Unfortunately, McIlwain's stories seem to lack something. That lack seems to stem from the author's lack of respect for his subject.

To illustrate what is meant: pages 8 and 9 of No. 81 sets up Lt. Frieberg as Navy. On page 10 Gant is cited as Frieberg's sergeant. The Navy is implied to be the U.S's. The U.S. Navy has no sergeants—the corresponding rank is Petty

Officer.

On page 14 the radar screen is supposed to have a discernible sweep plus a picture. These are mutually exclusive. If the sweep pis a discernible the only picture showing is that of objects in the beam (assuming a visuable phosphur for radar). If the whole picture is showing then the sweep time is too rapid to be discovered.

On page 40 of No. 81 Farrant and MacClennon carry Bartok's body. On page 82 of No. 82 MacClennon and either Strang or Hoevler carried the body. Farrant is definitely implied as not having done so.

All transmitting equipment is smashed on pages 85 and 86 of No. 82-on page 90 of No. 83 an operational TV is given as being there but unopened. It would be a simple matter to rewire any remote control circuit to use for calling for help.

On page 11, No. 81, the first A-bomb is said to have exploded

in Nevada. It should have been New Mexico. Norman C. Metcalf.

Lowry Air Force Base. California, U.S.A.

Dear Sir.

I should like to thank you for your splendid magazine. The stories are of a very high standard and the factual articles excellent. I consider that the cover to number 79 is the best that I have seen so far, although I only "discovered" your magazine a few months ago. I am now, however, a regular reader and look forward to the day when New Worlds comes out.

P. F. Smith. Gravesend, Kent.

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