# NEW WORLDS
## SCIENCE FICTION

No 44. 2/-

## J. T. McINTOSH

Britain's foremost Scottish author says of this month's contribution : "I have always preferred not to have the hero marry the heroine, if possible, and in *The Solomon Plan* I managed this by having her a little too young and him a little too old. I liked this story—I always like writing spy stories. I feel that detective stories cannot be done very successfully in science fiction, but spy stories are just right for the medium.

"With luck we shall all live to see the day when science fiction writers try to do as little as possible within the framework of their stories, instead of as much as possible. I think—and hope—the *genre* is coming to the end of the throw-everything-at-the-reader era."

"*The Solomon Plan* is one story in which quite a lot of time is taken to say very little. You are simply invited to come to Bynald with Adrian Welkin and see why a world which should be rich is poor—and to meet a girl who wants to be a heroine."

## JAMES WHITE

Writing from the seclusion of his Belfast home says "*Question Of Cruelty*" grew out of a Willy Ley article I read on orbital rockets—including the need for data on the effects of such orbiting on the flesh and blood component in such a rocket—and a personal aversion for the down-beat type of science fiction story which writes the human race off as a planetful of juvenile delinquents. On the whole I think that we are pretty nice people—this even includes myself sometimes—and we have a long and interesting future ahead of us."

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# For Authors Only

This month's editorial may not particularly interest our general readership and does not apply to the authors who contribute regularly to our pages, but is presented expressly for the many amateur writers who submit material for our approval. At the moment we are receiving an increasing flow of manuscripts—between fifty and eighty a month of lengths ranging from 1,000 to 25,000 words, with an occasional novel for good measure. To keep on top of this mass of material requires constant attention; to simply our own task, save many would-be authors the sharp pangs of receiving a rejection slip, and keep our regular contributors from waiting too long for news of their stories, I thought the following information would help everyone concerned.

The fundamental presentation of a manuscript should be known to every erstwhile writer—stories should be typed double-spaced on one side only of quarto paper, allowing at least a one-and-a-half inch margin on the left of the page, with a title page giving the author's name, address, story title and length. I regret that it is no longer possible to consider handwritten stories, which are automatically returned unread. While sympathising with the younger writer who does not have access to a typewriter my feelings are all with the reader who has to plough through handwriting which gradually deteriorates as writer's cramp sets in. And the extra time taken in reading such a presentation has never yet paid a dividend.

Similarly a poorly presented manuscript, even when typed, is not likely to arouse much enthusiasm from an editor—MSS which have obviously been going round various editorial offices for years and are covered with dirty fingermarks and rusty paper clips receive a prompt rejection slip by return of post. If such a story was any good at all it would have been bought long ago.

Every publication has its own particular editorial requirements and while these may not radically differ in the science fiction field, would-be authors should at least study the differences and make sure the story he intends submitting at least conforms to the general policy as expressed in stories already published by that particular publisher.

For *New Worlds* and our bi-monthly companion magazine *Science Fantasy* we are only interested in stories between 3,000 and 15,000 words from new contributors. We do not publish fiction shorter than 3,000 words, preferring to use articles. Writers with little experience are seldom likely to produce a good first novelette of more than 15,000 words. For similar reasons we are not interested in reading MSS of novel length with a view to possible serialisation—if the novel is that

good it will sell to a hard-cover publisher long before it reaches our editorial desk. Our serials will either be written specially for us or chosen from novels already accepted for book publication.

Specifically for *New Worlds* stories should be based preferably in the future, although present-day settings are permissable, but not in the *past*—we do not publish stories of Time Travellers who go back to the Stone Age and hold monosyllabic conversations with Ug and his wife and then present them with a gas lighter and a used bicycle wheel.

We have strong feelings against stories directly connected with current world politics, religion, power-blocks between leading nations, atomic wars, post-atomic war civilisations dragging their weary way upward again, mad scientists, bug-eyed monsters, visitors from flying saucers and those that commence " You won't believe this, but . . ." or are written in diary form and found in a metal cylinder floating in the sea. A good writer, however, can easily get round all these taboos by careful writing and a little thought, thereby turning a hackneyed theme into something fresh and worth reading.

These restrictions still leave vast fields of thought for exploration and are mentioned merely to save the contributor's time in submitting material which we aren't likely to use. We like human beings in our stories who *act* like human beings and are faced with problems of changing environment—in the fast-paced modern world of today fiction can hardly keep in step with scientific advancement—there is therefore plenty of scope for the astute writer who does not want to wander far from the realm of reality. Stories need not necessarily have an all-male cast but such stories are preferable to those which introduce questionable romance or still more questionable sex. It is to be expected that women will continue to play as important a role in the future as they have done in the past—there is a place for them in our stories, but writers should make sure that such inclusions are in good taste.

Finally, let me say that this office gives every encouragement to the unknown writer who submits material for our consideration. Many established authors saw their first publication in our pages—E. C. Tubb Alan Barclay, Brian Aldiss, Dan Morgan, John Kippax, Lan Wright, John Newman, James White and many others. Their successes have largely been due to their own endeavours plus a little help from ourselves.

Remember—an unfinished manuscript will never sell !

*John Carnell.*

# THE SOLOMON PLAN

*In between writing first-class science fiction novels and film scripts of a varied nature J. T. McIntosh still manages to produce an occasional novelette for the magazine field. His latest herewith has all the ingredients readers have come to expect from his fertile imagination.*

**By J. T. McIntosh**

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Illustrated by QUINN

## I.

"Excuse me, sir," said the engineer, sidling into Harnell's tiny office apologetically. "Won't be a minute. Just checking the office phones."

And he proceeded to do just that, though Harnell was fully aware that the routine check was only the excuse for his visit, not the real reason.

Most of Bynald's administration was done in this one large building. Grafted on to Administration House, which was square, was the Capitol, which was round. If there was any symbolism in the shape of the two sections, the significance of it wasn't generally known.

As a matter of fact, not only legislation, taxes, education, public works, galactic affairs, and surprising offshoots like the state opera were controlled from this vast building in Scio, Bynald's principal city, but also Bynald's espionage and counter-espionage departments.

That knowledge wasn't public property, of course. Harnell was aware of it because he had once been in CE himself—once he had been accustomed to watch the messengers of the period tensely, with rapidly beating heart, because the summons might be for him.

But that had been ten years ago and more. Now Harnell was forty-seven, and felt every year of it. CE had worn him out, he thought resentfully. With an expectation of life well over a hundred years, a man of forty-seven ought to be merely in his prime. Harnell wasn't, and knew it. He was a jumpy, touchy, worn-out, middle-aged, ex-man of action. He only wanted to be left alone—not that he was in any doubt that he would be, now.

Not until the engineer said "All right, sir," and had picked up his tools and left the office, closing the door quietly behind him.

On the desk before Harnell was a small sheet of paper.

He stared at it in disbelief and growing terror. A summons for him? After all this time? Yes, there was no doubt about it. It read curtly:

*See me at* 11.30. *GS.*

Harnell forgot the rules he had once known so well. Communication in writing like this was considered less dangerous than communication by word of mouth, because tiny microphones could be so much more easily concealed anywhere than the smallest vision transmitter. He knew perfectly well that even here, in Bynald's CE HQ, he was supposed to read and dispose of such a card so casually that nobody watching through a peephole, real or televisionary, would have his suspicions roused.

But instead he stared at the paper, he picked it up and turned it over, he held it up to the light, he practically took it apart. Three things told him the card was genuine—the tiny, almost invisible black dot in the bottom left corner, the fact that there was an aggressive, speared period after the initials GS, and the faint thumbnail mark on the left side of the card.

It *couldn't* be for him. The messenger must have made a mistake. But even as he told himself this, Harnell knew he was trying to deceive himself, and failing. Mistakes like that weren't made. Here he was, at forty-seven, being called back into CE service.

Belatedly he did what he should have done with the card. He put a cigarette in his mouth, flicked the lighter two or three times as if it was nearly empty, and when the flame came, lit the card from it quickly

as though the lighter was on the point of flickering out. He lit his cigarette and waved the burning card carelessly in the air, letting it burn to ash before he dropped the embers in the disposal chute beside his desk.

It was more than ten years since he had done that.

His nerve was gone, there was no doubt about that, and he admitted it. " Just give me a chance to get out of it," he prayed silently as he sat at his desk, staring at nothing. " Anything—anything, so long as I don't have to . . ."

He wasn't praying to any god in particular, never having been religious. He just wanted out of it, at any price. He didn't care about pride or patriotism or money any more, so long as he was allowed to sit at his desk and grow old peacefully.

Veronica, that was it. He had to look after Veronica. He couldn't take on a dangerous job with a daughter of eighteen to look after, that stood to reason . . .

He was uneasily aware, however, that ten years ago, when his wife had been alive and Ronnie was only eight, this case would have been much stronger.

At 11.22 he got up and walked out of the office. His legs weren't very steady. He tried to rally himself with the fact—and it was a fact—that counter-espionage wasn't very dangerous, really, and that his chances of surviving whatever job GS had lined up for him were better than ninety per cent. It was no good. He was too nervous to be rational.

He walked into a little nest of offices and got lost. Intentionally lost. He'd never found out whether the very miscellaneous men and women who had offices in that section of the building were really very carefully selected, and all in the secret, or if it was just fortuitous that there was always so much noise and bustle, so many different things happening there, so many people coming and going, that people visiting GS were never missed.

GS was behind an empty desk, waiting for him. It was a long time since Harnell had seen him as GS, but he'd met him socially as somebody else once or twice in the intervening period. Even counter-espionage chiefs have to have a social life.

GS looked very much younger than he was. But how GS looked was immaterial ; if one face became an embarrassment to him, he got another. Faces were only skin deep.

" Sit down, Harnell," said GS. " I won't waste any time. It's not you I want, it's your daughter."

Harnell almost shouted for joy in his relief. In that instant of blessed reprieve it was woefully clear that he was no great shakes as a father. But he didn't care. Let them do anything they liked with Ronnie, so long as they didn't call on him.

GS, who knew something about reading faces, didn't miss Harnell's reaction. He, too, felt relieved. GS was hard and ruthless and dedicated to the Solomon Plan, but he was still a human being. GS knew that it was very unlikely that Veronica Harnell would be alive in a week's time, and he didn't care, because if she died it would be because she had proved herself a traitor. Harnell he had been sorry for. But if the man was glad Veronica was being given a dangerous job and not himself . . . it was no longer necessary to feel sorry for him.

" Has any approach been made to Ronnie ?" Harnell asked, feeling called upon to say something.

" Not yet. I want you to tell her what to do. She has no idea that you ever worked in CE ?"

" None at all," said Harnell. He was beginning to get nervous again. Apparently he wasn't being relieved of all responsibility after all. He had to give Ronnie her instructions. If anything went wrong they'd blame him . . .

" Then we won't tell her. I take it she has no knowledge whatever of the Solomon Plan ?"

" None. I myself never . . . I mean . . ."

" You don't know it either ? So much the better. It's an embarrassing secret to know." He smiled slightly. " The death-rate among people who've even heard of it is alarmingly high."

Harnell, who knew that, changed the subject hurriedly. He *could* have known about the Solomon Plan, but he had thought the less he knew about it the better, and refused all knowledge of it. He'd never been sorry. What you didn't know, people could never accuse you of betraying.

" I'm surprised," he said rather wildly, saying the first thing that came into his head, " that CE should want Ronnie, of all people."

" Because she's unpatriotic, doesn't give a damn for Bynald, and has a schoolgirl crush on Earth and everything connected with Earth?" inquired GS. He didn't wait for Harnell's nervous rejoinder. " I should have thought it would be obvious that that's precisely why we want her. If she turns out to be a traitor, it will be as well for us to know, and take appropriate action."

He looked coolly at Harnell, who was shivering at the idea of his daughter being a traitress, and what that would mean to him.

" Never mind," said GS, not unkindly. " If she isn't, we'll find that out too. I'd better tell you what this is all about. A spy from Earth arrives here in Scio tomorrow. His name is Welkin—Adrian Welkin. He's been sent pretty openly, in fact Earth has requested in a semi-official way that we should look after him . . . Put another way, Earth has more or less warned us that if anything happens to Welkin, it'll be resented and Earth will make a considerable nuisance of herself. Is that clear ?"

" Not entirely," said Harnell, who had himself seen two Earth spies shot with no great compunction. " Earth hasn't sent this man here as a spy and told us that, surely ?"

" No, he's described as an historian. In fact he *is* an historian—we've checked on him, of course. He's supposed to be writing a book on Cedrica or something—anyway, something or someone in Bynald's history."

" And . . . has he written any books before ?"

" Oh, yes. Earth's espionage department wouldn't fall down over a detail like that. The man really is an historian. Whether he stands any chance of discovering the Solomon Plan through study of our history I don't know. I doubt very much if it's possible. There aren't many history books, and those there are have been carefully cleared of anything which . . ."

GS saw with some grim amusement that Harnell was squirming in his chair, terrified lest he should be entrusted with the secret. He couldn't resist making Harnell still more uncomfortable.

" Actually the clues are all around us, so thick it's amazing that CE has been able to guard the secret for two and a half centuries," he said. " I'm surprised that you, Harnell, could actually have been working for CE and not know—"

Harnell had to interrupt him, whatever he said. " Are you going to let this man study our history ?" he asked unsteadily.

" We can hardly stop him. That's where Veronica comes in. We want to know what Welkin actually does learn. Now it happens that this Welkin is a keen amateur musician, and our agents suggest that the first thing he does when he has a spare moment here will be—"

" He'll go to that little place where Ronnie works ?"

" We must endeavour to see that he does, in such a way that he's unlikely to suspect he's been directed there . . ."

When Harnell briefed Ronnie she hailed the prospect with delight. " You mean he's a real spy—from Earth ?" she asked excitedly.

" Yes."

"And I'm to be a sort of spy too, and spy on him?"

"Yes."

"What is he trying to find out?"

"I don't know. All they told me was to tell you—"

"Will I have to sleep with him?"

Harnell choked. "No!" he said violently, when he got his breath back.

"How old is he?"

Harnell had asked that too. "Forty-eight," he said slowly. In some ways that was the worst part of it. He himself was worn out at forty-seven. Apparently this Welkin was still going strong at forty-eight.

"Oh," Ronnie said disappointedly. You couldn't get romantic over someone who was forty-eight.

"Anything else you want to know?"

"Yes—can I get Roy to help me?"

"No!" exclaimed Harnell again. "Nobody must know about this—nobody, understand?"

Roy was Ronnie's current boy-friend. How serious it was Harnell didn't know. It was forced on him once again that he had never paid much attention to Ronnie, never knew much about her. He pushed the thought aside.

"Ronnie," he said nervously.

She looked at him inquiringly.

He could warn her that this was a test of her loyalty as well as . . . He could tell her that she was going to be watched as well as the man she was watching, that if she did or said or even thought anything disloyal, CE would know and she . . .

But if he told her that, CE might find that out too, and he as well as Ronnie would suffer.

"Be careful, Ronnie," he said weakly at last.

Ronnie shrugged impatiently. Imagine telling a counter-spy to be careful. You had to be reckless and daring if you were a beautiful spy—she *was* beautiful, wasn't she? In her bedroom she looked at herself critically, and couldn't quite make up her mind. She wasn't old enough to have been told by many beaux that she was beautiful. Anyway, most of her beaux, even Roy, got red and looked at their boots and blurted things out and never got round to telling her anything about how she looked. So she couldn't be sure, though she thought she was rather pretty. Perhaps if you were someone romantic anyway, like a spy, it didn't matter so much and you'd pass as a beauty more easily.

She was disappointed that she couldn't tell Roy about the adventure. Roy was always telling her that she ought to be more patriotic, a lot prouder of her world, and it would have been grand to tell Roy that she'd been given the job of watching a spy. But she brightened very soon. She'd be able to tell Roy afterwards, when it was all over and she was a heroine and everyone was proud of her.

## II.

Adrian Welkin was obviously an experienced space traveller. His luggage consisted of one small case, for one thing—he had learned what some people never learned, that it was always much cheaper to buy what he wanted when he got there than to take it with him. Another noticeable thing was that he had outgrown the novelty of spaceships, spacefields, customs examinations and all the other things which were common to space travel everywhere, and more concerned about the important things—what was characteristic of the world he was visiting, what was different, what was individual. Also it was clear from the way he walked that he had learned to adjust rapidly to the various approximations of IG which were native to the worlds colonized by human beings. Bynald's was 0.89G. It might have been IG precisely for all the trouble it gave Welkin.

The first, most obvious thing about Scio was that it was cold. Not keenly, bitterly cold, but never far from freezing-point. Snow lay everywhere, for it was still morning and the sun, which was quite warm, was only gradually melting the night's snow and ice and starting rivulets flowing off the roads and along the choked gutters. Every now and then an avalanche of soft snow would crash down from a high building. The overhang was constructed so that these clouds of snow landed in the street, missing the sidewalks. The people hurrying about didn't even look up.

The second obvious thing about Scio was that it was old-fashioned. It was like a twentieth-century Earth city transported many light-years and four centuries to Bynald. The buildings were heavy and solid, not built in the light, graceful architectural style of the twenty-fourth century. The vehicles were big and heavy and powerful, not the nimble fairy cars that flashed like tropical fish about the cities of Earth and most of the other colonized worlds. The clothes the people in Scio's streets wore were heavy and dull, things like coats and pants and gloves and boots, not the colourful, dashing, infinitely varied garments of men and women who didn't have to wear clothes that would keep out the cold.

Welkin had got this far in his observations as he emerged from the spaceport and looked about him when a man came up to him. " Mr. Adrian Welkin, from Earth ?" the stranger asked.

Welkin looked at him. An old young man, with the chubby cheeks and baby face of a youngster but probably thirty or thirty-five. Enthusiastic, shy, intense. Determined to do his job well, whatever it was. A counter-espionage agent, naturally.

" Yes," Welkin said.

" I'm Dick German," said the old young man. " I've been asked to look after you, give you any help I can . . ."

" That's very nice of you," said Welkin cordially. " Er—*who* asked you ?"

" Government people," said German eagerly. " CE or something."

Welkin's opinion of Bynald's CE division went up sharply. He could admire a counter-espionage section which told a spy it had its eye on him and who one of their agents was.

But then, Bynald's CE division *must* be good. At least twenty different intelligence departments must have tried to solve the Bynald enigma, and Welkin would have known if any one of them had succeeded.

" Pleased to meet you, Mr. German," said Welkin, shaking hands. " Are you an historian ?"

" No, you've got me there," said German frankly. " I can't help you on your research, or whatever it is, Mr. Welkin. But if you want to know anything about hotels, currency, libraries, stores, things like that . . ."

" I do," said Welkin. " Hotels first. Where should I go ?"

At the earliest opportunity he meant to find out how easy or how difficult it was to shake off German and wander about on his own. But there was no doubt about it, a CE man could be very useful in the first few hours of one's visit to a strange world, before one meant to do anything important anyway.

Welkin automatically discounted German's eagerness, awkwardness and unsubtlety. German could be a very dangerous man, and it certainly wasn't safe to try to deceive him. With German Welkin proposed to tell nothing but the truth, to show nothing but the truth. Honesty is always the best policy—if possible.

German hesitated. " They told me you'd probably want peace and quiet, a room where you could work, where nobody would disturb you, just simple service. Is that right ?"

" Well, yes, I guess so."

" Then maybe you'd rather not go to one of the luxury hotels, Mr. Welkin. If you'd like quiet lodgings instead, I know a place where—"

" Why, certainly," said Welkin, perfectly prepared to let CE put him where it liked. It would do that anyway.

Less than an hour later he was comfortably established in a small boarding-house off Commerce Street, the nerve centre of Scio. Moreover, German, far from being difficult to shake off, was looking at his watch and saying he'd have to go.

" You can phone me either at Administration House or at my home," he told Welkin, giving him two numbers. " And I'll look in from time to time to see if there's anything I can do. Okay ?"

Welkin credited the Bynald CE department with more and more intelligence. Naturally if CE stuck a leech on him he'd have to make some push to get rid of it. But German looked like being a most useful and not at all embarrassing warder.

" Just one thing before you go, Dick—may I call you Dick ? Do you know where I can get my hands on a French horn ?"

German stared at him. " A what ?"

" French horn."

" One of those curled-up things they use in orchestras ?"

" Exactly," said Welkin gravely.

German, who until now had been most useful and knowledgeable, was now clearly at a loss. " I could find out," he said hopefully.

Welkin grinned again. " Never mind. I'll manage by myself. What's the biggest music dealer in Scio ?"

German brightened at that. " Keynote, just round the corner in Commerce Street," he said. " Maybe they could help you there."

" Just what I was thinking," said Welkin agreeably. " Thanks, Dick."

German coloured. " It's nothing," he said uncomfortably. " I'll look in this evening and see how you're making out."

Welkin lunched at the boarding-house and had to admit that CE had done very well for him. He'd never have found lodgings so quiet, comfortable and convenient if he'd been left to himself. Mrs. Henbald was the perfect landlady—always there when you wanted her, never there when you didn't, and gratifyingly mean with words. If " yes " or " no " was enough, Mrs. Henbald wasn't the one to add anything, and there were many occasions when she managed to get by without words at all.

Of course, if Bynald had nothing to hide, which was unlikely but not completely impossible, a Terran spy might be treated exactly like this. An intelligent counter-espionage department on a world which had no secrets would realize that the only way to convince the intelli-

gence groups of other worlds about this was to let them find it out for themselves—and would treat foreign agents much as Welkin was being treated.

There was no one else at lunch, but just as he was thinking of leaving, a woman came in, sat down at the table and shouted for Mrs. Henbald.

If this woman was another CE agent, she was acting beautifully. She was a career woman in a hurry, probably an artist of some kind, only mildly interested in Welkin's presence. Only when she had started her lunch did she look round at him.

"Staying here?" she inquired.

Welkin nodded.

The woman was about thirty-five or forty, handsome in a frank, powerful way. She was like a beautiful horse rather than a startled faun. She had big but well-shaped features, well-kept hair and hands, and a figure which health and strength had kept good, and would keep for many years yet. Her waist wasn't slim in inches, but her powerful chest and flanks made it slim.

"I'm Jane Bolt," she said. "You won't see much of me, I'm too busy."

"Adrian Welkin," he introduced himself.

She stopped her fork on its way to her mouth. "The historian?" she inquired, with some interest.

Welkin nodded, a little surprised. "I didn't think anyone would know about me here."

"Shouldn't think anyone does," said Jane bluntly. "I read some of your books in Heimat. They think a lot of you there."

She spoke without a trace of adulation, flattery, hero-worship. "You're good in your job," her manner said in effect, "just as I am in mine." She had met other famous men—many a great deal more famous than he was.

"Yes, I did them a bit of good there," he admitted. "Often an historian can, poking around into pioneer periods when there was very little writing done, very few records kept."

"Then this place will suit you down to the ground," said Jane briskly. "There's no history to speak of. Nothing written down, I mean—plenty of event."

"I shouldn't think," said Welkin shrewdly, "you'd have much time for reading, Miss Bolt."

"Haven't," she said frankly. "None at all for novels. When I do read it's history or biography."

"And you say there's hardly any written history here? What about biography?"

"Some," she said. "But take away the thirty or forty Lives of Cedrica, the half a dozen of George Solomon, and there's not much left."

Welkin nodded. "That's about what I'd heard."

"Why is there so little exchange of information between worlds—do you know?" Jane asked bluntly.

Welkin shrugged. "Expense of transport," he said. "A book's published here on Bynald. Well, if bound copies were taken to Earth they'd cost about seven hundred dollars there. All that ever goes is a microfilm copy of the most important books—and that goes to the Library of Congress or the British Museum or some such place, generally straight into the vaults at that, and the general public never sees it. Oh, occasionally some publisher gets hold of something from Rigel II, Maverick, Cawn Persis, Heimat or here, decides it's a good risk—usually it's a novel—and publishes it. But most worlds have too many books of their own to have much time for the literature of other worlds."

Jane reflected for a few moments, without pausing in her disposal of a substantial lunch.

"Interesting," she said. "Then there's no censorship or anything like that—just lack of interest?"

"I don't know that you can even call it that," said Welkin. "In the seventeenth century about five percent of the world's population could read. One man could have read everything new that was written, if he could get his hands on it. By the nineteenth century more than a hundred times as many people were reading and writing. When space travel started there were so many books that people were making digests of digests. And now in the twenty-fourth century there are so many books and journals and magazines and reference volumes that you could publish something important, something vital, and it might be a hundred years before anybody noticed it."

"You're exaggerating," said Jane, buttering a large slice of bread.

"No, I'm not. All I did on Heimat was correlate three things that had been written a hundred and fifty, a hundred, and seventy years ago. For seventy years they'd been there for anyone to find. The conclusions weren't difficult. Anyone who had the three references could draw them. Nobody had ever happened to read all three, that's all."

"How come you found them, then?"

"Well, anyone who dabbles in history gets to know where to look." He had been speaking easily, but with obvious interest in his subject.

" So you go around looking for what's been discovered, and hasn't been discovered ?"

" That's exactly right," said Welkin with a grin.

Jane had come to the end of her rapid meal. She had eaten twice as much as Welkin in half the time. She got up, wiping her mouth. " That's very interesting, but now I've got to get back to rehearsal. Are you cultured, Adrian ?"

Welkin blinked at the sudden switch, but she didn't wait for an answer. " Get some culture if you're not. There's two tickets for the theatre. No, they don't cost you anything. I work in the state opera."

She was gone. Suddenly Welkin realised what she was. He should have known at a glance she was a singer. That chest development, that powerful, well-controlled voice which gave the impression, even when she talked quietly, that when she cut loose she could rattle the window-panes and make people in the street stop and stare over their shoulders, could only belong to an opera singer.

That was very interesting. Could she really be a CE agent as well as German ? He'd been assuming she was. He'd been setting the scene for what he was going to do in Scio—and the satisfying thing about it was that he didn't have to act, didn't have to be anyone but himself, didn't have to say anything but the truth, didn't have to assume any but his own interests.

Welkin would have been very happy with the whole situation but for the fact that so many Terran agents had failed to return from Bynald. There was no doubt about it, having a family and children made one very reluctant to run one's head into danger. But for Viola, Danny, Anne and Freddy, he'd be enjoying himself hugely.

He liked the look of things and he hadn't a doubt of his success. However, this confidence extended only to his ability to discover Bynald's secret. To get away with it and a whole skin was another matter. He wasn't as young as he was. Why hadn't he been satisfied with previous successes—or near successes ?

No, he had to be the Master Spy. Which meant, very likely, that Viola would soon be a widow—and she so young.

Meantime, it was a pity he hadn't asked Jane about French horns. She would know.

## III.

The young lady at Keynote, a typically old-fashioned music store, knew nothing about French horns or anything else to do with music, but she passed Welkin to a small, bald, knowledgeable man.

" Well, you see, sir," he said, " Scio isn't the best place to buy musical instruments. There's nothing here but government head

offices and things like that . . . Bennis would be better. You might try Fernie's—it's a little place that deals chiefly in brass instruments."

Fortified by detailed directions, Welkin trudged through the snow along streets that were successively narrower and shorter until he wondered how anyone could be expected ever to find Fernie's. When he got there at last he found it was a tiny shop with a window of microscopic dimensions affording a mere glimpse of an astonishing number of cornets, trumpets, trombones, euphoniums, tubas and horns. He pushed the door open, having to stoop to enter, and blinked at the girl who looked up at his entrance.

She was the last, positively the last thing he expected. She was very young, only seventeen or so, she was very pretty, and more than that, she was smart and intelligent-looking. He'd have expected a female assistant in such a place to sniff, peer at him myopically and wear woollen stockings. Instead she looked like the kind of girl one might find behind a perfume counter back in a store on Earth, except that she was so young. She must be fresh out of school.

"Yes?" she said.

"I want a horn," he said simply.

"Yes, sir. Single or double?"

She knew something about instruments too. "Single, probably," he said. "Depends what you've got."

She smiled, and the illumination in the shop went up by about two hundred per cent. "I've got everything," she said.

"So I see," said Welkin politely.

The girl chuckled delightfully. "Let's stick to French horns," she suggested.

"If we must," Welkin retorted regretfully.

"We've got a good second-hand German horn, if that would suit you?"

"I'd rather have an ordinary French horn. But you're not busy, are you?"

"No."

"Then you can show me everything you've got. Musical instruments, I mean," he added reassuringly.

She looked startled, started to laugh, blushed, caught his eye, and they both laughed. Welkin, who had learned a thing or two in his forty-eight years, was making it clear in his manner that though making mild passes at her was no more than her due, he was perfectly harmless.

The girl, for her part, attended to her job conscientiously, was frankly inviting, but equally frankly so-far-and-no-further.

It took a long time to satisfy him, and by the time he had decided on a horn, and paid for it, the girl had agreed to come to the theatre with him. If he had a suspicion that this was contrived rather easily, with little or no action on his part, her frank admission that she was only coming out with him because she had never known anybody from Earth and had a million questions to ask him did a lot to offset it.

"Shall I pick you up here?" he asked.

"Goodness, no!" she exclaimed. "Think I'd go to the theatre like this?"

Welkin could hardly say that since it was Bynald, he'd been thinking exactly that.

"I'll meet you at the theatre," she said.

Welkin was going to insist on picking her up at her home, but realised that since he didn't know the conventions of Bynald he'd better be guided by the girl.

At the door he paused. "Oh!" he exclaimed. "Names. I'm Adrian Welkin."

She laughed. "And I'm Ronnie Harnell."

"Ronnie?"

"Veronica—but don't dare call me that."

"Does that mean I can call you Ronnie?"

She looked surprised. "What else would you call me?"

On the way back to his lodgings he reflected on the three people he had met. It looked very much as if CE had nothing to hide, or, conversely, wanted him to come to that conclusion. German was a CE agent, undoubtedly; Jane Bolt was a CE agent, probably; Ronnie Harnell was a CE agent, possibly.

German had directed him to Mrs. Henbald's, so the boarding-house was where CE wanted him to be. Jane could very easily have been planted there. On the other hand, could CE know that he'd ask about French horns, and knowing that, tell German to direct him to Keynote, tell the man in Keynote to direct him to Fernie's, and plant Ronnie there to meet him and induce him to date her?

It was perfectly possible, of course, but extremely unlikely. Bynald's espionage must be very good for them to have found out enough about him on Earth to know that he'd buy a French horn on Bynald. No, they couldn't have meant him to meet Ronnie.

Back at his lodgings he warned Mrs. Henbald of what was going to happen, he went up to his room, shut all the doors and windows, took out his horn and started to play.

Like most horn players in the last four hundred years, he tried the horn tune from *Till Eulenspiegel* to warm up, and again like most horn players in the last four hundred years, fluffed a couple of the notes.

He played some more Richard Strauss horn tunes, then came back to *Till*. It came out right this time, even to the two low notes at the end. He played some of the Mozart fourth horn concerto.

Really, it was a very good horn. A very fair proportion of the notes came out as intended.

No, Ronnie Harnell was just what she seemed to be. He was glad of that. He didn't want that child to be a spy. Not that he intended to be any more than an elderly friend to her—he calculated that he was nearly three times her age—but he liked her. He liked her very much.

In the early evening, before he set out for the theatre, German called on him and was shown up to his room. German stared at the gleaming brass instrument.

"What do you want that for?" he asked, at a loss.

"To play," said Welkin amiably.

"But what for?"

Welkin shrugged, grinning. German was a serious, intense young man, and obviously had no time for music. It clearly was beyond him that a visitor to a planet—particularly a spy—should buy a horn and sit in his room playing it. He could have done that on Earth, couldn't he?

German came back to things he could understand. "Well . . . is there anything you want to know? I mean—where to go, what to see, or anything?"

"Yes," said Welkin. "Where can I take a girl, after the theatre?"

German looked at him as if he had never heard of anyone taking a girl to the theatre. Clearly German had no time for girls either.

At last he had it worked out, however. "I guess you could bring her back here," he said, with what seemed to be meant for a leer.

"I'm not going to seduce her," snapped Welkin unaccountably annoyed. He nearly added "idiot." "I meant—when one takes a girl to a show in Scio, isn't there anywhere to go afterwards?"

"Only the park," said German.

"The park!" Welkin exclaimed. "To sit holding hands in the snow?"

German stared at him. "But I meant Solomon Park . . . oh, of course, you wouldn't know. It's a wonderful place—seventy degrees, covered in, and it stretches for miles."

Heated gardens on cold worlds were commonplace. Nevertheless, Welkin was rather surprised to hear that Scio boasted such a park. Gardens like that needed atomic power to run—everything else was

far too expensive, on such a scale—and he hadn't seen any sign of atomics in Scio.

In any case, Dick German obviously wasn't the person to ask about entertaining a girl. "Thanks, Dick," Welkin said. "Maybe we'll take a look at Solomon Park. You've been a great help."

It was a mistake to underestimate people. German coloured and said bluntly: "You mean I haven't?" and it took Welkin some time to soothe his ruffled sensibilities.

Ronnie arrived at the theatre, breathless, only a few seconds after Welkin. "Am I late?" she panted.

"You're the only girl I ever knew who wasn't," said Welkin, smiling.

She digested that. "Oh, but I'm not sophisticated," she said frankly.

"I'm glad you told me," he said gravely.

The theatre, like so much of Scio, had an air of twentieth-century Earth about it. It was shiny with chromium and glass, and the carpets were soft and predominantly red and brown.

Inside it was more comfortable than Welkin expected. The foyer was warm and scented, and the women standing about wore dresses much more like Welkin's conception of evening gowns than he had expected to see in chilly Scio.

"I didn't know that . . ." he began, turning to Ronnie, but she was gone. The cloakrooms, he soon discovered, were more elaborate than in Terran theatres, because more of a transformation had to be effected in them.

He came back to wait for Ronnie, looking about him curiously.

Ronnie came out hesitantly, unsure of the impression she was going to make, and she had reason to be doubtful. At first glance he guessed that her mother was dead and she had no older sisters.

The gown she wore would have been fine for a dashing widow of thirty-five or so. On Ronnie it was a ghastly mistake. Bynald's fashions weren't those of Earth, but certain general principles were common and Ronnie's dress was obviously just as wrong in Scio as it would have been in London. It was a translucent red foam that was rather daring down to the waist and positively foolhardy below it. No wonder she looked anxious.

"You look lovely, Ronnie," said Welkin heroically. "Absolutely lovely."

She blushed, pleased. He took her arm and led her inside, treating her like precious china. That was the only way to treat her, he decided. He'd try to give her a good time but make it clear as early as possible that he was married and had three children. You could never be


sure what wild ideas romantic girls of eighteen might get into their heads.

The name of the piece was *Hail Bynald* ! with an obligatory exclamation mark. Welkin didn't expect much of it, but from the moment the curtain went up he was astonished. The piece was part opera, part ballet, part play, and in every respect it was good. Supremely

good, he thought for a while. He had never seen anything quite like it. When the surprisingly strong plot was being developed, the characters played it straight, in prose, without exaggeration. When the emotional stress became high, they burst into song, and it was grand opera until the stress was over. Then they were back to prose again. And when action or beauty or grace or emotion could best be expressed by the dance, the ballet began.

Jane Bolt, a contralto, had a part that rated about fourth in order of importance. She was very good but overshadowed, as she had to be, by the soprano who played Cedrica. Welkin had already seen in the playbill that Jane Bolt was not only one of the principals of the opera, but its librarian and an assistant stage manager.

At the first interval Welkin turned to Ronnie and found that she shared his enthusiasm.

"I never knew Bynald had such a high cultural level of its own," he said.

"Well, there aren't many operas like *Hail Bynald* !" she said, glad to have found something she knew more about than him.

"How long ago was it written ?"

"Oh, two hundred—more than two hundred years ago."

Welkin wondered why the opera hadn't been taken up in other parts of the galaxy. As it proceeded, however, he began to see why.

It wasn't, after all, quite first rate. The patriotism was overdone ; instead of being noble and sincere the nationalism of the opera became at times fanatic, too frenetic even for opera. The motives of the main characters, too, were heavily overlaid with a too-strong love of Bynald, so that one was expected to find it right that the hero, who wasn't called Solomon but obviously was George Solomon, should sacrifice love of Cedrica to Bynald, and later Cedrica herself. The Bynald bias was so strong that by the end, after nearly three hours of it, Welkin found himself sickened by the propaganda, the false motives, the false values, the unbalance of it, and a little angry that what could have been a great work had been spoiled by its obsession. The blemishes weren't essential to it—they seemed tacked on, like commercials written into a Shakespeare tragedy.

The opera was so long, and finished so late, that there was no question of going anywhere afterwards, though they did take time out for a cup of coffee at the theatre café before Welkin took Ronnie home. She had forgotten all about her crimson dress by this time, but Welkin hadn't, and as they went upstairs he intercepted a score of curious, startled glances and wondered if he should drop a gentle hint about the gown. He decided he couldn't—there was no way of doing it

without making her feel foolish and ashamed. He had seen a daughter safely through the stage Ronnie was at now, and knew something about the problems of being eighteen, female and very pretty.

He was wondering whether Ronnie was going to be of any help to him or not, and whether he was justified in dating her. He didn't want her to get in trouble with her own people.

They sat down and ordered coffee, and Welkin was surprised to find that Ronnie agreed with him completely about *Hail Bynald* !

" I think dying for love is a beautiful idea," she confided in him, " but dying for a country is crazy, and sacrificing the girl you love for your world is crazier, and whenever it comes to that bit I want to be sick."

" You've seen it often ?"

" Not often. Four or five times. They send us from school to see it."

Welkin hadn't meant to do any investigating at all on this first day before he had worked out his plan of campaign, but this was a chance not to be missed.

" You don't sound very patriotic, Ronnie."

" I'm not," she said frankly. " Oh, if I had a chance to do something wonderful and exciting and romantic for Bynald I'd do it like a shot. But I could never go for this *My world right or wrong* stuff they drummed into us in school, this *Bynald is everything* business, this *Hail Bynald* ! racket . . ."

" And are you allowed to get away with that ?" he asked quietly.

" What do you mean ?"

" In some countries or worlds where nationalism is cultivated—nobody's allowed to stay outside it. People who talk like you . . . disappear."

Ronnie laughed, at least she started to laugh. Then she looked at him, startled, doubtful. " Take me home," she said suddenly, breathlessly. " I . . . I have to start early tomorrow."

Welkin took her home. In the taxi he sat decorously in the corner opposite Ronnie, not even touching her, though he sensed that she expected *something* and was going to be a little disappointed when nothing happened at all. But for that last uneasiness on Ronnie's part he might have omitted all suggestion of seeing her again—for her own safety. However, he was certain that she knew something, or guessed something, and he had to find out what it was.

" What's this Solomon Park I've been hearing about ?" he asked idly.

She became enthusiastic at once. "It's a marvellous place," she said. "Do you want to see it? I've an afternoon off tomorrow. I'll show you around."

So that was that. Tomorrow afternoon he would find out why she had become uneasy when he mentioned people disappearing. He knew he had made a hit with Ronnie—she made no attempt to hide the fact. He doubted very much if there was anything she'd refuse to tell him.

"Goodnight, Ronnie," he said at her front door. The taxi was waiting.

"Goodnight, Adrian," she said breathlessly, standing still beside him. If she had asked him in words to kiss her, it couldn't have been any plainer.

He smiled down at her. "Goodnight, Ronnie," he said firmly, and went back to the taxi.

Welkin went home and straight to bed. But Ronnie couldn't go to bed right away. Her father was waiting up for her. "Well?" he asked before she had her coat off.

She was suddenly angry, a rare thing with her. It had been a lovely evening, and Adrian was a marvellous person. Of course, he was rather old, but there was something about the older man she had never met before, something none of her teen-age boy-friends had ever had. She hated her father for reminding her that this was just business, that she was supposed to spy on Adrian and report everything to CE, through him.

She forgot that only the day before she had been thrilled at the idea. It was still an exciting idea to cross swords with a spy, but . . . she didn't want to cross swords with Adrian. She liked Adrian. He was nice. She had wanted him to kiss her, yet she admitted to herself that she liked him even more for not doing it.

However, nothing had happened that would be of any interest to CE. So she reported it all as well as she could remember, and her father noted it all down. She looked at him thoughtfully, wondering if it was wrong not to love one's father.

Well, she did love him, but . . . He seemed a small man, somehow. A small, nervous, jumpy man, not like Adrian. No, nothing like Adrian.

"Goodnight, Daddy," she sighed.

She lay in bed for a long time, thinking. Adrian was trying to find out some secret of Bynald, evidently. He was handsome, kind, thoughtful . . . like she had always imagined Earthmen would be. What he was doing couldn't be *wrong*.

Why couldn't she . . . help Adrian? Between him and Bynald there was no question where her loyalties lay. There was no harm, surely, in working with him, helping him, at least until she knew what kind of information he was looking for?

Then . . . she would see.

## IV.

Next morning Welkin got up, had breakfast, rapidly read two morning and two evening papers he found lying about, went back to his room, put his feet up and thought.

The problem was simple. Bynald had been colonized three hundred years ago and had then been one of the best prospects in the galaxy. There was oil, coal, steel, uranium, diamonds, silver, platinum, rich agricultural land, everything a world could want. Within fifty years there had been a population of nearly a hundred million. So far so good.

Now, two hundred and fifty years later, the population was two hundred million and Bynald was about the most backward world in the galaxy, certainly the most backward of the twenty-three settlements of Bynald's age or more.

There was no obvious reason. Bynald still had all her mineral riches, emigration from Bynald was uncommon, people appeared to live as long on Bynald as anywhere else, men and women got married in their early twenties and had families of around three or four children.

The population should at least double itself every generation. *At least.* Bynald issued no statistics, and never had. Simply on the appearance of things, the population ought to rise by anything from a hundred to five hundred per cent every thirty years.

And it didn't. Moreover, Bynald, which should have been rich, was a comparatively poor world, with a low standard of living, a technology that lagged behind that of any other world, and only a trickle of exports considering what Bynald might be expected to produce.

This state of affairs had puzzled most of the occupied planets for some time. Bynald wasn't aggressive, nor particularly secretive—just stubbornly non-productive, non-fertile.

If there was a simple explanation (which was more than likely) Earth, Heimat and all the other worlds which had anything to do with Bynald wanted to know what it was.

The question of a Bynald *secret* wouldn't have arisen but for the fact that certain spies sent to find the explanation of the Bynald enigma failed to return. Most did, of course, with little or nothing to report,

but the disappearance of the others could only be satisfactorily explained by the theory that they had found out something and hadn't been allowed to get away with it.

Hence the appearance on the scene of Adrian Welkin, with one or two tricks up his sleeve.

When he had everything he knew so far in place in his mind, he went to the Scio public library. It was the principal library on Bynald, presumably, yet it was no bigger than the public library in any city of a hundred thousand people on Earth.

More than that, Welkin soon discovered that the library contained only eight thousand books which had been written and published in the whole of Bynald. Eight thousand in three hundred years. The rest were Bynald reprints of standard texts.

Of the eight thousand local books, four thousand were novels. Three thousand dealt with the natural lore of the planet—its geography, geology, botany, flora and fauna, exploration, etc. That left just one thousand miscellaneous books to include all the social history, biography, poetry, essays, drama, research, philosophy and psychology of a world three hundred years old.

Certainly it wasn't much.

Welkin learned all he could in the library, and it took him only an hour and a half. He didn't believe he had missed much of importance. Before lunch he had time for a visit to two second-hand bookshops, buying some three dozen old volumes of which the library hadn't had copies. He took the most interesting of these with him and had the others sent to his lodgings.

By lunch time he was convinced that Bynald's secret would soon be no secret to him, and was chiefly concerned about what CE was going to do to stop him getting away with it. That was the essential point, of course. Often it was easy enough to get the required information, but virtually impossible to take it and a whole skin away.

However, it was pointless worrying about that yet.

He saw Jane at lunch and complimented her on her performance. She accepted this praise as her due, and asked what he thought of the opera as a whole.

He told her frankly. She raised her eyebrows. She must have been more interested than she had been the day before, because she actually stopped eating.

"I suppose we here in Bynald take our nationalism for granted," she said rather coldly. "I always thought the real beauty of *Hail Bynald* ! was its moral."

"I thought it was the only thing that spoiled it."

She was silent, resenting his criticism.

"Was the performance last night authentic?" Welkin asked.

"What do you mean, authentic?" Still annoyed, though trying not to show it.

"Was it from the original score, the original libretto?"

She considered. "No. It's been modified from time to time."

Welkin was silent. "Well?" she said challengingly.

"I'd very much like to see it in the original version."

"Why? Changes are made only if they're improvements."

He shook his head, deliberately baiting her.

"Damn it," she said, almost openly angry, "I'm a stage manager and the librarian. I ought to know whether these changes are improvements or not."

"You ought to, but you don't. Some of the additions stand out like sore thumbs. Art and propaganda never did mix very well."

She was quietly furious: "If all you could see in *Hail Bynald*! was propaganda—"

"That's just the trouble . . . I could see a lot more, but it was difficult. Strip some of the sentimentality, fanaticism and propaganda off the top of it and the opera I saw last night would be a masterpiece—not just here, but anywhere."

"Sentimentality, fanaticism . . ." she repeated, then suddenly burst out: "Oh, go to hell. You don't know what you're talking about."

Welkin said no more, but continued to watch her curiously. He was wondering even more than he had wondered the day before whether she was a CE agent or not. Probably, he decided, she was a CE contact only—they had asked her to report on him.

He picked Ronnie up at her home. From the moment he saw her there was something strange about her, some suppressed excitement. He was afraid for a moment that she'd really fallen in love with him, which would be awkward, but soon decided it wasn't that.

He knew her pretty well by this time—imaginative, romantic, ready to do a thing the adventurous way though she'd never even consider doing it the ordinary way, never dashed for long by setbacks. She was with him partly because he was an Earthman and partly because he had made last night's outing very pleasant for her. He had learned a thing or two about women in his forty-eight years.

Welkin could have found out about the Park at the library, but he had had other things to do. He was rather surprised when they arrived at a vast dome, fully as large as the largest on Mars. It was of plastiglass too, coated to reflect as little light as possible, and was quite invisible at a distance of more than a few feet.

He was more impressed when they got inside. Ronnie lingered in the pavilion at the entrance, and that gave him a chance to look round.

Solomon Park would have been a showpiece on any world but Earth. He wondered why he'd never heard of it—probably because it was manmade. There were so many manmade wonders on the colonized worlds that generally the wonders which one heard about were the natural ones.

Just outside Scio, beside the cemetery, Solomon Park was a vast, well-planned, well-maintained garden, warm as June in the northern hemisphere of Earth, totally enclosed but with no sign of it, cooled and aired by soft, warm breezes. And this on a world the mean temperature of which was 40° Fahrenheit, in a city where it snowed all the year round.

It was quite untypical of Bynald.

Ronnie joined him and he saw the reason for the park. It had obviously been constructed so that Ronnie could wear her green playsuit, a neat little confection that fitted her much better than a glove. It quite made up for the unsuitability of her dress the night before. Ronnie could hardly have been shown to worse or better advantage than at the theatre and in the park.

You had to expect that of young girls—no one could look righter, or wronger.

"Aren't you going to change, too, Adrian?" she inquired.

"I'm not eighteen," he said. "You look wonderful, Ronnie. I wish I were about twenty-one."

She said nothing, but that pleased her.

They strolled along the walks and lanes of the gardens. They must have been about a mile from the pavilion when Ronnie said:

"Will you let me help you, Adrian?"

"In what?" he asked.

"I know you're a spy," she said composedly.

It was a surprise chiefly because he had been pretty certain she couldn't be in CE's employ. It wasn't much of a surprise that she told him like that, yet he recognised it immediately as an innocent, terrible mistake.

"Who told you?" he asked gently.

"My father. I'm supposed to report on you. I'll do that—I can't see that it'll do any harm, do you?"

"No." He wondered whether they should sit in some quiet spot, and decided it would be better to go on walking. The people they passed could hear only a word or two. "Just one thing, Ronnie. Were you told to bring me here?"

She looked up at him in surprise. "No. I've hardly been told anything. That's why I thought I'd help you, so that I'd find out . . . whatever it is."

He knew already that one of his most difficult jobs on Bynald, perhaps the most difficult job, was going to be getting Ronnie away safely. For he didn't want her to die, and it was pretty certain that she was going to unless he could save her.

"Do you know the danger you're in, Ronnie?" he asked.

"You mean—my own people might punish me for helping you?"

"What you're proposing could be called treason," he said gently. He knew he couldn't make her understand the deadly peril she was in, and there wasn't much point in trying too hard. He had some idea of the efficiency of CE. She probably had none.

She frowned. "You wouldn't do anything bad, would you, Adrian?"

"Not anything *I* thought bad. But in conflict you often have two sides both thinking honestly that they're right . . ."

"I'd rather trust you than Bynald," said Ronnie.

"You don't like your own world—is that it?"

"I like it all right—except for all the effort they put into *making* you like it."

"Tell me about that, Ronnie." She had already said enough to get herself executed, if and when CE found out about it. More wouldn't make much difference. Of course, the possibility that Bynald had no secret at all still remained—but by this time Welkin was regarding it as a very thin possibility.

"There's not much to tell you. You saw the opera last night. Well, the school books are all like that. *Our wonderful Bynald.* You don't dare say a word against it. And . . . I was thinking about what you said—about people disappearing. They do, you know."

Welkin stopped sharply and put his hands on her shoulders. "Are you telling the truth, Ronnie?" he asked. "Were you told to tell me this?"

She looked straight up into his eyes. If she was lying he'd never be able to trust his judgment of anybody again.

"I'm not lying," she said quietly. "I'm guessing, so I may be wrong. But I'm not lying, Adrian."

"What's this about people disappearing?" he asked.

"Well, it's just a rumour," she admitted. "I *have* heard about people disappearing, and I never really knew . . ."

"Did you believe the rumours?"

"Not until Ellen Marks left. She wasn't exactly a friend of mine, but I knew her, and once when I'd been away on vacation she made

me promise to write. So when she went away—Adrian, I'm *sure* she'd have written !"

"And she never did ?"

"No, she was supposed to have gone to Blueville, in the south, but when I tried to pin anyone down, they said they weren't sure it was Blueville, it might have been Walton City—"

"Who would know for certain if she'd disappeared ?"

"Well . . . I don't know. There's her brother, but he wouldn't care much. And her folks went away too—"

"Could they have—disappeared as well ?"

Ronnie was startled. "Maybe—I don't know. I never thought of it."

"How many people know about these rumours ?"

"It depends whether they listen to them or not. Adrian, does this make any sense to you ?"

"If Bynald makes sense at all," said Welkin grimly, "someone must disappear to somewhere."

"What do you mean ?"

He explained briefly.

Ronnie became excited. "Then that's the secret—where these people go ?"

"Only part of it, the less important part. What we want to know is *why* they go. And who makes them go—who runs the whole business."

"Have you any ideas ?" Ronnie asked.

"I will have when I've found out a little more. Ronnie, how much history do they teach at school ?"

"Not much. Only dull things like the names of the presidents and so on."

"Anything about Cedrica ?"

"Oh yes."

"Tell me about Cedrica."

"What we're told, or what I really think ?"

"What you really think."

"Well, Cedrica was a girl who had beauty and brains—and ambition, of course. I think she was very selfish. She never really cared for any of her lovers, only herself . . ."

"Ronnie," interrupted Welkin, amused, "you're giving me a very different picture from the one in the books."

"I've thought about Cedrica a lot," said Ronnie seriously. "She's in so many books, operas, plays, movies, songs, poems and so on that you get plenty of chance to make up your mind about what's true and what's false. She must have been selfish, don't you think ?"

"Yes, I do. Go on."

"She lived at the time when this world was just settling down into something. George Solomon was the president of the Assembly at the time. She knew what she wanted—everything she could get. Solomon built this Park for her, did you know?"

"No, I didn't know," said Welkin interested.

"There's a plaque somewhere in it . . . He called it Cedrica Park, but after she left him he changed the name."

"I've always wondered why Cedrica took such a hold on the imagination of this world," Welkin mused.

Ronnie's brow furrowed. "They say she was a scientist too, but I've never believed that," she said. "She must have got mixed up with someone else—probably another woman living at the same time. It isn't in character for her to be a scientist."

"Why not?"

"Research is solitary work, usually. And I can't imagine Cedrica ever being alone."

Welkin grinned. "You're going to be a wonderful woman yourself some day, Ronnie."

"We were talking about Cedrica," said Ronnie a little doubtfully, not quite sure what Welkin meant.

"So we were."

They talked for quite a while about Solomon, the first important president, Cedrica, the only woman of note in Bynald's history (she took the place of all the sirens in Earth's history and legends, Welkin reflected—Venus, Helen of Troy, Cleopatra, Pompadour and Nell Gwynn rolled into one), Cleeholme, the president after Solomon, and Jarvis the one after that.

Then without letting Ronnie know what he was doing Welkin led the subject away so that they couldn't get back to history and the question of disappearances, and then sat down with her on the warm grass close to some other couples to make quite sure that they didn't return to the earlier subjects.

Ronnie had said enough. Ronnie had said far too much for her own good, without helping Welkin very considerably.

## V.

Ronnie went straight up to her bedroom when she got home. There was a murmur of voices from the lounge—her father had a visitor, and the tones of the visitor's voice weren't familiar.

She dropped her heavy coat on the bed and started to undress. She had made no definite date with Roy that evening, because she might

have had to meet Welkin. But nothing had been said about that, so she might as well call Roy.

Roy might, understandably, have been awkward about this business, but hadn't been. As soon as he heard that Ronnie had to do a small job for the government—that was all he was told—he'd agreed that she must do it, and hadn't pressed her to tell him about it.

Suddenly Ronnie caught a phrase from the conversation below. The stranger, whoever he was, was saying : ". . . not sure we can trust her, Harnell."

Ronnie tensed. They must be talking about her.

She didn't waste time wondering whether she was justified in listening or not. She had to hear what they were saying. From her bedroom she couldn't hear more than a word here and there, but the boxroom beside it was only partly floored and she was sure she'd be able to hear through the unfloored plasterboard.

Without more ado she hurried silently into the boxroom, shut the door quietly, squatted by the open rafters and listened.

Her father was saying something she couldn't hear.

" If we give her a shot of napoline or even sodium pentothal we can be sure it's the truth," said the other man. Ronnie started violently.

Another mumble from her father.

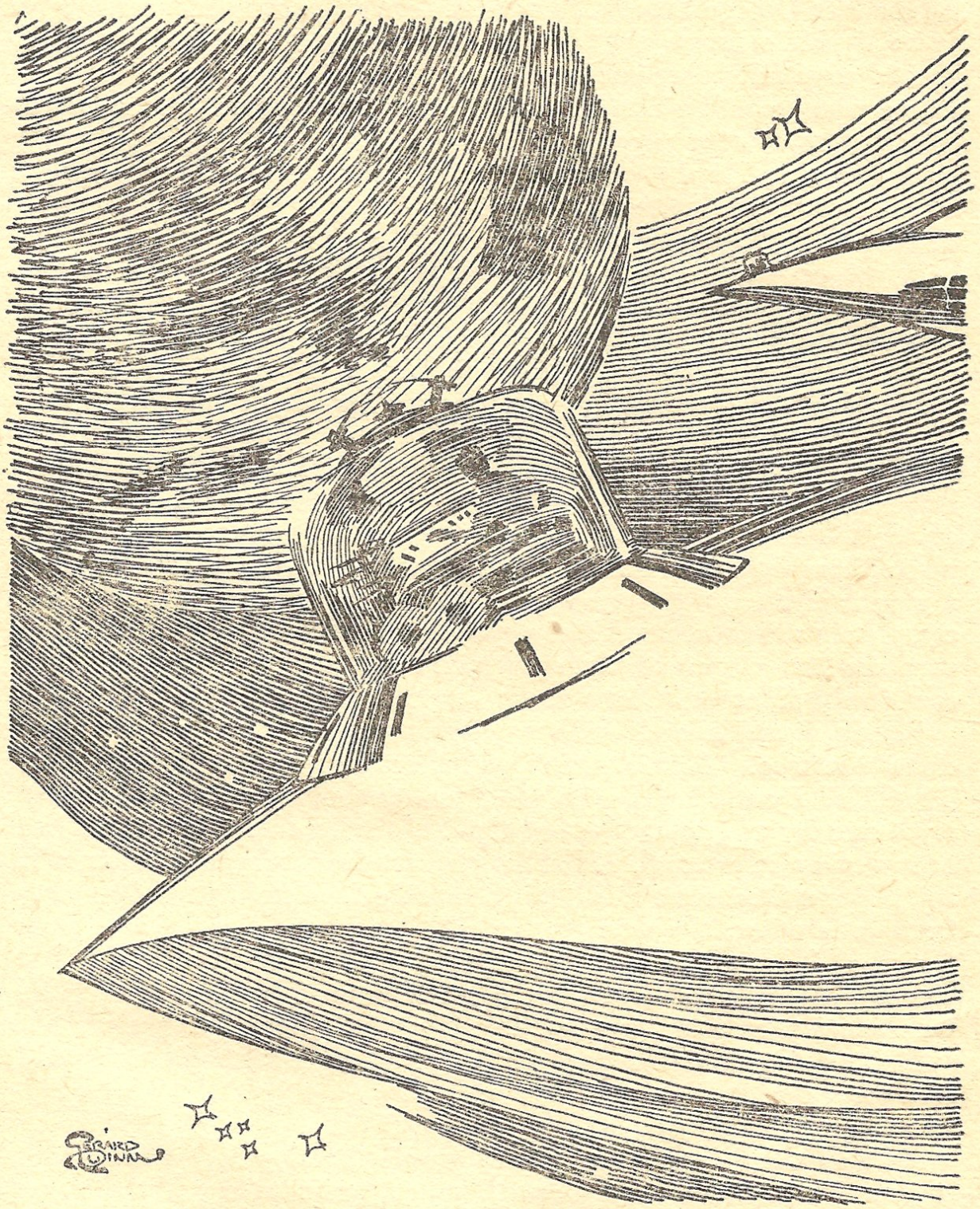
" All right, we'll wait till she's seen him again," said the stranger. " But then—we've got to know exactly what they were saying in the park this afternoon. We caught some of it, and though all we could get didn't help us much, it made us want to know exactly what they *did* say. Frankly, I haven't the least faith in your daughter telling just the truth about it, but we'll ask her anyway."

More mumbles. If the stranger didn't have such a harsh, incisive voice she wouldn't be able to hear him even here.

" Okay, I'll talk to her when she comes in. She probably already has a date with Welkin again tonight or tomorrow. And after that—the drugs, and we'll know exactly what's going on."

Ronnie went back quietly to her bedroom. This changed things completely. She realised with shame and disillusionment that when she thought of helping Welkin, when she spoke to him openly as she had, she'd had no idea of the danger she was running. She'd had some vague idea that if she was questioned she'd fob the questions off cleverly and easily, and an even vaguer idea of third degree men torturing her in a not too unbearable way and herself insisting bravely that she'd told he truth.

She hadn't seen them drugging her to take her will away from her and make her talk. There was nothing romantic about that. You couldn't fight it . . .



She put her coat on again, went very quietly downstairs again, opened the front door and slammed it as if she'd just come in.

In the books he had bought that morning Welkin found two small but interesting items.

One was George Solomon's view of foreign policy and what ought to be Bynald's future policy. Solomon believed passionately that if Bynald were fully developed it would inevitably be ruined by the predators who would be drawn to a rich, successful world. He believed that if Bynald were to grow up strong and free and healthy, *it must grow up poor*. He thought that Bynald must put five hundred years of patient toil behind it before it took advantage of its resources and decided to be rich.

Sound or not, Solomon had believed in this, and this was exactly what had happened. Welkin could find this attitude set down in only one volume, but it rang true. Solomon had been a fanatic patriot, even a crazy patriot, and somehow he had set the Bynald scene as he wanted it and kept it that way centuries after his death. That little piece of lore made sense because it was true, not because it was sensible.

The other item Welkin found was Cedrica's insistence that she died a virgin. Perhaps neither true nor important, but Welkin found he couldn't dismiss it easily. If Bynald's greatest courtesan, the woman who epitomized sex to her age and to the next two centuries, had died a virgin, if there was even a possibility that this was true, she was completely misunderstood and anyone who wanted to understand the part she had played in history would have to make some new and completely different guesses about her.

Welkin found himself following out the hypothesis that Cedrica's claim was true. That Ronnie's picture of her was completely false. That *Hail Bynald* ! was even more wrong about her. That she had ruled men by understanding them, not enslaving them. That she had been a scientist, after all. That her plan for the future, and Solomon's, and perhaps Cleeholme's, had mingled and gained strength and subtlety from each other, the strength from Solomon and the subtlety from Cedrica. That the state of Bynald now had been settled in the first century of the colony's existence, when Solomon and Cedrica and Cleeholme were making plans, not just slavishly carrying them out and ' improving ' them, as Jane Bolt and others like her had ' improved ' *Hail, Bynald* !

He was just finishing his solitary evening meal—there was no sign of Jane Bolt—when Dick German called, again asking if there was anything he could do.

Welkin decided to find out if he was going to be allowed to get rid of German.

" No, thanks, Dick," he said. " In fact—I can manage by myself now. Thanks for your help earlier. I appreciated it. But I think I'm settled in now, and I needn't troubled you again."

German looked awkward and at a loss. " Okay," he said huskily. " I guess you don't want me hanging about any more, is that it ? If you do need me, you know how to get in touch with me. So long."

It seemed to be as easy as that.

Welkin was on the point of retiring to his room to play his horn when something much more interesting presented itself.

Jane Bolt came in, obviously in a hurry, and placed a large volume in front of him. " You can keep that," she said gruffly. " It's a copy of the original *Hail Bynald* !"

Welkin was touched, and let her see it. " Thanks, Jane," he said. " You make me feel a heel, after all I said."

" You said this was good," she said, indicating the book. " Maybe you're right. Look and see. Now I've got to run."

Welkin took the book up to his room. It was unlikely that it would help him in his main job on Bynald, otherwise CE would have seen to it that he didn't get it. But life wasn't all work, particularly Welkin's life, and he looked forward to an evening studying the book.

He found it was a complete copy of the work, copied by a photographic process on very thin paper. It had complete stage directions, dialogue, vocal and orchestral score, and notes on the choreography. He was interested to see that in the original cast Cedrica had sung the soprano part (did the woman do everything ?) and that the part itself was *Erica*, not Cedrica. That was no surprise. Cedrica was such a figure in Bynaldian tradition that it was all of a piece that she should give her name to a theatrical character she had created.

A quick glance through the dialogue showed that he had been right —this was very much better than the version he'd seen the night before. He forgot all about Bynald's secret. He was back to his first love, discovery of the jewels of the past.

He was quite annoyed when Mrs. Henbald interrupted him to tell him there was a young lady downstairs to see him.

He pulled himself together. It must be Ronnie. He got up at once. It was a mistake Ronnie coming to see him here, where everything he did must be under observation and probably all the walls had ears. The best he could do was act as if he had been expecting her, and hope she'd have the sense to wait until they were outside before she said anything of importance.

She had. She hadn't taken off her coat, and was waiting as if they had arranged to go out together. He thought there was something a little tense about her smile, but naturally didn't say anything to that effect.

Ronnie waited till they were well away from the boarding-house, walking along Commerce Street, before she said anything about the reason for her call. It was getting dark, and a soft, fine snow was falling. It was bitterly cold ; they breathed out white clouds.

" Adrian, I know how you feel and I'm sorry," said Ronnie breathlessly. " I couldn't help it." She told him rapidly what had happened at her home.

" I never thought of them suspecting me, using drugs to make me talk," she concluded, disillusioned. That wasn't adventure as she knew it.

" What *did* you tell this man ?"

" I told him as close to the truth as I could—nearly everything we said, hoping they'd have caught some of it and think I was telling the whole truth. Oh, Adrian, I didn't think it was going to be like this !"

She didn't have to tell him that. The main difference about romantic adventure and real adventure was that in romance the hero and heroine always came through. In real life, you came through if you could, but it was never so certain, and you couldn't take the risks that romantic characters took and got away with.

" Don't you realise, Ronnie," he said gently, " that you were meant to hear exactly what you did hear, and do exactly what you've done—come running to me in a panic ?"

She drew herself up sharply. " I'm not in a panic !"

" You should be. I would be, if I were you."

" Why—what do you mean ?"

" I've got some protection. I haven't broken any international or local law. I've—"

" But you're a spy !"

" Don't shout it in the middle of the street, Ronnie. In a sense I am, but I never have to get outside the law to do what I want to do. Sure, CE will put me out of the way if they consider it's got to be done, but they know Earth will get very nasty if they do, and perhaps take the opportunity of clamping down on Bynald and ordering a full-scale investigation, in the course of which they'll have an excellent chance of finding out what I was sent here to find out. CE knows that. But you . . ."

" What about me ?" she asked half defiantly.

He didn't particularly want to tell her, but no useful purpose would be served by letting her deceive herself about her own position.

" Well, you see, Ronnie," he said kindly, " only Bynald has any responsibility for you. If they decide, without trial or any public mention of your case, that you're a traitor—which they're bound to do whenever they get you under drugs—there's nothing whatever to stop them—"

She stared at him in horror. " You mean I'm going to be shot—and there's nothing you can do ?"

He pulled her down on a bench at a street corner. It wasn't a comfortable place to sit, with the snow sifting down, but they were much safer out in the open than in any place where they might be overheard.

" I don't want to be unkind, Ronnie," he said, " but you've landed yourself in this mess all by yourself. You're in a much worse mess than me. Now let's see how we can get you out of it."

He considered for a moment. Ronnie didn't speak ; she was trying hard not to cry.

" Whom can you trust ?" Welkin said at last. " Really trust—literally with your life ? Not your father. He's in this too deep."

" I know," she said, and with a sudden flash of anger : " I hope I never see him again !"

She never did.

Welkin was still waiting. " Roy," said Ronnie in a small voice. " Just Roy."

" Who's Roy ?"

" My . . . my boy-friend."

" And you can really trust him ?"

" I . . . I think so. If I can't trust him I can't trust anybody. Certainly not my father . . . I hate him ! How could he do this to me ?"

" Let's go and see Roy," said Welkin.

" But—are you sure nobody's following us ?"

" I'm sure somebody is. We'll see what we can do about that first."

Stage-managed by Welkin, they gave the man or men tailing them nightmares. They got on and off buses, into buildings one way and out another way, hurried through crowds and fastened themselves on to large groups, pressed through cinema queues and waited for their pursuers to overrun them, taking full advantage of Welkin's experience and Ronnie's knowledge of the city. Fortunately Ronnie's coat was grey, a common colour for women's coats, and Welkin's was black, even more common.

Presently he declared himself satisfied. " It's always easy to drop a tail," he said. " I know because I've often got lost when I was doing the tailing. The trick is not to get flustered, and don't be afraid to stand still for a long time. The man behind you is after someone who's moving, not someone leaning against a wall, picking his teeth."

They called at Roy's lodgings. Welkin was fully aware that they might pick up their tail again by calling there, but didn't consider it necessary to tell Ronnie so. She had enough to worry about. He'd told her the truth of her position just to make it clear that her only chance was to do as he said.

" Why, hallo, Miss Veronica," said the landlady, faintly surprised. " Didn't Roy call on you before he left ?"

" Before he left for where ?" asked Ronnie, with foreboding.

" Letterston, I think he said. But he must be meaning to write—I tell you what, Miss Veronica, there'll be a letter from him tomorrow."

Ronnie was going to protest, but with Welkin's hand gripping her elbow like a vice she merely thanked the landlady and came away.

" Where's Letterston ?" asked Welkin.

" On the other side of the planet. He *couldn't* have—"

" Don't talk too much."

They went through another tail-losing operation. When it was safe they sat on another bench, huddled together so that anyone who saw them would take them for lovers.

" That's another disappearance," said Welkin grimly.

" But what are we to *do* ?" Ronnie demanded raggedly. " We can't escape, can we ?"

" Oh, quite possibly," said Welkin cheerfully. " But you see—I can't go yet. If I were to go now, I might as well never have come."

" But now they suspect you, and—"

" They suspected me long before I came. As for you—you'll have to come to Earth, Ronnie."

She gave a cry of delight. " Can I ? How ?"

" I imagine if I took you away with me now there wouldn't be too much trouble. The only thing is, as I was just saying, that wouldn't do any good. I haven't got what I came for. I have one or two interesting clues, and the germ of an idea, but—"

" You could save me, and you won't ?"

Welkin smiled at her rather sadly.

" I'm afraid you're finding out where romantic ideas break down, Ronnie," he said. " I can't take you back to Earth and tell my superiors ' No, I didn't find what you sent me for, but I saved a Bynald girl's life. I'm sorry you lost seven hundred million dollars for nothing, but—' "

" So . . . I've no chance ? I just disappear, like Ellen Marks and . . . and Roy ?"

The way she talked about Roy, Welkin decided, showed she'd never really been in love with him.

" We'll see," he said. He might have told her, but didn't, that he hadn't asked her to declare herself for him the way she had, and that indeed his own position would have been much better if she'd refrained from indulging her passion for the romantic.

" We can't stay here, anyway," he said. " Where can we go ?"

" Some other town ?"

" No, there'll be a close watch at all travel depots."

" An hotel ?"

" Likewise. I'll settle for some place where we can be comfortable and work out what we're going to do."

" The park ?"

" They know us there too. But come to that, we can't go anywhere where people aren't checked over in some way. It might as well be the park, if it's open."

" It's always open. And we can go in by another entrance."

Welkin decided on the park knowing perfectly well that CE would be able to find them there if it liked—but again he didn't force the knowledge on Ronnie. Ronnie wasn't a fool, but she was very young and very romantic, and just didn't realise that as far as governments and espionage departments were concerned one young girl was quite as expendable as a sheet of government notepaper.

" Just one thing before we get in there," he said. " They may catch up with us any time. We'll need a code."

" A code !" she exclaimed excitedly. She was too buoyant to be kept depressed by her desperate situation. Any mention of anything exciting or interesting was enough to make her forget her danger for the moment.

" Just a simple one," he said. " If I think we're being overheard, and I want you to follow my lead, I'll say something about you being lovely."

" If you want me to say nothing, you say I'm lovely ?"

" No—if I want you to say nothing, I'll call you Veronica. Once I've said the word Veronica, say nothing that matters. Is that clear ? The other thing—often it's very valuable to be able to talk, overheard, without the listeners knowing you know you're overheard. If I tell you you're beautiful, follow my lead—say what I seem to want you to say, even if it seems dangerous. Okay ?"

" I think so. And if I notice anything, what am I to say ?"

He didn't know how well she could act. He preferred not to let her say anything as a signal, in case she hammed it with such emphasis, such significance, that the game would be up.

" Don't say anything," he said, " do something. Do something to your coat."

" I won't have my coat on. I'll take my jacket off. All right ?"

" Yes, only remember not to take it off if you *don't* see anything."

They made their way to the park in much better spirits, Ronnie cheered up by the business of the code and Welkin by the quite strong possibility that he *would* get a chance to get in some double-talk. If he did, it was bound to be useful.

## VI.

Solomon Park by night was wonderful—especially to people coming straight in out of the snow.

It wasn't brilliantly lit—it was lit just enough not to be menacing, not enough to be garish. There was no sign of the source. Probably the light was electroactinic, Welkin decided, matched to some reflecting index of the plastic dome which did not interfere with the passage of sunlight the other way.

The effect was that anything close was quite well lit while more distant objects disappeared into shadow. Considering how cold the rest of Scio was and how warm, friendly and intimate the park was, it must be the lovers' lane *par excellence* of the civilized galaxy. The number of couples they saw, or sensed without quite seeing, indicated that this was the parks' principal nocturnal function.

"How are morals on Bynald, Ronnie?" he asked idly.

"Huh?"

"You don't have scandalized letters in the papers about what goes on after dark here, do you?"

She laughed. "That's what it's for, silly."

"Have you been here with Roy?"

"Of course." But definitely she hadn't been in love with him, or some shadow would have fallen over her. In any case, she was rather unfeeling about Roy—did she realize the boy was probably dead?

"And . . . with anyone else?"

She laughed again. "Well, I'm here with you," she said ingenuously

She was at the selfish period of adolescence, Welkin reflected a little sadly, when all that really mattered to her was whether others found her attractive or not.

But then, as if she sensed what he was thinking, she suddenly asked: "Adrian, do you think Roy's all right?"

He was glad of the anxiety in her tone. He liked Ronnie, and wanted to think well of her.

"Perhaps. Does he mean a lot to you, Ronnie?"

"I don't know," she said. Then: "No, he doesn't. He can't because I've felt nothing since I knew he was gone. Just nothing. Unless . . . maybe . . . maybe I'm even glad."

"Glad he's gone?"

"He said he loved me. And I couldn't see any reason why I shouldn't love him, yet . . ."

That was better. She was sounding more like a girl with a heart—a heart that had never been touched yet.

They had left their coats at the pavilion. They looked, in the semi-dark, like most of the other couples they sensed around them. Welkin could have been quite a few years younger and Ronnie could have been older.

Welkin pointed and they sat in an intimate corner well off the main path, enclosed on three sides by shrubs.

" Do you mind ?" Welkin asked, taking Ronnie in his arms.

" Of course not," she breathed up at him, her lips parted.

" Well, remember it doesn't mean anything," he said bluntly. " Now that we've got time and peace to work things out, let's do it. Point one—CE can pull us in almost any time they like. I've a healthy respect for CE. Point two—at the moment I'm on the threshold of Bynald's secret, but not over it yet. If I get another couple of days, I'm sure I can crack it. Point three—when we leave here we've got to go somewhere, and I'm not sure where."

" Together ?" asked Ronnie.

" We'll have to be together," he said grimly. " I've a strong suspicion that if I let you out of my sight I'll never see you again."

She shuddered.

" Had enough of adventure ?" he asked sardonically.

" I'd be enjoying this tremendously," she said frankly, " if I was sure everything was going to come out all right. But . . ."

" That's just it," he agreed. " And I've got a wife and three children to worry about."

Ronnie moved a little restlessly in his arms, and he decided he'd dropped the reminder not before time. She was a young, vital creature, hungry for love, and he found himself reflecting that this Roy of hers couldn't have been much of a fellow if he hadn't managed to waken in Ronnie what Welkin, at his age, could hardly help wakening.

" You said you were on the threshold of . . . whatever it was," said Ronnie. " Tell me about it."

" Two and a half centuries ago," said Welkin reflectively, " Bynald was pretty much as it is now. George Solomon was president. Cedrica was . . . Cedrica. Cleeholme was Solomon's deputy. Solomon loved Bynald so much he was crazy about it. Everything he did was for Bynald's future. Even when he was under Cedrica's spell he had one eye on Bynald. His fear was that if Bynald developed its vast mineral wealth, there would be wars, legal battles, commercial strife, and Bynald would be torn to pieces again and again . . . and I'm not going to say that he was wrong. He believed that the only way for Bynald to stay safe was to stay poor, never allow anyone to come and develop anything, never sell a square inch of Bynald's soil . . ."

"Where did you get all this?" demanded Ronnie wonderingly.

"All sorts of places. From you, from that opera, from books, from the way Bynald is now, from guesses. I'm a historian, Ronnie. I'm good, too. Give me an inch of fact, and I'll make a mile of theory. Well, to go on . . . Solomon founded the sort of government that kept and would continue to keep things as they were, stop development, make moderate but never spectacular progress, and build up a tradition. The head of CE, whatever his real name is, is always called GS—one of our unsuccessful spies told us that. GS for what? George Solomon, of course.

"Solomon built to last. He passed his beliefs on to others, and by the time they retired from office, the machine was running. Dead slow. Except for espionage and counter-espionage, which as I told you were pretty good.

"Now Cedrica. I think you and everybody else are wrong about Cedrica. I think she was a psychologist rather than a power-mad siren. And I think she and Solomon worked together far more closely and rationally than the legends would have us believe. *They* started Bynald's secret, whatever it is. I'm certain of that. Solomon and Cedrica cooked it up two hundred and fifty years ago, and it's been running smoothly since."

Ronnie was staring up at him fascinated, like a child being told an enthralling story. Of course, this was new light on people she'd been hearing about—vaguely, in legend—all her life.

Welkin wondered if she'd forgotten she was in a man's arms. No—no woman could quite do that.

"What I can't fit into the picture is this question of disappearances," he said, frowning. "We can guess a large number of people *must* disappear. I'm sure of it. There are no figures, but you've only got to take a bird's-eye view, see how almost every two people produce at least three more, those three produce four or five, and the four or five produce about six, all before the first two are dead—that's two into fifteen in less than a hundred years—"

"But they've all got to marry other people. I mean—"

"I know what you mean, and I'm allowing for that. The population should be multiplying itself by six every century."

"You mean—all those people are dying?" Ronnie exclaimed.

"I don't know that they're dying. Maybe. Or going somewhere else—"

"Where?"

"How should I know? But there's plenty of room in the galaxy."

He paused, then ruminated: "This sounds crazy, but it *would* make some sort of sense—Solomon sense. Suppose everybody who

didn't think Bynald was wonderful was killed—removed, anyway. Suppose for generations this went on, so that every child was brought up in an atmosphere of fanatic nationalism, so that gradually a sort of nationalism was almost inbred in the population. Darwinism. Nationalist strains survive, non-nationalist die. In the end you might have—"

"Well, it's not that," said Ronnie definitely. "Didn't I tell you about Ellen Marks? That's what I didn't like about her—she never talked about anything but Bynald. She was crazy about Bynald, just like Solomon, if what you say is true. And Roy's the same—that's one of the reasons why I never really fell for him, he always cared more about Bynald than about me. And—"

"Ronnie," said Welkin urgently. "Think of all the people you've ever known, the people who *might* have disappeared."

"But I only know about Ellen and Roy, in fact I don't even *know* about them—"

"I understand that. See if you can get your mind to cover all the people you've known and don't know now, people you've lost sight of, people who have moved to other cities, people you've just forgotten. Can you do that?"

"I . . . I think so."

"Well, generally, are these people old or young? I mean, were they old or young when they disappeared?"

"Young, mostly. Nearly all young."

"Men or women?"

"Both."

"And—patriotic or indifferent?"

"Patriotic," she said, quite definitely.

"And can you ever remember anyone like you, anyone who didn't give a damn for Bynald—can you remember anyone like that disappearing?"

She hesitated for a long time, while Welkin waited tensely.

"No," she said at last.

Welkin was silent for a long time. He still had to guess—but he had something to go on now. Solomon, Cedrica, Solomon's policy—and what Ronnie had just told him.

"Ronnie," he said excitedly, "I can almost—"

"Just a minute, Adrian," she said quietly, and sat up, pushing his arms aside. He stared at her in wonder, his mind wholly occupied with something else.

It was only when she dropped the little jacket which had covered her shoulders to the ground that he remembered.

He took her in his arms again. He was careful not to look about him. "I'd take you back, Ronnie," he said gently, "if only I'd done

what I came to do. But there's no point in our going now—I'd only have to come back."

He let his eyes wander slightly, but he could see nothing. He didn't doubt that Ronnie's eyes were sharper than his.

Abruptly he realized she couldn't say anything yet because he hadn't given her her cue.

"Lovely, lovely girl," he said kissing her cheek, then her lips. "That's the only really worthwhile thing I've done so far on Bynald—meeting you."

"What about your wife and children?" she inquired in a voice that wasn't quite natural, but with admirable spirit.

"They aren't here," he remarked.

Sitting up abruptly he said in a different tone: "I can't understand it. I knew before I came here that Bynald was an enigma, but—"

In the bushes, something was dropped. It wasn't much of a noise, and for a second Welkin debated pretending not to have heard it. But that was impossible. He was supposed to be an experienced man.

"Who's there?" he inquired in a conversational tone. "Yehudi?"

Three men stood up. Welkin and Ronnie stood up too. Welkin was surprised to see that one of the men, evidently the leader, was Dick German.

"Come on," said German briefly. "Quietly, please."

Ronnie started to say something.

"You can talk later," German said. "But not here."

There was nothing Welkin and Ronnie could do but go with them. Welkin was rather glad they weren't being given an opportunity to talk. It wasn't necessary to act injured innocence.

Ronnie bent to pick up her jacket, but one of the men stopped her.

"It doesn't matter, Veronica," said Welkin indifferently.

She took the hint. She said hardly another word, leaving it all to Welkin.

At the gate, German refused to allow them to take their coats. Probably that was Welkin's fault for mentioning them—there might be something about Welkin's coat that German didn't know and he was taking no chances. He was right, of course.

"You're not going to make Ronnie go out like that?" Welkin protested.

"There's a car just outside the door," said German briefly.

If Welkin had had a choice, he'd rather he had his coat than Ronnie hers. But it didn't really matter—there were plenty of buttons on his pants and shirt.

Ronnie shivered violently as the snowflakes settled on her bare shoulders. But then they were in the car, on the way to be questioned by CE men, and she had more to worry about than the cold.

## VII.

They were taken to a room in the Administration Building—a small room with nothing important in it. No windows, one door, a table, some chairs. There were Welkin and Ronnie, German and the other two men, two nondescript men, not in uniform.

"We won't do any pretending, shall we?" asked German.

"Not if you'd rather not," said Welkin agreeably.

"Frankly," said German, "I'd rather you simply decided to go away, Welkin."

"Taking Ronnie with me?"

"You can't do that. She stays here, whatever happens."

The casual, indifferent way he said that made it worse. Ronnie went pale.

"She never took to Bynald's nationalism," said Welkin easily. "I think you'd better let her come to Earth with me."

German shook his head, refusing to argue.

"How did you come to pick a girl like her, anyway?" Welkin asked.

German shrugged. "We thought you'd talk more readily to a girl like her."

"And you were right. You're sending me away, then?"

"Probably—after you've both been questioned under drugs."

"I see." Welkin looked at German. He meant it. They weren't going to talk him out of it—and again he was perfectly right.

"In that case," said Welkin, "I might as well talk now and save us all time. Am I addressing GS in person?"

German nodded, undisturbed. Welkin managed to catch Ronnie's eye, and tried to tell her in one glance to keep out of this—not to obtrude her presence by as much as a start or a quickly indrawn breath. She seemed to catch the message. She sat down quietly out of the way, so that German couldn't even watch her and Welkin at the same time.

"But if I'm going to talk," said Welkin, "do you want these two to hear it?" He indicated the two guards.

German nodded to them and they went outside. That was interesting. They would remain outside the door, and Welkin's chances of escape remained at nil, but the fact that German had sent them away meant that they weren't in the secret—that very few people were, in fact.

"I've found out quite a lot about the Solomon Plan," said Welkin. The reaction was very slight, but there was a reaction. Welkin was pleased. If German was going to let him guess and see whether he had guessed right or not, something might easily be accomplished. Already he had established that there *was* something called the Solomon Plan, or words to that effect.

Welkin didn't know the whole story, but neither did a fortune-teller when a client entered. Yet she was trained to make an initial good guess and go on guessing, instantly abandoning a false trail and following up anything which got a reaction, and soon convincing her client that she really had a clairvoyant source of information . . . Welkin was surprised that German let him do it. But then, German thought he held all the cards.

" Perhaps I should say the Solomon-Cedrica-Cleeholme plan," Welkin went on. " It's been operating for two hundred and fifty years, and I should say it's got at least another two-fifty years to go." No reaction this time, yet even the absence of reaction was something.

" It's a crazy plan, and it's not going to work," said Welkin. It was time to take the first plunge.

" We guessed about the disappearances," he said slowly, " but we never knew about the *army*. We thought people were simply eliminated, not saved up, put in the bank so to speak, as part of the Plan."

Again no reaction. Nevertheless, he felt it, felt German's tension and knew he'd guessed right or nearly right.

" It was just the kind of thing Solomon would think of," Welkin went on, hoping German couldn't see the sweat on his forehead and realise how hazy he really was about all this. " Anything to put Bynald on top—anything. I don't know what's been done all these years with the patriots, but I know they've been collected, banded together . . . what's been done with them, GS ?"

German looked back quite blankly, not even acknowledging that a question had been asked. But he was still listening.

And Welkin knew that if he didn't have everything, he had enough. He went on in a surge of confidence.

" Must be some sort of suspended animation," he mused. " Cedrica's contribution, no doubt. Solomon wanted Bynald to stay apparently poor, but actually get stronger. So he formed the plan of stashing away about half each generation, I don't pretend to know how. Some of them are volunteers, I suppose, but if they're not volunteers they've got to go anyway, once they've been asked. These are the people, the chosen people who think as Solomon thought about Bynald—as you think, GS."

Ronnie was staring at him open-mouthed. GS had forgotten about her, though. What she did no longer mattered.

" The end of the plan, I guess, must be something like this," said Welkin. " In about two hundred and fifty years from now Bynald will sort of waken up. Exports will rise, assets will be converted into cash and machinery. Thousands of young people will be sent to Earth and the other planets to attend colleges. They'll come back as trained,

up-to-the-minute technicians, and they'll set about the business of turning Bynald into a slick, high-powered, efficient world. There'll probably be some law, or some excuse to keep foreigners out for a year or two. It wouldn't stick for long, but for a year or two . . ."

"Welkin," said GS at last, "what are you up to? You know I can't let you go now."

"Then," Welkin went on, unheeding, "you waken, train and equip your army. Let's see—it could be anything from four billion strong to . . . say twenty billion. An *army* of four billion. That could only be meant to take over the whole galaxy, eh, GS?"

German wasn't even pretending his picture was wrong.

"Obviously Solomon was a megalomaniac," Welkin observed. "I don't know how he ensured that only other megalomaniacs should be chosen to play their part in this plot through the centuries, but obviously he managed it . . ."

German's gun came up. He wasn't going to argue. He was merely executing Welkin and Ronnie on the spot, to make sure there were no mistakes.

"I wouldn't do it if I were you," said Welkin with a sudden edge to his voice. "Just a moment ago you asked what I was up to—you knew I must be up to something."

"Well?" said GS, his gun pointed straight at Welkin's heart.

"You've let yourself get behind technologically here in Bynald," said Welkin steadily. "So far behind that it probably never even occurred to you that everything that was said in this room was being picked up and recorded for delivery to Earth?"

GS didn't hide his consternation. If Welkin was bluffing, it wouldn't gain him anything; if he wasn't, neither GS nor Welkin himself mattered much any more.

"These buttons," said Welkin, fingering them. "I expect you had them examined pretty closely—I noticed how thorough the so-called customs examination was. True, they're simple, ordinary plastic buttons, and if you sawed them up you'd still find nothing strange about them. But actually they resonate with sound vibrations, as almost everything does to some extent, and this resonance is picked up by two short-wave beams that don't need wires to operate any more than a carrier beam does, and at the other end of the beams, in two Terran Navy ships hanging about just clear of Bynald's atmosphere, this resonance is recreated and blown up by the most powerful amplifier I ever saw—and every word I've spoken since I landed on this planet, every word anybody else has spoken to me, has been noted and recorded."

" How do I know this isn't bluff ?" GS demanded sharply.

" Any way you like. Would you like some coloured streamers in the sky ? A bomb dropped on Solomon Park ? Let me suggest that we make it a tender for Ronnie and me, landing in front of the Capitol in . . . say two hours' time ?"

GS was staring at him.

" If I'm bluffing, I gain an hour or two ; that's all," said Welkin. " But you know I'm not bluffing, don't you, GS ?"

Apparently German did. " Get out of those clothes," he said grimly. He turned to Ronnie. " You too."

Welkin laughed. " Shutting the stable door after the horse has bolted only prevents him from getting back in," he observed.

" Quickly !" said German sharply. " Or I'll shoot you both, here and now. Then there won't be anything else for these ships to overhear."

Trying hard not to show her uneasiness of the gun waving about at them, Ronnie stood up straight, defiantly, took a deep breath and started to unfasten her playsuit.

Still laughing, Welkin said : " Hold it, Ronnie. GS, be reasonable. If I'm lying, there's no point in destroying my clothes, as I presume you're going to do. And if I'm not, it's too late—I've said enough already, and anything else that's said now will hardly be worth recording."

German hesitated. " All right," he said abruptly, and turned. " Tell them to send down that tender—in two hours' time." He was gone.

Naturally Welkin tried the door, and naturally it was locked.

He looked back at Ronnie, who was slowly fastening her playsuit again, and realized with a flash of amusement that she'd half *wanted* to be searched, as most beautiful spies were at some time or other during their adventures—usually in an attempt to find ' the missing plans.'

Ronnie couldn't seem to realize, and remember, how desperate her situation was, and still, now and then, seemed to be thinking of it as an exciting game with herself as the heroine.

GS had been right the first time, Welkin reflected. He should certainly have carried out his threat—there might still be some vital message that Welkin wanted to convey to the two waiting ships, and GS had given him the opportunity to do it. There wasn't any such message, as it happened, but GS should have played safe.

And if he could be diverted from his purpose in that, he might also be diverted from his purpose of executing Ronnie as a spy. It wasn't likely, certainly, but Welkin intended to try it.

## VIII.

" Was all that true ?" Ronnie breathed.

" All that," Welkin agreed. " Say what you like, Ronnie, so long as you realize that both CE and Earth are taking careful note of everything you say."

The polite hint naturally startled her. But having made his point, Welkin was smiling. " I don't think it matters," he said.

" They're not going to let us go—after that ?"

They were going to let Welkin go. Ronnie, no. Ronnie had helped to break down the Solomon Plan—for it must be broken down now. GS, CE and Bynald would hate her far too much to allow her to go free.

But if Welkin put his awareness of this into words, it would weaken him in his effort to save Ronnie.

" I expect they are," he said casually. " GS is a fanatic, of course, but he shows every sign of being a realist as well."

" But that crazy story . . ."

" It's not a crazy story. At least it's crazy, but it's perfectly true, in essence. I don't know about the details."

" You mean all these people who ever disappeared are alive, and can be brought back . . . ?"

" It's the only thing that makes sense. I wonder where they are ? You know, I suspect Solomon Park. I wondered when I saw it—why should Solomon, of all people, build such a place ? Only as cover for something else. If this other thing needs a lot of power, as it probably does, the drain from the atomic plant running the park could easily be camouflaged . . ."

Ronnie was still dazzled by the idea. Sensibly she returned to more immediate matters. " Why should GS let us go ?"

" Well, he always wanted to get rid of me peaceably, if he could. Planets like Bynald can't afford to murder Earth's official representatives, even Earth's semi-official representatives. Now more than ever. If GS shoots me, Earth will be able to use that as an excuse to take Bynald apart, looking for evidence."

" And what about me ?"

There had been times when he'd thought of her as a bit of a nuisance, and wished she'd kept out of things she didn't understand. But there was no denying that in the end she'd been useful, and that he'd very much like to get her away from the just wrath of Bynald's administrators if he could.

Unfortunately, Earth couldn't make anything of whatever Bynald cared to do to one of its own citizens. Bynald could say she was a

murderess if it liked—certainly she was a traitor, and on most worlds the penalty for treason was still death.

It was a tragedy though. He looked at her affectionately, aware that he might not have much more chance to look at her. She was in the perfect outfit for a pretty eighteen-year-old—something simple, and not much of it. It was horrible to think of that lovely little body being lifeless in a few hours' time.

"Don't let's talk any more," he said. "Let's just wait and see, huh?"

They waited, but there wasn't much to see. Not until nearly two hours later, when GS came back.

"A small ship just landed in front of the Capitol," he said.

"So?"

"So you'd better get on it."

"And what are you going to do?"

GS hesitated, then smiled faintly. "Tell Earth, Welkin," he said, "that it can't do a thing to us. The Solomon Plan is reversed, as of now. If we must—we'll grow rich and fat. We've more than ten billion workers, you know—or we soon will have."

Welkin grinned back. "So that's the way of it? That's your business, so long as the original Solomon Plan is buried. It's nothing to me. Come on, Ronnie."

"Ronnie isn't going," said GS softly.

Welkin looked over at her. She was scared by these three quiet, certain words, and couldn't hide it. She had good reason to be scared, Welkin admitted. "Then neither am I," he said just as quietly.

"Don't be a fool, Welkin," said GS harshly. "She's our business. You know that."

"I can make things awkward for you—or easy. Which is it to be?"

GS hesitated again. "I haven't the power to let her go," he said.

"But I'm supposed to go, isn't that so? So I'm staying."

Welkin let the deadlock hang for a few moments. He himself was in a strong enough position. He was pretty sure that in these last two hours GS had been told, or rather, *instructed* to let him go.

"Tell you what," said Welkin at last. "Let us get to the tender, then shoot Ronnie—and miss. That'll clear you personally.

"Okay," said GS instantly.

"Another thing—there's a book at my lodgings I'd like to take back with me—"

"All your things are at the tender already. Including your French horn."

The last was said with a touch of visciousness, the only time German had allowed the slightest hint of his own feelings toward Welkin to escape him.

"Thanks, GS," said Welkin cordially. "That's very kind of you. Let's go."

They walked through the Administration Building, which was silent and empty, but with most of its lights blazing—all that were along their route, anyway. They were accompanied by not two but seven guards, so it was a procession of ten that strode through the empty, echoing building.

They went through the Capitol too, and here there was plenty of signs of life. People stared at the procession, particularly at Ronnie in her playsuit. Welkin was surprised that a way hadn't been cleared, so that no one would know anything about the affair. But then, there was an obviously Terran tender in front of the Capitol. That could hardly be hushed up.

They marched out at the front of the Capitol. Again Ronnie shivered as snow fell on her shoulders, as she stepped out into the below-freezing chill of Scio at night. The tender was about two hundred yards away, a miniature spaceship, sleek, gleaming and terribly efficient-looking.

Welkin wondered if the Bynald Navy had any ideas about following the tender and trying to destroy the two ships in the hope that that would prevent the secret of Bynald reaching Earth. If that was so, they'd be wasting their time. For one thing, even this tender, let alone the parent ship, could laugh at anything the Bynald Navy could do. For another, one of the two ships must be billions of miles on its way to Earth already.

As they approached the tender Welkin saw his things being handed to a naval officer who looked very doubtful about whether he should accept them or not. However, when he looked up and saw Welkin coming his face cleared and he took them.

That was one thing about going back by a naval ship, Welkin thought. You didn't have to worry how much luggage you made them carry—not like an ordinary civil ship.

He hung back to let Ronnie go first. They were almost at the ship. Ronnie could have stretched out her arms and touched the hull.

Unfortunately it was GS whom Welkin was watching principally. GS did nothing. It was one of the guards—Welkin never learned whether by orders or not, or by what orders—who raised his gun suddenly and fired.

The instant before the shot, Welkin dragged on Ronnie's arm as if he were trying to wrench it off, and she lurched toward him. Nevertheless, the shot didn't miss her. She dropped in the snow with a small red hole in her back.

Welkin didn't stop to argue. He swept her up in his arms and got her inside the lock, knowing GS wouldn't let him be shot. He saw startled faces, faces he knew.

" Get off, quick," he said, and looked for the doctor, still holding Ronnie slumped in his arms. She hadn't made a sound since the shot.

There was always a doctor on a tender, by regulation. He stepped forward, led the way to a tiny cabin, and Welkin put Ronnie carefully, face down, on the bunk.

" Now go away," said the doctor.

Welkin saw that the bullet hole was just below the tip of the right shoulder-blade. Through the lung certainly, if not through the heart —it depended on the angle. Then he left the doctor.

Lester was shaking his hand. " Well, you made it, Adrian. Did ever you hear anything so crazy ? *Would* they have got away with it ?"

" They might," said Welkin. " Depends on our espionage departments two hundred and fifty years from now—it *should* have been able to find out in time."

Inevitably he was terribly tired. A lieutenant, aware of this, came up, smiling, with a tonic. Welkin swallowed it.

" I must say," said Lester, half protestingly, " you took rather a lot on yourself insisting that girl should come with you. Think you'd better play that bit down in your report, Adrian."

" Excuse me, sir," said the lieutenant, grinning, " didn't you happen to get a good look at her ? I did."

" Oh well," said Lester, " you did it anyway, Adrian. Queer lot, these Bynaldians. Is that GS character crazy ?"

" Only in one way," said Welkin. He was managing not to look at the door of the tiny cabin he had left, but he couldn't help keeping his head on one side to listen intently for any sound from there.

" Funny business altogether," said Lester, who was a good naval officer but not gifted with much imagination. " Hard to believe some of it. In fact I don't believe it now."

" We'll leave that to Security," said Welkin. The tonic was beginning to work. It was just as well, he thought, that people like Lester weren't left to decide whether to take notice of things or not. The only menace Lester would recognize was a visible, three-dimensional, present-time menace.

The tender shot faster and faster toward its parent ship. Two hours hadn't been in the least necessary for it to reach the Bynald Capitol—

Welkin had given GS that so that he'd have time to get in touch with his superiors. Twenty minutes would have been enough.

Welkin felt like suggesting to Lester that he might cut down the acceleration, since a seriously wounded girl was aboard being treated. However, if the doctor himself didn't suggest it, he couldn't.

The tender was swallowed neatly by the battleship it had come from, and immediately the battleship was piling on acceleration for Earth. Still the door of the little cabin in the scout hadn't opened, though presumably the doctor knew they were aboard the naval ship.

Welkin had to make his report to Fenworthy, confirm that his advice was got back to Earth as soon as possible, and change his clothes before he could go back to the tender, resting rather fatuously in a large, otherwise empty hold.

At last the doctor emerged.

" Will she live ?" Welkin asked anxiously.

" Oh, I shouldn't be surprised," said the doctor indifferently. " It would have saved me a lot of trouble, though, if you'd managed to stop them firing that shot. I've had the devil of a job."

" Can I see her ?"

The doctor shrugged his shoulders.

Welkin went into the cabin quietly. Ronnie looked ghastly. If Welkin had seen her like that before seeing the doctor, he'd have been sure she was dying. But he knew the doctor's " shouldn't be surprised" meant that he'd be very surprised indeed if Ronnie did die.

" Next stop Earth," he said gently.

She looked up at him weakly. " What's it like, Adrian ? What's going to happen to me there ? What will they—"

" Don't talk," he retorted, " or you won't get there at all. Don't worry, Ronnie. We'll find something for you on Earth. As a matter of fact, I can promise you a good job now if you like. An interesting, exciting, romantic job.

She heeded his injunction not to talk, but looked her inquiry.

" I can get you a job as a spy," Welkin said.

Her expression showed what she thought of that idea. " No, thanks," she gasped weakly.

*J. T. McIntosh.*

*In his novelette "Red Alert" published in our January issue James White managed to portray the thoughts and actions of an alien with admirable effect. The following story, although entirely different in theme, is also narrated from the viewpoint of an alien entity and shows the difficulties we may one day have to face should we be visited first.*

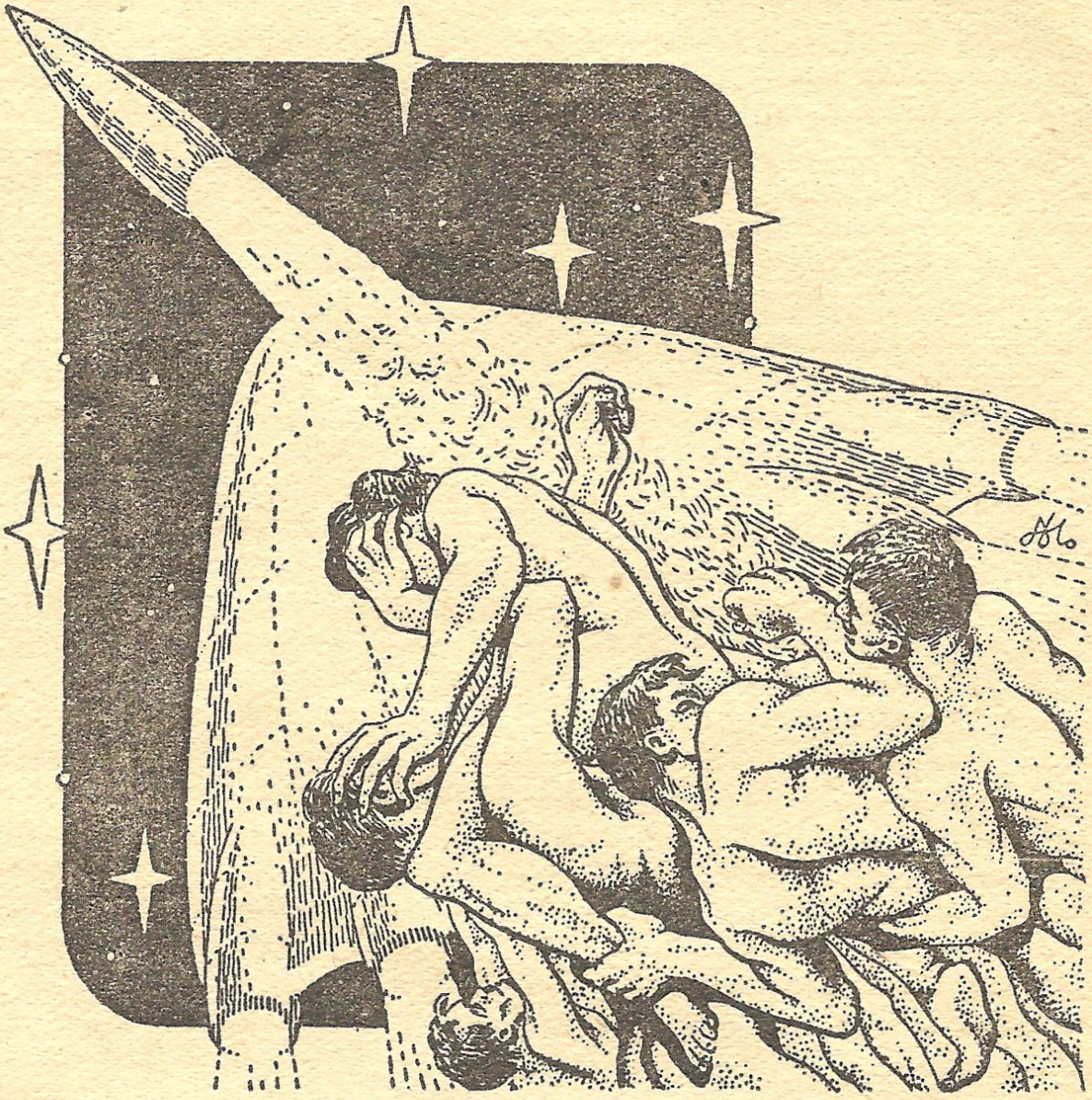
# QUESTION OF CRUELTY

## By James White

Illustrated by HUNTER

The great flying wing, its controls sluggish in the high, rarified air, came slowly out of the dive and pulled its nose up in a forty-five degree climb. Booster units along the trailing edges spewed flame and smoke, adding to a velocity already twice that of sound, and it was shrewdly making use of the rotational spin of the Earth itself. In the instant before its climbing speed began to slacken, fire and fury erupted from the silver torpedo clinging to the wing's broad, triangular back, and the rocket shot free.

Trailing a dazzling white column of vapour—already showing the kinks knocked into it by stratospheric winds, it climbed into the black near-vacuum that was the outer atmosphere, and beyond, Still accelerating, but at a rate which would not quite kill its occupant, its flight path curved smoothly until it paralleled the planetary surface below, and continued until the pre-calculated velocity was attained. Then the motors shut down.



The first orbital rocket circled Earth, telemetering a constant stream of data to ground control. Everything from cosmic, gamma and Solar radiation to the respiration, perspiration and—sometimes—the desperation of the vehicle's occupant. Everything worked perfectly. After a short—or very long, depending on the viewpoint—time, an inconspicuous mechanism connected to the air supply plumbing functioned briefly.

The world nearly ended at that moment.

Protected by its invisibility screen and very little else, the Execution Ship slowly paced the orbiting rocket. It was an incredibly crude and antiquated mechanism, the Captain thought ; he was surprised that it had been made to work at all. But what surprised him even more

was that the equally crude and grossly-formed creature strapped in its nose section was capable of building such a device. A biped, hairy, and with five stumpy appendages growing from each of its upper limbs . . . The Captain thought of the twelve strong, sensitive, and highly flexible manipulatory organs possessed by the Srilla, and his yellow-grey hide puckered in distaste.

In a control cupola near him, the ship's last remaining Weapons Officer interrupted his thoughts with urgent, whistling speech.

" We've enough energy left to peel them. Why are we wasting time?"

The Weapons Officer was in pain. Hard radiation had caused tissue breakdown in his four speaking orifices, making it difficult for him to modulate properly. He had to shrug and wrinkle his pelt so as to clarify by signs what some of the slurred phrases meant, which also added considerably to his pain. Obviously the Weapons Officer's approaching death was making him angry, and very impatient.

The Captain was about to reply when the third occupant of the control room saved him the effort.

" Our arrival here was purely by chance," the ship's Biologist began evenly, " and the ship was so badly damaged that we lacked both the ability to land and the instruments to make the usual long-range investigation. Yet on little more than a few radiation tests of its atmosphere, we had decided to destroy all life on this world. Then this space-vehicle came, allowing close observation of the creature aboard and of an artifact which must be one of the ultimate products of the being's technology." He paused and swung an eye towards the Captain. " I think our decision should wait until this new data is properly evaluated. We are, by necessity, merciless. We are also just."

Apparently the coming end had not affected the Biologist's personality pattern at all, the Captain noted, envy briefly tinging the admiration he felt at the other's composure. And neither of them for an instant thought of just leaving and heading for home. Planets like this were their job, and a subtle blend of hypno-therapy and brain surgery made their job more important to them than things like eating, breathing, or any other actions or evasions likely to prolong life.

With a curt twitch of back muscles he signalled that he agreed with the Biologist. He returned his attention to the object in his viewscreen.

His ship's scanning beam penetrated the rocket's hull, showing the almost empty fuel tanks, the simple reaction motor, and the intricate mass of electronic equipment packed solidly into what space remained. The living section was incredibly small and cramped, and the being occupying it was strapped in with only its upper limbs free to move. Pneumatic pads protected various parts of its body against acceleration

pressure, and a maze of wires and tubing led from other parts to instruments which telemetered the data received down to the planet below.

The Biologist spoke again.

" You will notice that this being is low on the evolutionary scale, with a crude digestive tract, and that no provision for the disposal of body wastes is incorporated in the vehicle's construction. The flight, therefore, will be of fairly short duration. But one thing puzzles me . . ." He indicated what appeared to be a cylinder and timing device hidden behind the air inlet grill above the creature's head, and fell silent.

More than one thing puzzled the Captain. The being's behaviour, for instance. Sometimes passive, then for no apparent reason, as it was doing now, flailing its arms about as if in panic. Still, he reasoned, if this was one of the first flights of this race into space, a certain amount of fear would be normal. But what was that dry spongy substance floating about the compartment ?

Suddenly, something happened in the being's rocket. Vapour exploded into the tiny living space. The being's head and arms jerked convulsively, then became still. The Captain began, " What . . .?" but stopped, too sick with shock and disgust to trust himself to speak.

He had no need to be told that the being was dead. Murdered.

The Weapons Officer spoke first.

" It is obvious what has happened," he said, their present plight making his ' I told you so ' expression seem very childish. " A dominant life-form divided into two or more idealogically opposed groups, each trying for the military advantage of a space-platform. One group succeeds in sending up this vehicle as a preliminary, but spies or sympathisers sabotage the attempt by killing the pilot—which must ultimately cause the destruction of the vehicle. Or possibly it was the work of a being jealous of the fame this ascent would bring the pilot, pre-supposing this to be the first flight of its kind." His voice rose impatiently. " I repeat, we should exterminate—"

" Please," the Biologist broke in. " We must not jump to conclusions." He rolled forward in his cupola, hissing with the effort it cost him, and began setting up a localised attraction field on the control panel before him. " We are not *sure* that the being was killed deliberately. But there is a way to find out."

*So that was it*, the Captain thought with wry amusement. The Biologist was, without doubt, concerned about the fate of these bipeds, but he was primarily a Biologist, and Biologists, the Captain knew, were happy only when they had strange life-forms and processes to

dissect and investigate. But let him have his fun. The Captain was sure that it would make no difference in the end. Judging by this specimen, that was not a nice race down there.

And it would be in order to take the creature aboard for investigation. A living, intelligent being could not be treated as an experimental animal—that was forbidden by law. But a creature that had died was a different matter. Even if the resuscitation and regrowth techniques of the Srilla brought it back to life, it was still technically a dead specimen.

Looking at the rocket ship pictured on his screen the Captain felt suddenly uneasy. It was chemically fuelled, and carried a small surplus. His ship's tractor beams could do strange things sometimes, like giving certain metals a high charge of static electricity. Suppose a spark . . . "*Wait* !" he called urgently. He was too late.

The view-screen flared white. The ship shuddered as it ran through the expanding sphere of vapour and debris. *Too bad*, the Captain thought, *no specimen.* But the Biologist wasn't giving up so easily.

With the scanner they had used watching the orbiting rocket coupled to his tractor beam, the Biologist was frantically fishing through the area of the explosion. Twisted and tangled pieces of rocket, large and small, flicked into view on the screen to be discarded as being only metal. Then : something black and shapeless, streaked with red—the burnt and tattered rag of what once had been a living creature, still held to a length of metal by a wisp of strapping, and there was a single piece of that enigmatic spongy stuff only slightly burnt.

The Biologist gave a brief 'Wheep' of exultation. The image swelled as he drew everything in the area towards them, then it blanked out as the collection passed behind the curve of the ship. The Biologist rolled heavily from his cupola and left, without saluting, for the airlock.

Discipline had gone to pieces, the Captain thought tiredly, and it was his own fault. Even now he could stiffen them to attention or set them doing anything he wished with just a few sharply-spoken words. But he didn't want to make the effort. And there were so few of them left anyway ; why not let them take it easy, or amuse themselves like the Biologist. Himself, he didn't want to do anything, anything at all. He wished everyone would go away, so he wouldn't have to speak, or listen, or even think . . .

"This is stupid," the Weapons Officer burst out, anger making his voice a discordant screech. "While *he* wastes time satisfying his professional curiosity, *we* are steadily losing physical efficiency. If this job isn't done at once, we won't be able to do it properly. And you know as well as I do what sort of culture grows from a civilisation

which has been almost, but not completely, wiped out. A race of killers—"

"*Attend* !"

The Captain was angry, and the pain of speaking made him angrier still. He knew that the Weapons Officer was right in what he had said, but the Captain did not like insubordination—even when nothing much mattered anymore—and suddenly he hated the other for dragging him out of his deep, almost pleasant lethargy back into a pain-wracked state filled with the responsibility of making decisions. He said harshly: "We have been judge and executioner to many planets such as this. Very few have not been found wanting and allowed to survive. This one will be given exactly what it deserves. Now," he softened his tone slightly, "get me a report on the present operating efficiency of the ship."

The Weapons Officer saluted so carefully that the Captain wondered if he was being insulted again, then he turned to the intercom.

*Judge and executioner*, the Captain thought grimly as he sank back into the padding. Many of them had been beautiful worlds, not unlike some of the planets briefly called 'home' by the Srilla before they were forced to leave them. All contained intelligent life, usually of the wrong sort, and some of it was of a surprisingly high level. The Captain winced at the too recent memory.

In the solar system they had just left—or rather, been blown out of—the natives' technology had been at least the equal of his own. Caught between the fire of an orbiting fortress and a well-placed battle squadron, his ship battered and falling apart, his only chance of survival had been to retreat into the safety of hyperspace. But, in the very instant of his 'fading out,' one of the enemy's helium torpedos caught him, knocking them off course and lethally irradiating the whole ship.

With the fatalism that had become a part of his race, they accepted what had happened, deciding only to return into normal space for a look at the stars before the end.

But they materialised near an inhabited planet, and found that they still had work to do.

The Captain thought of the pitiful condition of his ship and crew, and decided that it was his most difficult job as well as being the last. He looked up as the Weapons Officer turned to face him.

"Another Engineer has . . . has . . ." he left the sentence unfinished: the Srilla were an extremely long-lived race, and it was difficult to speak of one dying without showing some emotion. The

Weapons Officer went on, " Otherwise the position is as before, except that the Biologist is ready with a preliminary report on the native."

The Captain gestured towards the wall speaker, and the Biologist's slow, almost pedantic, voice filled the room.

" The specimen has extensive burns," he began, " but its nervous system is reasonably intact. Besides renewing the damaged tissue, this means that we can Thought-Probe the creature's mind when it is revived. Our judgement will therefore be based on complete and accurate information." He paused, and the Captain could imagine the struggle it was for him to keep the mounting excitement and curiosity he felt from showing in his voice. He resumed, " The creature is well-designed physically, but curiously under-developed. Taking into consideration the size and composition of this planet I would have expected something larger. Perhaps this is an especially small one because of the necessity of saving weight.

" The fuel," he continued, " which I was able to analyse from its spectrum as it exploded, is a low-powered chemical type, and I'm amazed that the ship reached the altitude which it did. And the being would have died anyway, because there was not enough fuel left in its tanks for the return trip." His voice grew vaguely uneasy. " I don't understand this. There were ways in which the ship could be lightened, mechanisms with overlapping functions and so on, so that a return would be possible. Maybe . . ." He hissed slightly in puzzlement, and ended, " It's been some time since we've had a regrowth. I think you might find it interesting."

With an effort the Captain altered his body's centre of gravity and rolled onto the floor of the control room. Immediately a wave of pain and weakness sent him sliding against a nearby bulkhead. He hadn't realised he was so far gone. Maybe he shouldn't waste time with the creature, but follow the Weapons Officer's suggestion of destroying the life on this planet at once. If he delayed, then collapsed before being able to carry out the sentence . . . He compromised by having the Weapons Officer remain by his panel in the control room while he went to examine the specimen.

It was a pity, the Captain thought as he watched the creature in the regrowth tank, that the metabolism of the Srilla was not so simple and straightforward as this. If it had been, then he and his surviving crew would have gone through a similar process and emerged alive and whole, instead of being the radiation rotted near-corpses that they now were. But the Srilla were an old race, and their physical cell-structure was as bewilderingly complex as the tangle of conflicting

motivations which drove them into creating such things as the Execution Ships.

The Captain looked down at the raw, pink, and still hairless skin forming over the newly-grown layers of muscle. *Animal* ! Somehow he knew that this one was going to be like the others, a vicious, power-hungry brute.

*Why*, he groaned despairingly, echoing the half prayer half curse that rose constantly from every member of his race, *did bestiality and intelligence march together* ? Why did the gift which set a being above the animals succeed only in making him more cruel, sadistic, and predatory ?

Think of a race old, wise, and peace-loving, spreading slowly and naturally over the millenia from star to star. Their ways were gentle, and even racial memory held no hint of violence in their past. This was the Srilla. Then imagine them meeting another race—a poisonous, exploding mushroom race, scattering its spore across the galaxy like a corrosive blight, and attacking and destroying everything in its path. Then shortly afterwards the awful discovery that the Srilla were alone, because every new culture found was, or would certainly develop into, an identical copy of that first accursed race. In short, that almost every being in the galaxy was a potential enemy.

At first the enemy had a name, then soon there were too many of them. They were just . . . the enemy.

Retaliatory action was impossible. The Srilla could not hit back, or even defend themselves, because that would have meant killing, and the philosophy they had held for thousands of years made violence towards any intelligent being unthinkable. That was at first. But the shame of constantly retreating, of fleeing from world to world, from an enemy which they might possibly have beaten began to put cracks in the noble white pillar that was their pacifist philosophy. Some of them were able to fight back.

The Executioners, as they called themselves, were unaffected by the thought of killing—except, the Captain amended grimly, when they dreamed at night. Hypnotic conditioning coupled with some very delicate brain surgery removed every trace of the softer emotions as well as the glandular network responsible for them. The treatment, on those able to take it, made it possible to begin a programme of extermination that would have horrified even the enemy.

By this time the number of Srilla able to fight was too small to attack the enemy directly—long life in their race was counterbalanced by a very low birth-rate—so they were left alone. Over the centuries, it was hoped, the more highly-advanced cultures of the enemy would gradually kill each other off. The hope was probably a vain one.

Instead, the Srilla searched out planets containing races whose cultural patterns were fixed and—even though their technology was on the bow and arrow level—if those races showed signs of becoming counterparts of the enemy, they were ruthlessly obliterated. The best way to deal with vermin was to make sure that they never reached maturity.

And somewhere, sometime, there would be another race that was good, and kind, and intelligent, and yet be able to stand against the enemy without losing those attributes . . .

"Captain!" the Biologist called excitedly, jerking him back to awareness of his surroundings. "The revivication is successful. I will be able to receive thought impressions in a few minutes." Embarrassed then, he brought his tone down to a more sober level and explained that he had been able to analyse the spongy substance retrieved with the specimen, and while it was undoubtedly a food of some sort, he couldn't see the need for it when the creature had proved to be well-fed already.

The Captain made a pretence of interest, but he wished suddenly that he had listened to the Weapons Officer instead of allowing the Biologist to talk him into waiting. True, it was his duty to weigh all the available evidence before passing judgement, but he was so very tired. It seemed as though he had travelled for aeons, being judge and executioner to a myriad worlds, always hoping to find just one culture that showed the promise of true civilisation. He had yearned —secretly—for that discovery since his first Captaincy, but the few cultures he had not needed to wipe out were so physically impotent that any hopes he had were long since dead. The galaxy, all of it, was evil.

The Captain was tired, and disillusioned. This was, after all, his last job, so nobody would know of his one and only lapse. He turned to call up the Weapons Officer.

"This is very strange," the Biologist said suddenly. He had an induction plate of the Thought Probe pressed against his brain case and his eyes were closed in concentration. He opened one of them enough to extend a similar plate to his superior. The Captain hesitated, then accepted it. A short delay would not matter much.

He wished fervently that he hadn't.

Fear; hatred; cunning. A surly, vicious killer whose mind fairly screamed savage instability, and an all-pervading animal selfishness that was completely without gratitude. Utterly amoral, too, presupposing that it could recognise a code of morals if it saw one, something which the Captain doubted very much. In short, a creature without a single saving trait.

How, he asked himself sickly, had these . . . these *beasts* . . . built a civilisation capable of climbing into space? For once his duty would be almost a pleasure.

But the empathy which had grown in the Srilla over the centuries for all forms of intelligent life and which neither surgery nor hypnotic conditioning could completely eradicate, made him pause. Surely they were not all like this. He forced himself to probe deeper.

The brain was not fully restored, and acceleration trauma still blurred everything. But there was remembered pain in the creature's mind, too. Memories of great shining, whirling machines, of crushing, smothering pressure, and of the prick of many needles. Acceleration tolerance tests, the Captain guessed. There was anger as well, at what seemed to be its confinement; strict and continual confinement because of some grave offence. It was a life of feeding, testing and detention. A twitch of revulsion sent the Probe plate clattering to the floor.

The culture that would use one of its criminals—one of its mentally sick—for the purpose of space-flight experiments instead of searching for curative therapies, deserved to die. Firmly he pressed the call-up stud for the control room.

"Sir!" the Weapons Officer said eagerly.

But the Biologist cut in before the Captain could speak.

"I agree with your feelings," he said quickly. "But remember that the impressions you received were mostly on the sub-conscious level. When it is fully restored the thalamic censors will operate, showing up its inhibitions, its moral and ethical values, and allowing us to read the traces left on its brain by the minds of its close associates." The Biologist gestured towards the creature, whose skin had now deepened in colour and begun to grow hair. "Let me make a full investigation, sir. It won't take very long . . ."

Angrily the Captain waved for silence. He had the feeling that he was about to make a ghastly mistake, but didn't know which of two courses to take to avoid it. The creature's mind had convinced him that its world should be destroyed, and if he didn't act quickly he would be too weak to act effectively if at all. But the ship's Biologist kept appealing to his Srillan sense of justice—though the other's motivation there was partly selfish curiosity about a new and unusual life-form. Hurriedly he made a decision.

"Detail all power sources available in the ship," he said briskly, ignoring the Biologist. "And your procedure in destroying the planet below."

The ship was woefully short of power, the Weapons Officer reported, his voice over the intercom sounding even more slurred and discordant.

Complete detonation or irradiation of the planet was impractical, but they could 'peel' . . .

". . . Our tractor beams, reinforced by the hyperdrive generators, will immobilise the whole surface of the planet to a depth of roughly fifty feet for several seconds. The normal rotation of the world under this temporarily immovable 'skin' will pulverise and destroy all artifacts and grosser forms of life on it. The effect will be the same as if the planet's spin had been abruptly halted. There will be considerable flooding and volcanic activity, but the flora will not suffer much, nor sea life so long as it is well below the surface." He ended, almost enthusiastically, "Everything else which is larger than an insect will perish at once."

"Very well," the Captain said. "Set up the necessary machinery." But silently he wondered if the Srillan therapists had slipped up during his conditioning. He did not like the job, as the others did theirs, and never had. And particularly he did not like this one. Feeling a vague need to justify himself he turned to the Biologist.

A sudden wave of sympathy choked off his words.

He hadn't realised that the Biologist was so near death. The other had slumped against the regrowth tank, and accelerating tissue breakdown had made his once sleek hide a wrinkled and flaking horror. The Thought-Probe plate was still in position, though, but held more by gravity than by his grip on it. Urged more by compassion than curiosity, the Captain made a query sound.

"I've discovered the effect of the gas used on the creature," he answered, his voice surprisingly strong. "And the reaction of its taste buds to that spongy food substance." He became technical for a brief time, then went on, "And the strong mind traces of his associates leads me to assume that he is not typical, and that—"

"Ship ready for Execution!" the intercom speaker blared. "Do you wish me to proceed, sir?"

Caught off balance the Captain hesitated. Of course, he told himself savagely, the being was atypical. A luckless, mentally retarded criminal, used for callous experimentation and then discarded. That in itself was a judgement on those capable of such behaviour. He swung towards the intercom.

"I repeat," the Biologist said gently, "that we must assume the presence of yet another race on this being's planet, one of much higher intelligence . . ."

The shock of it was like a physical blow. *There is no time to go through all this again*, he told himself desperately as he limply accepted the proffered Probe plate.

It was the same vicious, bad-tempered, murderous brute. After

attacking and almost killing three other beings working with or near it—there was a brief but shocking picture filled with blood and pain and killer lust—it was confined and guarded. *But the guards . . .!* As the mental image of them developed, the Captain almost dropped the Probe plate.

Roughly similar to the creature in the tank, but with differently distributed and a more sparse growth of hair—which they augmented by artificial coverings—they were a taller and more slender race. A stubborn, aggressive race, but . . . It was several seconds before he lowered the Probe plate and began moving heavily back to the control room.

Because its body chemistry and reactions so closely resembled their own, and because it weighed so much less than they did, the beings of Earth had used a large ' monkey ' in the first test ascent into space. The frustrating inefficiency of available fuels made it impossible for a ' human ' to go, though many yearned passionately for the chance. The Captain thought of the race that fought a lot, then forgot it and shook hands; the race who found time to laugh while desperately trying to sort out the mess that their non-unified planet was in, and who had progressed to atomic power and spaceships even more rapidly than the vicious cultures of the enemy. Mostly he thought of the race who bore no grudge against an experimental animal who had maimed three of their own.

" Hyperdrive ready !" the Weapons Officer relayed. The stay of Execution puzzled him, but obedience was a strong habit. The Captain *might* get around to telling him why.

The race, the Captain mused, that could send an animal into space, using a phenomenal amount of their precious fuel—and then waste that same fuel by including in the payload such unnecessary devices as a heavy timer and tube, which contained a gas that killed instantly and without pain, and several large pieces of cake for the occupant. The Captain liked a race that could do that. Very much.

At the moment they were having their growing pains. But soon peace would come to their planet. He didn't think that peace would make them soft, nor make them forget to laugh, or fight—either for fun or ideals—without being needlessly cruel. Someday they would have to meet the enemy.

There was power enough to get his ship home, and the Srilla could use it again—after the radiation had died from it, of course. The Captain felt content, and almost happy. It was rarely that the crew of an Execution ship had the chance of going home to die.

As the great blue globe of Earth faded into the grey of hyperspace, the Captain thought, *Poor enemy* !

*James White.*

*Before 1957 when the first of the experimental space satellites commence circling the Earth some particularly knotty legal problems involving territorial rights are going to need solving if they are to pass over countries belonging to other Powers.*

# WHOSE MOON ?

## By Roy Malcolm

The announcement that America and Russia are setting up unmanned artificial satellites in two years raises important questions in international law. Does an artificial satellite violate the sovereignty of every nation it passes over? How far upwards does a nation's air space extend? Can the crew of a spaceship, landing on the Moon, claim our whole satellite as part of their country's possessions? Already, as we shall see, prominent international lawyers are debating these questions and others raised by the imminent possibility of spaceflight. But let us consider the matter in a more down-to-Earth manner!

Recently, the South American state of Peru took the arbitrary and unprecedented step of extending her territorial waters to a 200-mile limit. This violation of international law was confirmed by the Peruvian government on the 14th of April. Several ships of the Onassis whaling fleet found within this 200-mile limit were taken into custody by the small Peruvian navy and a £1,000,000 ransom demanded.

If all other countries decided to follow the Peruvian example, the high seas would no longer be free to all traffic as they should be.

Imagine the farcical situation which would arise supposing the 200-mile limit were adopted. France's limit would extend into Britain and vice versa. A Briton sailing in the Channel would be legally in British waters and illegally in French waters, at the same time!

By international agreement, all nations with a seaboard have jurisdiction within the present three-mile limit of territorial waters. Also, each country considers as its own, the air space above the country. This extends up to the "top of the atmosphere," to use a loose phrase. No one knows where exactly the atmosphere ends and space begins.

From time to time a nation has forced down a plane considered by it to be violating its air space. The most recent example of this kind was the shooting down of an Israeli air liner by the Bulgarian Air Force with heavy loss of life.

The fact that these tragedies happen makes it clear that the questions posed at the beginning of this article must be answered before spaceflight becomes a practical proposition.

Mr. John C. Cooper, legal adviser to the International Air Transport Association, recently pointed out that the Chicago Convention of 1944 binds national signatories to recognise that every state has complete and exclusive sovereignty over the air space above its territory. This distinguished authority added, "If we accept the theory that the territory of the state extends as far upwards into space as required to prevent the entry of man-made activity which may result in injury to persons or property on the surface of the state, then we must assume that (an Earth satellite vehicle) is violating the sovereignty of every state below, which has not consented in advance to its passage."

At first sight it would be an ideal solution to extend the "air spaces" agreement to include interplanetary space. However, when this is examined, insurmountable objections arise.

A rocket ship taking off from Earth is sure to cross a section of space 'owned' by some country or other. This is due to the type of path the ascending rocket must take. The landing of the rocket would be even more complicated. If the ship lands by a series of braking ellipses, as has been suggested by von Braun and other rocket experts, in the course of this operation, the ship will circle the Earth completely several times.

A third point is this: who is to say where a country's jurisdiction in space ends? Control of even a small volume of space would be well-nigh impossible. It must be born in mind also, that the volume of space to be covered will increase with height away from the Earth's surface.

In addition, if we take the idea to its ultimate absurdity, we must consider the fact that as the Earth turns on its axis and moves about the Sun, other planets and stars swim in and out of each nation's infinitely long slab of space.

Only one workable solution presents itself here—space must be free to man as are the high seas. The open sea is not under the sovereignty of any national state. A state cannot acquire parts of the open sea nor can it exercise jurisdiction or police them. Outer space should have similar laws applied to it and spaceships and space-stations must have the same laws applied to them as govern vessels on the high seas.

Perhaps the 'territorial waters' of space may well be defined as that part of the Earth's atmosphere above a state's territory and ending, say, at the 500 mile level. This would safeguard manned and permanent space-stations from continually entering other nations' 'territorial waters' since no station can exist within the Earth's atmosphere.

Each spaceship must carry the flag of a terrestrial nation so that the normal jurisdiction of that nation will be exercised on board as is done on sea-going vessels. In that way the safety of passengers and crew will be met.

When we come to consider the Moon and the planets themselves, we have one obvious analogy, that is to consider them as new territories that may by occupation and effective control be acquired by national states.

Occupation and effective control may well be difficult. One visit to the Moon by a spaceship hardly satisfies that criterion. Again, how does one nation, even if she possesses a fleet of spaceships and establishes many settlements, expect to persuade other nations that she has an absolute claim to a planet and to natural and mineral wealth?

This claim would become increasingly difficult to maintain as other nations achieve interplanetary travel. In past history wars have been fought over situations such as this and it would be a sorry end to mankind's greatest dream, the conquest of space, if an interplanetary war with all its scientific frightfulness were to be fought because nations decided that the heavens were to be parcelled out among them.

It is obvious that the answer to these real and serious problems lies in international control of the new worlds. Already a suitable body is in being, namely the International Trusteeship Council of the United Nations. This body, or an analogous one, would govern all newly visited planets and satellites and also regulate communications and travel among them.

It is perhaps inevitable, man being what he is, that disputes will arise between nations whose ships are exploring new worlds. Such disputes may be settled as they are to-day at the International Court of Justice at the Hague.

One particular possibility arising from the establishment of space travel must be mentioned. The planets may not be unclaimed when man arrives on the scene! While the probability of intelligent life as we know it existing on the planets of our own Solar System is extremely small, we are not certain that we are the only intelligent species in the Universe.

If we voyage out into space in our species' usual acquisitive manner and do run up against another race we may be lucky to get off with being put into a reservation as our forefathers did to the North American Indians!

In all seriousness, most authorities, and indeed most intelligent persons, who have considered the legal aspects of space travel have quickly come to the conclusion, that to approach interplanetary travel in a national spirit shows an inadequacy of thought dangerous to the human race.

C.E.S. Horsford, writing recently in the *Journal* of the British Interplanetary Society, said: "The political consequences of any substantial conquest of space are so far reaching that an international body would seem to be essential, so great would be the need, and certainly should not be impossible to create through international co-operation."

The challenge of space must be met by a united Earth. It is, perhaps, the greatest challenge mankind will have to face; a greater thing than discovering America, exploring darkest Africa, rounding the Cape of Good Hope and sailing through the North-West Passage.

Man must face it together or not at all.

Oscar Schachter, of the United Nations Organisation, in an address to the famous Hayden Planetarium Symposium on Space Travel, has underlined this viewpoint. He too believes that the special rules required concerning the occupation of the Moon and other celestial bodies must be established by the United Nations.

"A legal development of this kind," he went on, "would dramatically underline the common heritage of humanity and would serve, perhaps significantly, to strengthen the sense of international community which is so vital to the development of a peaceful and secure world order."

It is a hopeful sign, then, as man is about to take his first real step into space, that some international lawyers are alive to the need for a balanced, well thought-out code of interplanetary law based on the basic unity of mankind.

*Roy Malcolm.*

*Science fiction has grown to cover practically every aspect of Man's enquiring mind. It no longer has to rely solely upon a mechanical background for its wonderment—in fact, it is rapidly becoming more human in its outlook. Man himself, more complex than any machine he has yet invented, can be the subject of some of the most interesting stories we can produce.*

# THING FRIDAY

## By John Brunner

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The bed—such as it was—was aging too. The four corner posts which had been upright and strong when they were carved from the tree were warped, and leaned a little inwards, and the network of tough tendrils from a plant which might have been called a liana that served as springs were dry and brittle and gave out tiny puffs of brownish dust when they were moved. Not that they had to bear much strain now; they were quite safe for the light, wasted body they supported.

Quiller lay on the mattress of plaited leaves, his grey head resting against the log of spongy wood which served him as a pillow, and as

his thin, trembling fingers touched the quilted coverlet he remembered things and smiled.

He was very thin. The fever had first withered him—how long ago ? In a reflex which he had never grown out of, he turned his head on his stringy neck and looked at the calendar clock on the wall. Of course, he thought, after straining to focus his tired and failing eyes on the dial; of course, it's stopped.

He had kept it going for a very long time. For almost five years. It had been one of the few things that had come out of his wrecked ship still functioning. Himself and the clock—the very epitome of Earth ! The comparison amused him, and he started to laugh, but the first deep breath irritated his lungs, and it turned into the racking cough he knew only too well. When he recovered, he looked thoughtfully at the blurred shiny face of the instrument and gave the idea serious consideration.

Yes, it had stopped. For one thing, the days here were not twenty-four hours long, nor were there three hundred and sixty-five of them in a year. He had tried to calculate the year from the shadow cast by a stick set upright in the ground, checking when the summer solstice recurred—but that was a long time ago.

When he first fell ill of the fever, he had been unable to re-set and wind the clock, and on his recovery he had no idea how long had gone by. So he had let it slide.

He held up one of his hands before his face and stared at it. He was old, he thought; perhaps he was sixty-five or so. He could easily have been here thirty years, all told. Or perhaps it was less, and the effect of the alien environment on a body designed for Earth and only for Earth had been greater than he knew.

He drowsed for a few moments, as he had been doing more often of late, and when he came to himself with a start, the hand which he had been staring at was lax on the quilt, and the yellow sun was sinking through red clouds towards the skyline of trees which he now knew better than he had known the oaks and palms and sequoias he had seen on Earth. Excitedly, and a trifle peevishly, he raised himself with grim determination till he was sitting, and stared through the square hole in the wall—all the window he had—to look towards the west.

This was his nightly custom: to watch the sun go down behind his ship.

The years had weathered and battered the outline of the vessel, corroded the stell, peeled the paint. The mild warmth, the gentle but insistent rain, and most of all the life-giving oxygen, took a heavy toll of the ship, which had never meant to stand the onslaught of a planetary

climate. The rigour and radiation of space it could take, but it had been designed for space, of course.

So, thought Quiller, an ineffable sadness slowly welling across his mind, I thought I was. I thought I too was designed for space. Instead, I've passed my life on a ball of mud.

Which, cold memory broke in, I had just decided to do after all—

And the recital began again in his head. By now its pattern was fixed; it was one of the few things in his steadily failing mind which remained stable, unchanged by the passage of years. It had become a ritual; like a religious office, any departure from the traditional course of its tortuous length was almost sacrilege.

It started with regret, of course, but that was half-hearted, and overlaid with a kind of nervous anticipation as he waited for the part he knew must come; yet he never dared to hurry or by-pass any of the prescribed stages. By the time he reached the important section, he had to clench his hands into fragile, bony fists to stop them trembling, and a little sweat was making his forehead wet.

It was his habit to say this part aloud, and he moistened his lips before murmuring in a breathy, rusty voice, " I wonder what happened to Margery. I suppose she found someone else. I suppose she settled down happily enough."

And then a pause, and then the words which he had sometimes—at the beginning—had to force himself to say, and later had grown to say with a stir of genuine hopefulness, " I'm sure she did. I'm glad."

And it was over.

There *was* no need for the clock, of course, thought Quiller. Not any more. For the ritual (he almost used the word to himself, making the admission, but avoided it with an effort of will) was just over, and there, in the bushes near the foot of the spaceship, there was movement. That would be Friday.

In the conpulsive, wandering way which had come to be a habit now that he was alone and nearly helpless, so weak-legged that he could leave his tough bed only for a few minutes at a time, his mind strung together a connected necklace of memories from that starting point, and he had drifted with the flow for minutes before he noticed that he was suddenly able to remember, and to think clearly and dispassionately about, things which had been overlaid in the course of time with a protective armour of oblivion. But he did not stay to wonder at the fact; something else intruded on his mind—what was it? He fumbled feebly for a while, and then realised that his feet and legs were cold. He tugged at the quilt and spread it more evenly over himself.

Odd. He should not have been cold. It was never cold enough here to freeze water, and at this season even the nights were usually balmy Or was his memory playing tricks again ? Had it turned to winter without his noticing ?

He gave a rusty chuckle. You're getting old, he told himself; hell, you *are* old.

Then the curtain of woven plant fibres which served to close the door rustled aside, and as noiselessly as ever Friday entered, bearing a flat slab of bark piled with the choicest of the fruits which his human digestion had with painful slowness grown used to. Quiller noticed foggily that many of them were his especial favourites, now almost out of season. Friday must have had to search long and go far through the bushy forest to find them.

He smiled gratefully at the little eight-legged being as he (he ? Perhaps she or it—Quiller had never tried to find out) set the platter on the tree stump at his right hand, drew the roughly-shaped clay jug which also stood there towards him, and opened the pouch of leathery skin between his forelegs. A neat stream of clear water flowed into the jug, filling it precisely to the brim, and stopped without a drop having splashed on the floor. Quiller recollected vaguely that once he had been repelled by the manner in which Friday carried the liquid, but he had not understood. There had been a lot of things he had not understood. With extraordinary clarity he pictured the way the being had managed to convey outraged dignity without possessing a single human feature when he displayed the smooth, tough skin of the pouch, as clean and impersonal as surgical rubber.

" Thank you, Friday," he said in a thin voice, and coughed again. The being did not give any acknowledgement; Quiller had never been certain whether he recognised the sound as communication, or even if he had organs to detect it, but he always waited a fraction of a second as if giving attention.

This evening he was pausing longer than usual. Quiller turned and eyed the fruit on the bark platter. Normally it tempted him at once, but tonight he did not feel hungry at all. Without making a move towards it, he smiled weakly at Friday.

" I'll have some later," he said.

Probably, he reflected, Friday would have shrugged if he had been human. As it was, the eight legs, as brilliantly and metallically green as those of a beetle, twitched into their accustomed rapid motion, and the curtain rustled behind him. He would be back at dawn tomorrow —was it seven or nine hours distant at this time of year ? Quiller did not remember, and anyway it did not matter.

Friday. He had known Friday a long time, too. Strangely, the guilty feeling which normally accompanied the memory of their first meeting was gone now; in its place there was a tolerant recognition of his own human fallibility, and a little pity for the Quiller that had been —the angry man, the shipwrecked castaway who had, after all, made up his mind to live out his life on a ball of mud instead of up there in the clean black vastness of space, but who was prejudiced in favour of one particular ball of mud with one very particular person on it. Called Margery.

Ah, well, it was all a very long time ago.

But—and his head turned towards the window again, making him pause unconsciously to hear if the skin would rustle dryly like the curtain at the door—he was remembering better all the time, even though he was so cold. The quilt was not as thick as it had been, perhaps; even its incredible durability had yielded to friction by infinitesimal degrees, losing a few molecules here and there, till he was cold.

Now he had lost the train of thought, and had to fumble again for the tag-end which had set him off. The ship; it was still there, with the last of the sunlight washing over it, redly enough to conceal the eating rust which marred the brightness of the metal. It had set him down, but that was the last thing it had done. It had taken years to hide the scars left on the ground by his panicky spilling of the atomic pile—seconds only, perhaps, before it hit guncrit and made a mile-deep hole instead of a surface scar.

Something else had vanished long before, however. With the spilling of the pile he had thrown away his only chance of return. Before the radioactivity had dropped enough to allow him to approach, the finely divided dust from the uranium blocks, being pyrophoric, had flashed into flame; later, the weather—the steady, implacable showers of the rainy season—had dissolved other precious ingredients into the soil beyond the reach of a lone space-pilot.

Yes, he had been an angry man, and a sorry one, stranded on a world which no human being had ever visited before, without the means of communication or the hope of rescue. If he had known what was waiting for him, very probably he would have let the pile go to guncrit and finish him quickly. Of course, the explosion would have killed Friday too, but he had no way of knowing about Friday then.

For a long time he had been sick, too: a little from the radiation, though he had avoided the worst of it; mostly from the alien vegetation he tested, trying a little here and a little there, making certain that they were not deadly. Once or twice he had guessed wrong, but in the end he had found a few pulpy growths which his stomach would

keep down, and which seemed to give him energy even if they did not bulk out his muscles. They had the curious unconvincing sweetness of glucose, and dextrose sugars; he had meant to test them once, and find out what they really were made of.

He had been afraid too, when he first met Friday. Of course, he did not know the creature by that or any name, then. He was only a strange animal with too many legs and a shiny green carapace, like a cross between an oversized beetle and a giant spider, and he had come out of the bushy scrub with trees dotted here and there which formed the only covering to the bare black soil. He had moved a little too fast for Quiller's jumpy nerves. There had been one charge left in the blaster which he carried for emergencies; he had been meaning to use it on himself if depression ever submerged him entirely, but he intended to die—if he had to—in his own time, and not at the behest of an alien beast.

Fortunately, his arm was weak with fatigue and sickness, and his eyes confused because it was dusk. The flaming bolt lit up the landscape for a mile around and fired a brittle, dry bush which later served him well on his cooking fires, but it barely touched Friday's hard shell. He had waited tensely in the light of the blazing bush, wondering whether the still form on the ground was dead, and had just decided to go closer when it got shakily up on its feet and disappeared slowly into the growing darkness.

After that he had spent many days making fire-hardened spears and rough clubs of stone bonded to short branches with strands of the liana which wandered like ivy up the boles of the oddly shaped trees. But he did not see Friday again for almost five years.

In that time he had built his hut and furnished it; he had been able to get into the ship and salvage things like the clock and the quilt which had not been ruined beyond hope. He had mapped the bushes whose fruit he could eat in safety, and the occasional springs which held clear, unsalted water. He had made clay pots and jugs. There was one still left unbroken even now.

He paused in his reminiscing and grew aware of a slight dryness in his throat. His head was hot, even if his legs were cold. With his skinny arms he reached for the jug which Friday had filled just now and set it to his lips. The water was cool and refreshing.

Perhaps his mind wandered for a moment as he lowered the vessel; perhaps his hands were too weak for the weight, or he had slopped a little of the liquid over and made the sides slippery. Before he knew quite what had happened, he felt a blow on his thigh, outstretched

under the coverlet, and the sound of the jug breaking on the hard earth floor was in his ears.

He looked down slowly. The water formed a pool between his legs on the impervious quilt. He moved, and made it run in a little shining trickle which caught the very last rays of the sun as it declined below the horizon, splashing on the floor.

That was the last of the pottery he had made when he was still able to be up and around. But somehow, it was not important. It was the worry of an old man called Quiller, bedridden, fever-wasted, worn out by the struggle to survive on a world where men were not meant to live at all. Where—as he was a young man called Quiller—an angry man, torn by a cruel fate from the woman he loved, thrown down from space just when he had agreed to leave it himself . . .

With the ease and comfort of a man slipping into an old and favourite suit, associated with leisure and peace, he slipped back into the memory of the man he had once been.

The seasons had waxed and waned. Five years, as men of Earth and the clock from Earth counted time, after his landing: that was the time of the fever.

He had no idea how he caught it, or why it had been so long in striking. Like malaria, it lay in the blood and awaited its opportunity to re-emerge, but it never came as badly as the first time, when he had lain for days and nights together in delirium, crying for Margery or imagining himself back in the control cabin of his ship with the heat of the runaway pile building up so that he could feel it even through his suit, making sweat boil from his pores. The heat belonged to the fever, he knew later, but it was terrifyingly real while it lasted.

When he awoke, paper-thin and exhausted, to his first sane awareness after the attack, long enough had gone by for the clock to have run down. Dawn light showed on the rising mound of the wrecked ship beyond his window.

He reached out and touched the familiar cool roundness of a fruit on the table beside his bed. Hunger possessed him suddenly, and he tried to carry the thing to his mouth, but his weak fingers let it fall and he heard it burst with a squelching sound on the floor. With the second attempt he was luckier, and managed to swallow half of it before he fell asleep again.

On waking, feeble but refreshed, by full daylight, he looked at the pile of waiting food. By degrees the truth penetrated his fogged brain. This was not provision he had made himself, for the fruit which had fallen to the floor and many others in the heap were ones he no longer chose because they were useless to his stomach.

At the time he could not summon the energy to wonder about that. He ate and was thankful, and lay gazing listlessly through the window until almost sunset, when the curtain at the door rustled and Friday came cautiously into the hut, bearing before him a sheet of bark on which reposed another supply of food.

He could tell this was the same creature he had been frightened into attacking on his arrival, for there was a dull patch—almost a scar—where the lustrous carapace had been seared by the heat of the blast. For a while he was afraid.

Then at each dawn and dusk until Quiller was well enough to find his own nourishment, the being came again. The twin antennae—like an ant's—which were his eyes noted what fruits Quiller did not touch, and he brought no more of them. He fetched water, too, in his own fashion.

While he was recovering, Quiller lay for hours together trying to fathom the depths of the mind which lay somewhere under that beautiful green shell, wondering if he could have done the same had the situation been reversed. The third time the being brought his load, he had made up his mind that he could not. His awkward, stammering words of thanks—the first he had addressed to a living being in years—came without previous decision and naturally received no acknowledgement. But equally without thought, he had uttered the name.

Friday. There could have been no other choice.

Once Quiller was well again, Friday stopped coming at regular times. Sometimes the two met in the scrub; sometimes when Quiller was working on his pots or cooking a stew of leaves over his little fire, Friday would appear silently and stand watching for half an hour before fading away. Quiller gave up making weapons then. Out of a shame-faced deference, he took out his arsenal and dropped it in the scrub.

He tried to talk to Friday sometimes. He hunted out his voice, rusty from long lack of company, and tried to explain that he was called Quiller and that a stone was a stone and fire was fire. Friday made no answer, nor did he seem to follow the pictures and the numerals Quiller scratched in the soft black soil. Sometimes the man wondered if he really had intelligence, but always he told himself that the ability to recognise and feel for a fellow-creature in distress was enough in itself, without the science to build spaceships.

The fever returned every year or so after that, and when he awoke there was always food and water waiting for him as there had been the first time. It was friendship, in a way—he knew no other word for it.

He had always hoped to be able to do something in return for Friday, but he realised it was impossible, unless it be by sheer chance, for Friday always seemed to know when the man was ill and needed help, whereas Quiller had no faintest clue where the other was except when he was in plain sight.

Yes, thought Quiller, returning to himself as the train of memory brought him up to the present, I did right when I chose life—even as a castaway—over a quick death. If I had thought seriously about it, being the kind of person I used to be, I would have opted for death. Yet I didn't.

The kind of person he used to be; and what marked the difference between himself then and now ? Almost nothing. A very little thing, but enough. Now he knew that there were—creatures ? *People*—who could do what Friday had done without hope of reward and without thought for themselves. It was the first time he had consciously realised that he knew.

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In response to the chill which was creeping up his body he twitched again at the coverlet. Awkwardly and slowly he slid down from a sitting to a lying position and rested his grey head on the pillow again, pulling the quilt up about his shoulders. He gazed at the stars whose arrangement had become familiar to him—more familiar than any other view of them, for he had never spent long enough on any other planet, not even on Earth, to grow used to thinking of stars as being ordered *so* and *so*. He wished he could see Sol, but it was never visible from this part of the planet.

His thoughts drifted back to Earth, and to Margery, as she had been when he saw her last—as she would be still, thirty years later. She did not have to die, prematurely aged, on an unknown world . . .

But the flicker of resentment died as suddenly as it had risen, and as surely as the warmth of his body. With a slow sigh, neither of sadness nor of happiness—simply of resignation, of acceptance of things as they were—Quiller closed his eyes and fell asleep.

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The passing of night brought the yellow sun climbing over the scrubby plain, and with almost as great certainty saw the little green eight-legged being whom no one would ever call Friday again, running over the dark rich soil with his morning burden of food and water.

The curtain rustled aside, and he halted, sensing the indefinable change in the hut. After a little while he approached the bed and laid one foreleg with a gentle touch against the withered hand which lay limp beside the tree-stump table.

He set down the platter and passed through the door again. Standing on the bare patch of ground which was the site of Quiller's cooking fire, he looked towards the east and called after his own fashion to another of his kind.

" I am returning," he signified.

The answer was prompt; it was very sweet, with a suggestion of surprise. " So soon ?" the other asked.

" So soon. They do not live long, these creatures."

" Apparently not. You have spent little time with him. Perhaps he was old when he came, or perhaps our world was different enough from his to age him swiftly."

" He cannot have been very old. All his understanding came to him after he arrived." Friday thrust aside a sweep of leaves and disclosed the pile of weapons which Quiller had thrown away. He regarded it for a while, and then let the branch swing back into place.

" But he did understand ?" The other seemed eager.

" Oh, yes," said Friday. " He came to understand."

There was a pause.

" I shall be with you soon now," he added finally. " In a year or less." He ended with an expression of deep personal regard and longing, coloured by undying friendship, which Quiller would have understood but not have been able to put into words, and turned once more to look at the hut which had stood for a breath, a twinkle of an eye, as his race counted time, before he began the journey to the eternal stronghold of his home.

*John Brunner.*

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# THE LITERARY LINE-UP

Next month's issue again features two long novelettes, the longest, " Hyperant " by Francis G. Rayer, dealing with a vast space fleet containing the remnants of a civilisation in their search for a habitable planet; the shorter, " The Smallest Ally," Kenneth Bulmer's first long story since his return from America, being worked out in a reverse order—the capture of an Earth ship by an alien race and the occupants attempts to conceal Earth's weaknesses.

Plus the usual short stories and features.

Story ratings for No. 41 were :

1. The Time Masters (conclusion) - - Wilson Tucker
2. The Voices Beyond - - - - - Francis G. Rayer
3. Plaything - - - - - - - - Kenneth Bulmer
4. The Uneasy Head - - - - - John Brunner

*Reshaping the face of Earth and harnessing the vast power potential of the planet's natural resources has long been a major ambition of mankind's but sooner or later Nature rebels and usually has the last laugh—often with disastrous consequences to human beings.*

# THERE IS A TIDE

## By Brian W. Aldiss

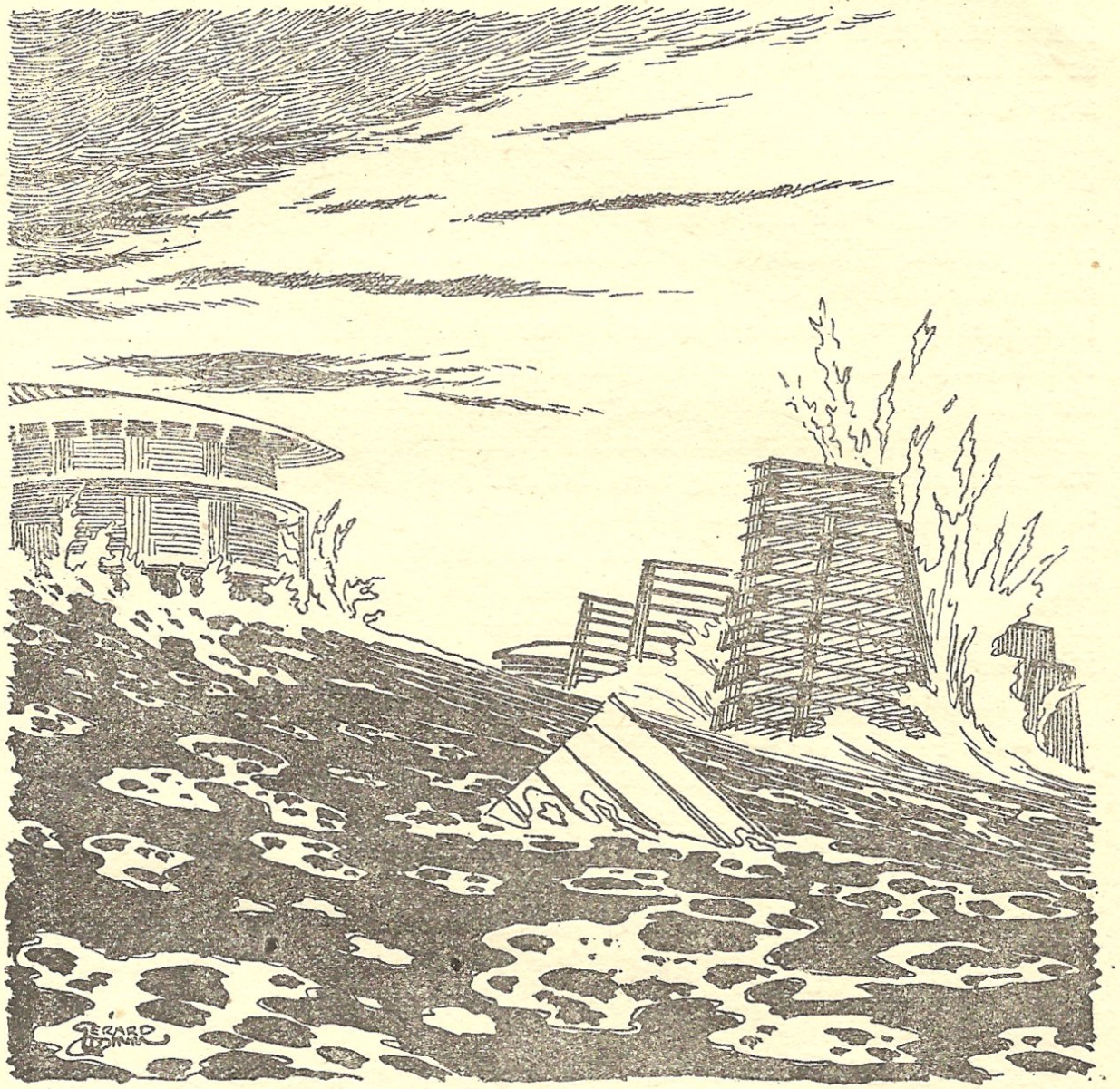
Illustrated by QUINN

How infinitely soothing to the heart it was to be home. I began that evening with nothing but peace in me: and the evening itself jellied down over Africa with a mild mother's touch: so that even now I must refuse myself the luxury of claiming any premonition of the disaster for which the scene was already set.

My half brother, K-Jubal (we had the same father) was in a talkative mood. As we sat at the table on the verandah of his house, his was the major part of the conversation: and this was unusual, for I am a poet.

". . . because the new dam is now complete," he was saying, " and I shall take my days more easily. I am going to write my life story, Rog. G-Williams on the *World Weekly* has been pressing me for it for some time; it'll be serialised, and then turned into audibook form. I should make a lot of money, eh ?"

He smiled as he asked this; in my company he always enjoyed playing the heavy materialist. Generally I encouraged him: this time I said, " Jubal, no man in Congo States, no man in the world possibly, has done more for people than you. I am the idle singer of an idle day, but you—why, your good works lie about you."



I swept my hand out over the still bright land.

Mokulgu is a rising town on the western fringe of Lake Tanganyika's Northern end. Before Jubal and his engineers came here, it was a sleepy market town, and its natives lived in the indolent fashion of their countless forefathers. In ten years, that ancient pattern was awry; in fifteen, shattered completely. If you lived in Mokulgu now, you slept in a bed in a towering nest of flats, you ate food unfouled by flies and you moved to the sound of whistles and machinery. You had at your black fingertips, in fact, the benefits of what we persist in calling ' Western civilization.' If you were more hygeinic and healthy —so ran the theory—you were happier.

But I begin to sound sceptical. That is my error. I happen to have little love for my fellow men; the thought of the Plague is always with

me, even after all this time. I could not deny that the trend of things at Lukata and elsewhere, the constant urbanisation, was almost unavoidable. But as a man with some sensibility, I regretted that human advance should always be over the corpse of Nature. That a counter-blast was being prepared even then did not occur to me.

From where we sat over our southern wines, both lake and town were partially visible, the forests in the immediate area having been demolished long ago. The town was already blazing with light, the lake already dark, a thing preparing for night. And to our left, standing out with a clarity which suggested yet more rain to come, stretched the rolling jungles of the Congo tributaries.

For at least three hundred miles in that direction, man had not invaded: there lived the pygmies, flourishing without despoiling. The area, the Congo Source land, would be the next to go; Jubal, indeed, was the spearhead of the attack. But for my generation at least that vast tract of primitive beauty would stand, and I was selfishly glad of it. I always gained more pleasure from a tree than population increase statistics.

Jubal caught something of the expression on my face.

"The power we are releasing here will last for ever," he said. "It's already changing—improving—the entire economy of the area. At last, at long last, Africa is realising her potentialities."

His voice held almost a tremor, and I thought that this passion for Progress was the secret of his strength.

"You cling too much to the past, Rog," he added.

"Why all this digging and tunnelling and wrenching up of river beds?" I asked. "Would not atomics have been a cheaper and easier answer?"

"No," he said decisively. "This system puts to use idle water; once in operation, everything is entirely self-servicing. Besides, uranium is none too plentiful, water is. Venus has no radioactive materials, I believe?"

This sounded to me like an invitation to change the subject. I accepted it.

"They've found none yet," I assented. "But I can speak with no authority. I went purely as a tourist—and a glorious trip it was."

"It must be wonderful to be so many million miles nearer the sun," he said. It was the sort of plain remark I had often heard him make. On others' lips it might have sounded platitudinous; in his quiet tones I caught a note of sublimity.

"I shall never get to Venus," he said. "There's too much work to be done here. You must have seen some marvels there, Rog!"

"Yes . . . Yet nothing so strange as an elephant."

" And they'll have a breathable atmosphere in a decade, I hear ?"

" So they say. They certainly are doing wonders . . . You know, Jubal, I shall have to go back then. You see, there's a feeling, er—" I don't converse well. I ramble and mumble when I have something real to say. I could say it to a woman, or I could write it on paper. But Jubal is a man of action, and when I did say it, I deliberately omitted emotional overtones and lost interest in what I said. " It's like courting a woman in armour with the visor up, on Venus now. You can see it, but you can't touch or smell or breathe it. Always an airtight dome or a space suit between you and actuality. But in ten years' time you'll be able to run your bare fingers through the sand, feel the breezes on your cheek . . . Well, you know what I mean, er—sort of feel her undressed."

He was thinking—I saw it in his eye—' Rog's going to go all poetic on me.' He said: " And you approve of that—the changeover of atmospheres ?"

" Yes."

" Yet you don't approve of what we're doing here, which is just the same sort of thing ?"

He had a point. " You're upsetting a delicate balance here," I said gingerly. " A thousand ecological factors are swept by the board just so that you can grind these waters through your turbines. And the same thing's happened at Owen Falls over on Lake Victoria . . . But on Venus there's no such balance. It's just a clean page waiting for man to write what he will on it. Under that $CO_2$ blanket, there's been no spark of life: the mountains are bare of moss, the valleys lie innocent of grass; in the geological strata, no fossils sleep; no amoebae move in the sea. But what you're doing here . . ."

" People !" he exclaimed. " I've got *people* to consider. Babies need to be born, mouths must be fed. A man must live. Your sort of feelings are all very well—they make good *poems*—but I consider the *people*. I *love* the people. For them I work . . ."

He waved his hands, overcome by his own grandiose visions. If the passion of Progress was his strength, the fallacy inherent in the ideas was his secret weakness. I began to grow warm.

" You get good conditions for these people, they procreate forthwith. Next generation, another benefactor will have to step forward and get good conditions for the children. That's Progress eh ?" I asked maliciously.

" I see you so rarely, Rog; don't let's quarrel," he said meekly. " I just do what I can. I'm only an engineer."

That was how he always won an altercation. Before meekness I have no defence.

The sun had finished another day. With the sudden darkness came chill. Jubal pressed a button, and glass slid round the verandah, enclosing us. Like Venus, I thought; but here you could still smell that spicy, bosomy scent which is the breath of dear Africa herself. On Venus, the smells are imported.

We poured some more wine and talked of family matters. In a short while his wife, Sloe, joined us. I began to feel at home. The feeling was only partly psychological; my glands were now beginning to readjust fully to normal conditions after their long days in space travel.

J-Casta also appeared. Him I was less pleased to see. He was the boss type, the strong arm man: as Jubal's underling, he pandered wretchedly to him and bullied everyone else on the project. He (and there were many others like him, unfortunately) thought of the Plague as man's greatest liberation. This evening, in the presence of his superiors, after a preliminary burst of showing off, he was quiet enough.

When they pressed me to, I talked of Venus. As I spoke, back rushed that humbling—but intoxicating—sense of awe to think I had actually lived to stand in full possession of my many faculties on that startling planet. The same feeling had often possessed me on Mars. And (as justifiably) on Earth.

The vision chimed and an amber light blinked drowsily off and on in Jubal's tank. Even then, no premonition of catastrophe. Since then, I can never see that amber heartbeat without anxiety.

Jubal answered it, and a man's face swam up in the tank to greet him. They talked; I could catch no words, but the sudden tension was apparent. Sloe went over and put her arm round Jubal's shoulder.

"Something up?" J-Casta commented.

"Yes," I said.

"That's Chief M-Shawn on the Vision—from Owenstown, over on Lake Victoria."

Then Jubal flashed off and came slowly back to where we were sitting.

"That was M-Shawn," he said. "The level of Lake Victoria has just dropped three inches." He lit a cheroot with clumsy fingers, his eyes staring in mystification far beyond the flame.

"Dam O.K., boss?" J-Casta asked.

"Perfectly. They're going to phone us if they find anything . . ."

"Has this happened before?" I asked, not quite able to understand their worried looks.

"Of course not," my half-brother said scornfully. "Surely you must see the implications of it? Something highly unprecedented has occurred."

" But surely a mere three inches of water . . ."

At that he laughed briefly. Even J-Casta permitted himself a snort.

" Lake Victoria is an inland sea," Jubal said grimly. " It's as big as Tasmania. Three inches all over that means many thousands of tons of water. Casta, I think we'll get down to Mokulgu; it won't do any harm to alert the first aid services, just in case they're needed. Got your tracer ?"

" Yes boss. I'm coming."

Jubal patted Sloe's arm, nodded to me and left without relaxing his worried look. He and J-Casta shortly appeared outside. They bundled into a float, soared dangerously close to a giant walnut tree and vanished into the night.

Nervously, Sloe put down her cheroot and did not resume it. She fingered a dial and the windows opaqued.

" There's an ominous waiting quality out there I don't like," she said, to explain our sudden privacy.

" Should I be feeling alarmed ?" I asked.

She flashed me a smile. " Quite honestly, yes. You don't live in our world, Rog, or you would guess at once what was happening at Lake Victoria. They've just finished raising the level again ; for a long time they've been on about more pressure, and the recent heavy rains gave them their chance. It seems to have been the last straw."

" And what does this three inch drop mean ? Is there a breach in the dam somewhere ?"

" No. They'd have found that. I'm afraid it means the bed of the lake has collapsed somewhere. The water's pouring into subterranean reservoirs."

The extreme seriousness of the matter was now obvious even to me. Lake Victoria is the source of the White Nile; if it ceased to feed the river, millions of people in Uganda and the Sudan would die of drought. And not only people: birds, beasts, fish, insects, plants.

We both grew restless. We took a turn outside in the cool night air, and then decided we too would go down to the town. All the way there a picture filled my head: the image of that great dark lake emptying like a wash basin. Did it drain in sinister silence, or did it gargle as it went ? Men of action forget to tell you vital details like that.

That night was an anticlimax, apart from the sight of the full moon sailing over Mount Kangosi. We joined Jubal and his henchman and hung about uneasily until midnight. As if an unknown god had been propitiated by an hour's sleep sacrificed, we then felt easier and retired to bed.

The news was bad next morning. Jubal was already back in town; Sloe and I breakfasted alone together. She told me they had been informed that Victoria had now dropped thirteen and a half inches; the rate of fall seemed to be increasing.

I flew into Mokulgu and found Jubal without difficulty. He was just embarking on one of the Dam Authority's survey floats with J-Casta.

"You'd better come too, Rog," he shouted. "You'll probably enjoy the flight more than we shall."

I did enjoy the flight, despite the circumstances. A disturbance on Lake Tanganyika's Eastern fringes had been observed on an earlier survey, and we were going to investigate it.

"You're not afraid the bed will collapse here, too, are you ?" I asked.

"It's not that," Jubal said. "The two hundred miles between us and Victoria is a faulty region, geologically speaking. I'll show you a map of the strata when we get back. It's more than likely that all that runaway subterranean water may be heading in our direction; that's what I'm afraid of. The possibility has been known for a long while."

"And no precautions taken ?"

"What could we do but cross our fingers ? The possibility exists that the Moon will spiral to Earth, but we don't all live in shelters because of it."

"Justifying yourself, Jubal ?"

"Possibly," he replied, looking away.

We flew through a heavy rain shower, which dappled the grey surface of the lake. Then we were over the reported disturbance. A dull brown stain, a blot on a bright new garment, spread over the water, from the steep Eastern shore to about half a mile out.

"Put us down, pilot," Jubal ordered.

We sank, we kissed the lake. Several hundred yards away rose the base of Mount Kangosi. I looked with admiration up the slope; great slabs of rock stood out from the verdure. Crouching at the bottom of this colossus was a village, forced to stand on piles partly into the lake by the steepness of the incline.

"Leave everything to me, boss," J-Casta said, grabbing a hand asdic from the port locker and climbing out onto the float. We followed. It seemed likely that the disturbance was due to a slight subsidence in the side of the lake basin. Such subsidences, Jubal said, were not uncommon, but in this case it might provide a link with Lake Victoria. If they could pinpoint the position of the new fault, frogmen would be sent down to investigate.

"We're going to have company," Jubal remarked to me, waving a hand over the water.

A dozen or so dugouts lay between us and the shore. Each bore two or three shining-skinned fishermen. The two canoes nearest us had swung round and were now being paddled towards our float.

I watched with more interest than I gave to the asdic sweep. Men like these sturdy fishermen had existed here for countless generations, unchanged: before white men had known of them, before Rome's legions had destroyed the vineyards of Carthage, before—who knows if not before the heady uprush of civilization elsewhere ?—such men had fished quietly in this great lake. They seem not to have advanced at all, so rapidly does the world move; but perhaps when all other races have fallen away, burnt out and exhausted, these steady villages will come into a kingdom of their own. I would elect to live in that realm.

A man in the leading canoe stood up, raising his hand in greeting. I replied, glancing over his shoulder at the curtain of green behind him. Something caught my eye.

Above some yards of bare rock, a hundred feet up the slope, two magnificent Mvules—African teak trees—grew. A china blue bird dipped from one of the trees and sped far and fast away over the water, fighting to outpace its reflection. And the tree itself began to cant slowly from the vertical into a horizontal position.

Jubal had binoculars round his neck. My curiosity aroused, I reached to borrow them. Even as I did so, I saw a spring of water start from the base of the Mvules. A rock was dislodged. I saw it hurtle down into the bush below, starting in turn a trail of earth and stones which fell down almost onto the thatched roofs of the village. The spring began to spurt more freely now. It gleamed in the sun: it looked beautiful but I was alarmed.

" Look !" I pointed.

Both Jubal and the fishermen followed the line of my outstretched arm. J-Casta continued to bend over his metal box.

Even as I pointed, the cliff shuddered. The other Mvule went down. Like an envelope being torn, the rock split horizontally and a tongue of water burst from it. The split widened, the water became a wall, pouring out and down.

The sound of the splitting came clear and hard to our startled ears. Then came the roar of the water, bursting down the hillside. It washed everything before it. I saw trees, bushes and boulders hurried down in it. I saw the original fissure lengthen and lengthen like a cruel smile, cutting through the ground as fast as fire. Other cracks started, running uphill and across: every one began to spout water.

The fishermen stood up, shouting as their homes were swept by the first fury of the flood.

And then the entire lower mountainside began to slip. With a cumulative roar, mud, water and rock rolled down into the lake. Where they had been, a solid torrent cascaded out, one mighty wall of angry water. The escaping flow from Lake Victoria had found its outlet !

Next moment, our calm surface was a furious sea. Jubal slipped and fell onto one knee. I grabbed him, and almost went overboard myself. A series of giant waves plunged outwards from the shore. The first rocked us, the second one overturned our flimsy craft completely.

I came to the surface coughing and snorting. J-Casta rose at my side. We were just in time to see the float ship go completely under: it sunk in no time, carrying the pilot with it. I had not even seen his face, poor fellow.

Jubal came up by the fishermen, who had also overturned. But dugouts do not sink. We owe our lives to those hollowed tree trunks. They were righted, and Jubal and his henchman climbed into one, while I climbed into the other. The waves were still fierce, but had attained a sort of regularity which allowed us to cope with them.

The breakthrough was now a quarter of a mile long. Water poured from it with unabated force, a mighty waterfall where land had been before. We skirted it painfully, making a landing as near to it as we dared.

The rest of that day, under its blinding arch of sky, passed in various stages of confusion and fear.

It was two and a half hours before we were taken off the strip of shore. We were not idle in that time, although every few minutes Jubal paused to curse the fact that he was stranded and powerless. Miraculous as it seems, there were some survivors from the obliterated village, women mostly; we helped to get them ashore and built fires for them.

Meanwhile, Dam Authority planes began to circle the area. We managed to attract the attention of one, which landed by our party. Jubal changed at once; now that he had a machine and men who, unlike the villagers, were in his command, he worked with a silent purpose allowing of no question.

Over the vision, he ordered the rest of the floats to attend to the villagers' needs. We sped back to Mokulgu.

On the way, Jubal spoke to Owenstown. They took his news almost without comment. They reported that Victoria was still sinking,

although the rate had now steadied. A twenty-four-hour-a-day airlift was about to go into operation, dropping solid blocks of marble onto the lake bed. There, a fault about three miles square had been located; four frogmen had been lost, drowned.

" It's like tossing pennies into the ocean," Jubal said.

I was thinking of the frogmen, sucked irresistibly down the fault. They would be swept through underground waterways, battered and pulped, to be spat out eventually into our lake.

Vision from Mokulgu, coming on just before we landed there, reported a breach in the lake banks, some twenty miles north of the town. At a word from Jubal, we switched plans and veered north at once to see just how extensive the damage was.

The break was at a tiny cluster of huts dignified by the name of Ulatuama. Several men, the crew of a Dam Authority patrol boat were working furiously at a widening gap. The damage had been caused by the very waves which had swamped us, and I learnt that a small, disused lock had stood here, relic of an earlier irrigation scheme. So the weakness had been of man's making. Beyond the lock had been a dried-up channel some twenty yards wide; this was now a swollen, plunging river.

" Is this serious ?" I asked Jubal. " Isn't it a good way of getting rid of surplus water ?"

He gave me a withering look. " Where are we if we lose control ?" he demanded. " If this thing here runs away with us, the combined waters of Victoria and Tanganyika will flood down into the Congo."

Even as he spoke, the bank to the south of the escaping waters crumbled; several yards were swept away, their place instantly taken by the torrent.

We flew back to Mokulgu. Jubal visioned the mayor and got permission to broadcast to the city. I did not hear him speak; reaction had set in, and I had to go and sit quietly at home with Sloe fussing daintily round me. Although you ' know ' from a child that Earth is a planet, it is only when you drift towards it from space, seeing it hang round and finite ahead, that you can *realise* the fact. And so, although I had always ' known ' man was puny, it was the sight of that vast collapsing slab of mountain which had driven the fact into my marrow.

To guess the sort of sentiments Jubal broadcast to the city was easy. He would talk of ' rallying round in this our time of crisis.' He would speak of the need for ' all hands uniting against our ancient enemy, Nature.' He would come over big on the tanks; he would be big, his fists clenched, his eyes ablaze. He was in touch with the people. And

they would do what he said, for Jubal carried conviction. Perhaps I envied my half-brother.

Labour and supplies began to pour north to mend the damaged bank. Jubal, meanwhile, thought up a typically flamboyant scheme. " Tilly," one of the lake steamers, was pressed into service and loaded full of rock and clay by steam shovel. With Jubal standing on the bridge, it was manoeuvred into the centre of the danger area and scuttled. Half in and half out of the rushing water, it now formed a base from which a new dam could be built to stem the flood. Watched by a cheering crowd, Jubal and crew skimmed to safety in a motor boat.

" We shall conquer if we have to dam the water with our bodies," he cried. A thousand cheering throats told him how much they liked this idea.

The pitch of crisis which had then been engendered was maintained all through the next two days. For most of that time it rained, and men fought to erect their barrier on clinging mud. Jubal's popularity—and consequently his influence—underwent a rapid diminution. The reason for this was twofold. He quarelled with J-Casta, whose suggestion to throw open the new dam to relieve pressure elsewhere was refused, and he ran into stiff opposition from Mokulgu Town Council.

This august body, composed of the avariciously successful and the successfully avaricious, was annoyed about " Tilly." " Tilly" belonged to the local government, and Jubal had, in effect, stolen it. The men from the factories who had downed tools to fight the water were summoned back to work: the Dam Authority must tend to its own affairs.

Jubal merely sneered at this dangerous pique and visioned Leopoldsville. In the briefest possible time, he had the army helping him.

It was at dawn on the morning of the third day that he visioned me to go down and see him. I said adieu to Sloe and took a float over to Ulatuama.

Jubal stood alone by the water's edge. The sun was still swathed in mist, and he looked cold and pinched. Behind him, dimly outlined figures moved to and fro, like allegorical figures on a frieze.

" The work's nearly done, Rog," he said. He looked as if he needed sleep, but he added energetically, pointing across the lake, " Then we tackle the main job of plugging that waterfall."

I looked across the silent lake. The far shore was invisible, but out of the layers of mist rose Mount Kangosi. Even at this distance, in the early morning hush, came the faint roar of the new waterfall. And there was another sound, intermittent but persistent: beyond the mountain, they were bombing fault lines. That way they hoped to cause a collapse which would plug Victoria's escape routes. So far,

they had had no success, but the bombing went on, making a battlefield of what had once been glorious country.

"Sorry I haven't seen anything of you and Sloe," Jubal said. I disliked his tone.

"You've been busy. Sloe called you on the vision."

"Oh that. Come on into my hut, Rog."

We walked over to a temporary structure; the grass was overloaded with dew. In Jubal's hut, J-Casta was dressing, smoking a cheroot as he dexterously pulled on a shirt. He gave me a surly greeting, whose antagonism I sensed was directed through me at Jubal.

As soon as the latter closed the door, he said, "Rog, promise me something."

"Tell me what."

"If anything happens to me, I want you to marry Sloe. She's your sort."

Concealing my irritation, I said, "That's hardly a reasonable request."

"You and she get on well together, don't you?"

"Certainly. But you see my outlook on life is . . . well, for one thing I like to stay *detached*. An observer, you know, observing. I just want to sample the landscapes and the food and the women of the solar system. I don't want to *marry*, just move on at the right time. Sloe's very nice but—"

My ghastly inability to express the pressure of inner feeling was upon me. In women I like flamboyance, wit and a high spirit, but I tire quickly of it and then have to seek its manifestation elsewhere. Besides, Sloe frankly had had her sensibilities blunted from living with Jubal. He now chose to misunderstand my hesitations.

"Are you standing there trying to tell me that you've already tired of whatever you've been doing behind my back?" he demanded. "You—you—"

"Oh, calm down. You're overtired and overwrought, and probably over-sexed too. I've not touched your little woman—I like to drink from pure streams. So you can put the entire notion out of your head."

He rushed at me with his shoulders hunched and fists swinging. It was an embarrassing moment. I am against violence, and believe in the power of words, but I did the only possible thing: spring to one side and catch him a heavy blow over the heart.

With shame, I will now confess what savage pleasure that blow gave me. I can perceive dimly how atrocities perpetrated before the Plague came about were commonplace. As Jubal turned on me, I flung myself

at him, breaking down his defences, piling blows into his chest. It was, I suppose, a form of self-expression.

J-Casta stopped it, breaking in between us and thrusting his ugly face into mine.

"Pack it up," he said. "I'd gladly do the job myself, but this is not the time."

As he spoke, the hut trembled. We were hard pressed to keep our feet, staggering together like drunken men.

"Now what—" Jubal said, and flung open the door. I caught a rectangular view of trees and mist, men running, and the emergency dam sailing away on a smooth black slide of escaping water. The banks were collapsing !

Glimpsing the scene, Jubal instantly attempted to slam the door shut again. He was too late. The wave struck us, battering the cabin off its flimsy foundations. Jubal cried sharply as he was tossed against a wall. Next moment we were floundering in a hell of flying furniture and water.

Swept along on a giant sluice, the cabin turned over and over like a dice. That I was preserved was a merest accident. Through a maze of foam, I saw a heavy bunk crashing towards me, and managed to flounder aside in time. It missed me by a finger's width and broke straight through the boarding wall. I was swept helplessly after it.

When I surfaced, the cabin was out of sight and I was being borne along at a great rate. Nearly wrenching my arm off in the process, I seized a tree which was still standing and clung on. Once I had recovered my breath, I was able to climb out of the water entirely.

The scene was one of awesome desoltation. I had what in less calamitous circumstances might have been called 'a good view' of it all.

A lake spread all round me, its surface moving smartly and with apparent purpose. Its forward line, already far away, was marked by a high yellow cascade. In its wake stretched a miscellany of objects, of which only the trees stood out clearly. Most of the trees were eucalyptus: this area had probably been reclaimed marsh.

To the north, the old shore line of the lake still stood. The ground was higher there and solid rock jutted stolidly into the flood.

To the south, the shore line was being joyously chewed away. Mokulgu had about half-an-hour left before it was swamped and obliterated.

Overhead, the sun was now shining clear, bars of pink, whispy cloud flecked the blue sky. The pink and the blue were of the exact vulgar tints found in two-colour prints of the early twentieth century A.D.—that is, a hundred years before the Plague. I was almost

happy to see this lack of taste in the sky matching the lack of stability elsewhere. I was almost happy: but I was weeping.

"They visioned me that one of the floats had picked you up—and not Jubal. Is there any hope for him, Rog, or is that a foolish question?"

"I can't give you a sensible answer. He was a strong swimmer. They may find him yet."

I spoke to Sloe over the heads of a crowd of people. Mokulgu, surely enough, had been washed away. The survivors, homeless and bereaved, crowded onto high ground. Sloe had generously thrown open most of her house as a sort of rest-camp-cum-soup-kitchen. She superintended everything with a cool authority which suitably concealed her personal feelings. For that I was grateful: Sloe's feelings must be no affair of mine.

She smiled at me before turning to address someone behind her. Already the light was taking on the intensity of early evening. Above the babble of voices round me came the deep song of speeding water. It would continue for months yet: Africa was ruptured at her very heart, beyond man's mending.

Instead of flowing northward, fertilising its old valley, Victoria crashed into our lake, adding its burden to the weight of water rolling west. While twenty-one million people perished of drought in Egypt, as many perished of flood and typhoid in the Congo.

I seemed to know what was coming as I stood in the crowded room, knowing Jubal dead, knowing the nation of Africa to be bleeding to death. We were dying of our own wounds.

The ten years to follow would be as terrible as the ten years of the Plague, when every member of the white races had died from its virulence.

Now we negroes, in our turn, stood at the bar of history.

*Brian W. Aldiss.*

*This month John Newman once again turns to the absorbing topic of astronomical research for his article and discusses the vast dust clouds which stretch across the galaxy—clouds which are the very life force of the stars.*

# BETWEEN THE STARS

## By John Newman

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The night sky as seen from this planet is a blaze of stars; space appears to be crowded with their thousands. And for every one that we can see there are untold millions too faint and distant to be visible. Yet, in spite of this, interstellar space is so vast that it is a phenomenally rare occasion when two stars collide; whole galaxies can sweep through one another and not cause a stellar collision.

The space between these stars is far from being an absolute void. It contains enormous quantities of dust and gas and is traversed by all manner of radiation, X-rays, light heat and radio waves travelling through it for thousands of millions of years. Magnetic fields stretch over light years, cosmic rays carry their unimaginable energy in giant spirals from one system to another and the whole fabric of space is riven by the great atomic storms from novae. The centres of the larger dust and gas clouds are giving birth to new stars. Anything less quiescent than the reaches of space is difficult to imagine, unless it be in the stars themselves.

Even though the interstellar material is sparsely distributed, the average over the Galaxy amounts to only about two atoms in every cubic centimetre, the vast volume of thousands of millions of *cubic* light years in our galaxy alone contains as much interstellar material

as is found in the stars themselves. And there are a 100,000 million stars in the Galaxy.

Astronomers once regarded this material as an inconvenience but some thirty years ago its enormous mass attracted attention. Now, study has shown that it is the most important single factor in the formation of galaxies, stars and planets—before there were planets there was dust and before that there was gas.

We can liken this interstellar material to a galactic atmosphere for, whilst many times less dense than our atmosphere, the gas corresponds to the air and dust, which as every housewife knows, is found everywhere.

The Milky Way stretches as a brilliant band of light across the sky and contains the greater part of the Galaxy within it. For our galaxy is constructed somewhat like a discus-shaped cloud of stars embodying a hollow doughnut filling of interstellar material. It is about 100,000 light years in diameter and 3,000 light years thick and we are three-fifths of the way out from the centre so that we see it edge on. But there are enormous gaps in its brightness where there appear to be no stars.

It is highly improbable, to say the least, that these are vast tunnels completely devoid of stars and all pointing directly at us for, even then, we would expect to see the galaxies beyond through them. Also, the nucleus of the Galaxy does not seem to be densely populated with stars, as are the other galaxies that we can see. It is most unlikely to be free of stars so interstellar material, in this case the dust, must obscure it. In fact, there is a dark cloud of dust, known as the Ophiuchus nebula, shadowing the nucleus of the Galaxy. Other dark nebulae, as these dust clouds are known, are obvious to anyone looking at the stars. In the constellation of Orion there is the famous Horsehead nebula outlined against the background of the stars and near the Southern Cross there is the equally famous Coal Sack nebula. Similar streaks of blackness can be seen throughout the Milky Way in all directions from Earth.

These are the larger, denser, dust clouds that are relatively close to us but there are many less dense clouds that are almost transparent to starlight. Their existence is only obvious when light has travelled through a large number of them so that the absorbtion effect is cumulative. And between the clouds there is a haze of dust extending to every part of the Galaxy and spilling over into the intergalactic void.

All this material is travelling at the same speed and in the same direction as the stars that it intermeshes. Most stars are moving in giant circles round the Galaxy's centre and our Sun is no exception.

We are travellihg at 137 miles a second, some 12 miles a second more than the average speed in this region of space and it takes about 200 million years to complete the round journey.

As a result of the dust in our Galactic plane, it is easier for us to study far galaxies well above this plane than the structure of our own galaxy. Indeed, most of the stars on the far side of the galaxy are invisible to us. We find that irregular galaxies, such as the Large Magellanic Cloud, have centres dense with dust, gas and young stars and they may be only 100 million years old, less than the age of the Earth. The spiral type galaxies, such as Andromeda and our galaxy, are middle-aged with a large proportion of their dust and gas condensed out as stars. The elliptical galaxies, such as Messier 87, have used up all their star building material and few, if any, new stars are being born.

The task of studying the interstellar dust was not simple. Stars fingerprint themselves by the light they emit but the dust can only be studied by what it hides. In spite of this, it has been found possible to discover many things about it, the elements in the clouds, the size of the particles, their temperature and their orientation in space.

The dust not only reduces the total amount of light that we receive from the stars but also reddens it, just as the light from the Sun is reddened by dust in our lower atmosphere deflecting the blue light more efficiently than the red. The colour of a star normally tells us its surface temperature but this can be found even more accurately from its spectrum. In this way it was found, in one case, that a star with apparently the colour of a surface at 4,000°C. was actually at 30,000°C., the difference being due to the interstellar absorbtion. This gives us a tool for finding the amount of absorbtion by dust and also for correcting for the dimming of distant stars. Red and infra-red light are affected least of all so infra-red photographs give the best pictures of distant star systems. Radio waves are entirely unaffected by the dust.

The dust particles were formed in two ways, from the condensation of the original gas of the Universe, in the same way that terrestrial mist is formed, and by the coalescence of the material thrown off by novae and supernovae. The latter process has been calculated to have produced only a very small fraction of the total amount of gas and dust so it is to the primeval matter that we must look. The mass of the dust is only a hundredth of the mass of the gas but it is more obvious because of its visible effects.

The obscuring nature of dust is very much dependent on the size of the particles and, whilst their average size is of the order of a fifty

thousandth of an inch in diameter, the total range covers material from the size of planets down to groups of a few atoms. A pound of material in the form of a solid chunk has little effect on the light from a star but the effect is appreciable if the chunk is broken up. Particles with a diameter of a millionth of an inch are ten thousand times more effective at absorbing light than the same mass as particles a third of an inch in diameter. Metal particles are less efficient at scattering light than are non-metallic particles, the difference being four-fold for the same size particles.

There is still some controversy over the composition of the dust. The reflecting power of it is high, greater than that of snow, and seems more like that of a non-metallic material but the fact that it can be orientated by magnetic fields suggests that it is metallic, probably iron and nickel. The evidence could be explained by small pieces of metal being embedded in a non-metallic mass. It is known that the dust grains contain carbon, magnesium, iron, silicon and sulphur and probably the lighter elements in the form of compounds such as ice and ammonia. The temperatures of the grains lies, except under abnormal conditions near stars, between —263° and —233°C.

Why should the clouds of dust form and the grains not remain spread evenly throughout the Galaxy ? For some years it was thought that this was solely due to starlight, each particle casting a shadow so that the particles in the shadow were not pushed by the light pressure. In such a manner it should be possible for small, and then large, clouds to be produced but, recently, it has been calculated that such a mechanism would take at least 100 million years to produce a star and requires a non-turbulent sector of space. However, we know that stars are formed in the volumes of greatest turbulence and the latest theory suggests that as the small groups of gas and dust collide with one another they lose their kinetic energy to one another so that their speeds and movement become similar and they combine together to form a single cloud. The viscosity of the gas is more important in this theory than the viscosity of the particles of dust. Gravity increases rapidly in the centre of a large cloud until the nucleus collapses to form a star and the radiation from this pushes the remainder of the cloud away, accelerating it so that it regains its kinetic energy and, once again, collides with more clouds. Thus it is possible for clusters of stars to be formed by a series of such mechanisms.

At many places in the heavens there can be seen glowing clouds of gas, the bright nebulae. And throughout the whole of this and many other galaxies, and probably pervading all intergalactic space, there is a faint haze of atoms and molecules of gas.

Whilst many of the gas clouds are aglow with light, others are not only non-radiating but are transparent to most light. In the heart of the constellation of Orion there is a dense grouping of stars, two or three times the average number in that part of the Galaxy and, whilst they are faint, they flicker and vary irregularly in brightness. The flaring of these stars is different from the well known, steady fluctuation of the Cepheid and long variable stars and the light from these Orion stars shows that they are surrounded by giant atmospheres of glowing gases at higher temperatures than the surfaces of the stars themselves. Atoms of a dense gas cloud are being drawn into their surfaces and the stars are being born or rejuvenated.

The problem of charting and analysing the clouds of gas was even worse than that of the dust clouds. The gas does not even obscure stars, although there is a selective absorbtion process by which they can be studied. Gas removes bands of light from the spectra of stars and these bands appear as lines across the spectra, their width and position depending upon the type and temperature of the atoms acting as the light filters, whilst their density gives us some idea of the amount between us and the stars. The effect is similar to the absorbtion in the Sun's cooler, upper atmosphere that gives rise to the Fraunhofer lines in its spectrum. At the same time, using the Doppler effect, we can use the low energy lines of the spectra to find out whether the clouds of gas are moving away or towards us. The further away a star is from us the larger the number of gas clouds that its light has to pass through and, when the clouds have different compositions and speeds, it is possible to distinguish between different effects.

The greatest part by far of the gas is hydrogen; it makes up two thirds of the mass between the stars and amounts to a hundred times the mass of oxygen and a thousand times the mass of the iron also there. This is just as well, for plenty of hydrogen in space is a prime requisite for the formation and continuation of the stellar reactions leading to the heat and light that make our existence possible.

Sometimes the dust and gas clouds are illuminated by a bright star or group of stars so that they appear as gleaming hazes and, on detailed study, are shown to be made up of an intricate network of filaments where the density varies. Other nebulae glow with a variety of colours due to the fluorescence of the gas by fast moving electrons, although each atom may only be hit by an electron every ten years. Many of the gas clouds that we see as nebulae are patchy and torn to shreds by, as yet, little known forces but some of the bright ones are symmetrical and compact. Planetary nebulae, so called because they show discs to us, often consist of a star surrounded by a ring of gas shining with the characteristic nebular fluorescence. These are due to novae

explosions and there may be two rings in such a system, formed a million years apart.

Other nebulae, such as the Veil nebula in Cygnus, shine as the result of the collision between interstellar gas and the gas shot out from a star going nova and the filaments in them are similar to the shock waves that might be expected from such a collision, the shock waves being almost a hundred thousand million miles apart.

In general, the temperature of the interstellar gas is about —148°C. except when it is near a hot star or is part of two galaxies that are colliding, when the gas is heated and glows red hot by the collision of the two gas masses. At the same time the gas and dust tend to be swept out of the galaxies and, when a group of galaxies are close to one another, the continual collisions result in the galaxies losing all their dust and gas so that their evolution is halted. This has occurred in the Coma cluster.

The presence of gas clouds can have profound effects on the stars near them. If our Sun should run into a denser gas cloud than the one that we are at present traversing this would result in an appreciable increase in the Sun's heat output. This would increase the amount of water evaporated from the seas, make our atmosphere more cloudy and increase the amount of light reflected back into space. Summer temperatures would be lowered and the ice sheets would gradually creep down from the poles to give another ice age. A little more heat from the Sun would reverse this process and melt the ice. The increase in heat output by the Sun would not be due to its increase in mass but to the fact that gas would fall into the Sun's surface at more than a million miles an hour and the kinetic energy of the molecules would be directly converted into radiation.

There is one chance in a hundred that the Sun could pick up enough mass from the gas during the next thousand million years to increase its mass and its brightness, the latter about a hundred-fold, enough to melt the Earth.

*John Newman.*

# THE FALSIFIERS

*George Longdon's story "Of Those Who Came" published in our November 1952 issue found considerable favour outside our pages, being anthologised in this country and also published in an American magazine. After a long absence he returns with another equally fascinating story filled with mystery and drama.*

## By George Longdon

Illustrated by QUINN

Alexis Cutler lifted the phone, closing his ears to the click of teletypers in the adjoining office.

"Alexis Cutler here," a voice said.

The clipped briskness was his, the intonation, and Alexis eyed the instrument as if it were a serpent. This was the third time in three days.

He depressed a button that would put the conversation on tape, and a second to warn whoever was on duty line-tracing. The routine was learnt, as was the single monosyllable that conveyed nothing:

"Yes?"

Seconds passed, then a click told the distant receiver had been replaced. He swore silently and flipped the switch of the desk communicator.

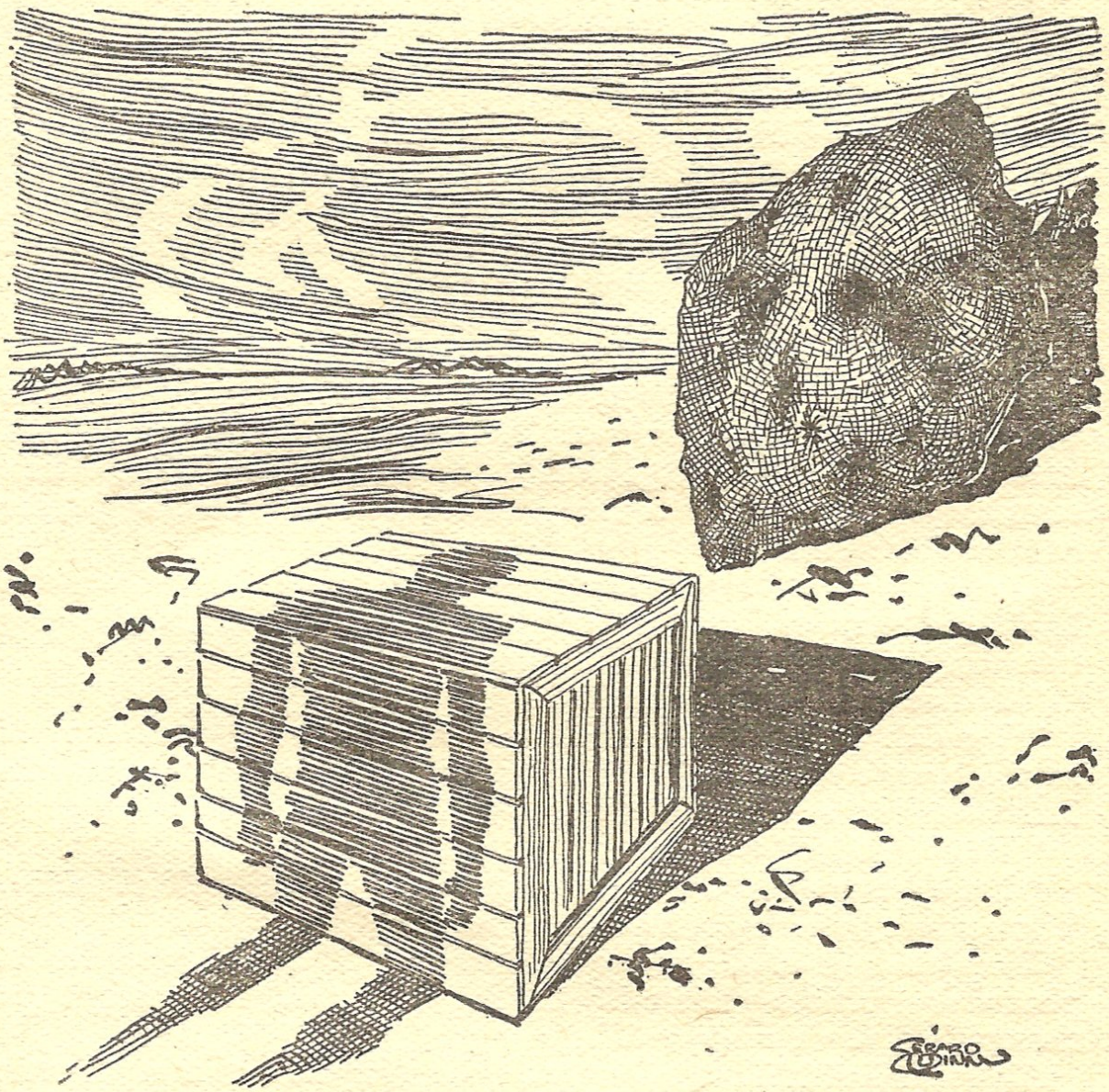
"That the basement?"

A short delay, then: "Yes, Mr. Cutler."

"Get any idea where that call was from?"

"No, sir. He rang off too soon—"

"Maybe recognised my voice. You'll let me know if anything develops."



Alexis switched off and scowled at his blotter. Young Clive, down in the basement amid the switchboards of the great building, hadn't had a chance. Nobody could trace a call in seconds.

The blotter was covered with doodles a psychoanalyst would probably have liked to see. Alexis tore the top sheet off, screwed it fiercely, and flipped it into his disposal chute. The hum of the *Jupiter Messages* building drifted back into his ears, hive-like murmur of a thousand people and machines. Alexis felt twice his thirty years. Most dangerous of all were the times he was not there . . .

He flipped a second switch. "It's understood that at present no one is ever to act upon any phoned order from me?"

"Yes, sir."

The tone of the girl's reply reminded him of the sharp snap in his voice. "Good. I didn't think you'd forget." He let it sound like an apology. "We must be careful until this affair is cleared up."

"I know, Mr. Cutler."

Alexis unwound his long legs and rose jerkily. His office clock was approaching noon, the hour when communication with *Jupiter Central*, always uncertain from Earth, was at its best. Over four-hundred million miles away on Jupiter, narrow-beam aerials would be aligned on Earth, whispering across space. The top level of *Jupiter Messages* was half filled with the equipment necessary to resolve those infinitely weak signals, distorted behind the blanketing inter-galactic static. Jupiter was a frigid wilderness, her gravity nearly unendurable. But where wealth lay, there man went, Alexis reflected. Some even lived to return with their grubbings from Jupiter's cravassed surface. Alexis stretched his long arms. It was good to be human, he thought, for humans achieved things.

The door opened almost under his hand. Captain Millrow was brisk, small—a dynamited imp of a man. He closed it, his keen grey eyes on Alexis, questioning and uneasy.

"You've had—another call?"

"We did." Alexis did not envy Millrow his responsibility. If anything went wrong in *Jupiter Messages*, Millrow was the man who had to answer, in the end.

"You've no idea who it is?"

"None, except that someone would like to pass himself off as me. There might be complications if he succeeds."

Lines showed round the other's mouth. "The danger lies in phoned instructions presumably coming from you. They might get through before we suspected."

Alexis studied Millrow's features, noting for the first time the taut lines about his jaw, the quick flicker of his gaze, and the way his dark brows stood thick and tufty.

"There'll be no danger of that in future, Captain," he assured.

Millrow looked relieved. "I'd heard you'd left instructions covering it. Very wise, with a load ready to leave Jupiter in the coming month.

When Millrow left he seemed more at ease, Alexis noted, and he felt that a point had been gained. Somehow the success or failure of the Jupiter mining project did not feel important, so long as Millrow's trust in him remained.

Up in the radio room Peter Finn was slowly writing down the Morse that had traversed a large sector of the solar system. Alexis watched him, marvelling that he could pick even the two words per minute out

of the welter of noise that had mixed itself with the signal. Peter was a likeable fellow, he thought. Young for such a post, sandy and slight, a trifle lacking in drive, but not wanting technically.

" Conditions are damn bad," Peter said.

Alexis nodded, silent because the Morse was only a faint wail beyond rain on a tin roof. *Jupiter Central* spelled its messages across space six hours daily. For six Earth spelled back, directive elements on the *Messages* building swivelling to cancel planetary rotation. At noon information on shipments back to Earth had started coming in. The message said there would be definite news within the week. Reading it, Alexis wondered why humanity valued rare metals so. Stored with the nation's gold, the ingots were symbols only, and never to see use in any machine, ship, bridge or power-plant.

" So my sister Ruth is being your new secretary, Alex," Peter Finn remarked, jabbing a stop.

Alexis read the finished sentence, a continuation of the eternal report on local conditions. The Morse paused.

" She is," he said.

He remembered Ruth Finn as if recalling a photograph. Quite slight, oddly like her brother, yet with a twinkle in her eyes and a quick mobility to her lips.

" You'll like her," Peter stated.

The Morse began again, and Alexis left the reception room. Peter's words reminded him that he was not supposed to have met Ruth Finn yet—but had, by chance, in the green park strip ringing the city.

The summer sun was going when he left, taking his car from the parking area behind the building. The vehicle had been delivered there three days before, while he worked, and ran well. Some windows were lit, the building aerials strange skeletons against a pink sky. As the miles drummed by he pondered on motives possibly prompting the infiltration of a stranger into the *Messages* offices. The voice had first come on the phone when he had returned unexpectedly to fetch something forgotten. Since then he had made a habit of being in the office at unexpected hours.

A twinkling city dawned ahead and he sped through the clover-leaf loop into the main street. Three lines of traffic sped each way; in front a signal flashed from amber to red, halting him before the great north by-pass. The crossing vehicles moved swiftly, thinned, and Alexis found himself staring at a car like his own, but older. In it sat a tall, lean man of his own height and build, a grey felt hat slightly over his brow, the way he himself wore it. The lights changed. He slid forward, a tiny nerve in one cheek suddenly twitching, his back abruptly cold with a feeling of exposure to danger. The opposite

vehicle came just as smoothly, drifting automatically through its gears. The driver had his features, Alexis thought. Was high-cheeked, lean, dark-haired too—*was him* . . . !

The shock of recognition almost brought him into the path of overtaking vehicles. The living image of himself slid by and was gone. Alexis braked, weaving through the lines to the side. A junction gave him space to turn, but he had to wait for the lights again. Past them, his speed mounted, lit buildings streamed by and he searched ahead for the bobbing red lamps of the other. A six-wheel lorry was rolling abreast af slow-moving traffic and he had to wait, fuming. When he licked by the clover-leaf was in sight, yellow lights now bright, and he knew he was beaten. Four roads gave one chance in four of choosing right. He felt the odds too small and turned back for home.

He left the car in the public basement garage, hastened through the lobby, and took the lift to his suite on the fourth floor. The door banged behind him and he stood with hands deep in his jacket pockets, shoulders hunched and cheek twitching. Nasty to find someone spoke with his exact intonation, he thought. But worse to know that man was a facsimile in appearance !

Realisation of the significance of his discovery froze him into motionlessness. The other's car had been heading out of the city. Where phone calls failed, personal contact might succeed—and might be risked by someone who knew the building well. Perhaps he could have chosen the right road at the clover-leaf, and continued the chase with success, Alexis thought.

He hastened into his study, jerked up the phone and dialled the *Jupiter Messages* building. The line was dead. He banged the receiver, realised irritation would not restore it to working order, and returned to the lift. He recalled that he had used the instrument that morning and found it working.

The phone in the lobby cubicle operated and within moments he heard the *Messages* building switchboard girl.

" Please give me Mr. Cutler's office."

Tension made his voice sound a trifle odd even in his own ears. The line clicked, there was a pause, then :

" Alexis Cutler here."

Alexis saw his knuckles grow white, and relaxed, fearing the plastic might fracture under his grip. Profanity and blank denial strove for supremity in his mind. He suppressed both and licked his lips.

" How long shall you be in, Mr. Cutler ?"

He hoped for thirty minutes—just sufficient to get back to the building and confront the impostor now occupying his swivel chair.

" Only a little while, to attend to something I'd forgotten."

The lie would pass, Alexis thought. The staff would believe he himself had returned unexpectedly.

The line clicked and he heard Millrow's voice. " You wanted an appointment ?"

Alexis swore softly. This was the routine ! Millrow was keeping him talking while young Clive in the basement feverishly traced the call ! The second Alexis Cutler would be sitting back in his chair, face expressing annoyance.

" Yes ?" Millrow's tones were honey. " I'll be glad to help if you let me know what you want."

Time wasting, while connection checks flipped back, back—towards his own block, Alexis thought. He stuck the phone back on its cradle, damning the second Alexis Cutler for being clever enough to get away with it.

He was half-way to the car when he remembered the automatic, relic of a boyhood craze, in his study. He could see it, dull black, snug in the right-hand drawer, as if referring to a photograph in his mind. Only a .22, he thought, as he swept up in the lift, but it had split inch planking behind his targets.

The drawer was locked, as he had expected; the key in the desk, as he had known. The automatic was gone. The shock of it stilled him and he sat back upon the arm of a chair, astonished.

It was like a remembered photograph from which the main subject had vanished. His gaze flicked round the room, over window, furnishings and walls. A thief might leave signs.

There was cigarette ash on the carpet near the desk. He sometimes dropped it there, but was sure he had not earlier that day. The ash shocked him more than signs of violent entry. A hurried thief did not smoke, he decided.

He began to examine the rooms systematically, critical of everything until reassured, and a thin doubt grew to certainty in his mind, evoking an extreme unease. The suite had been lived in since he had left for the *Messages* building. No hurried prowler had come and gone. A chair was moved, a book differently replaced on his shelves. The electric fire set in the hearth was not stone cold, as it would have been if unused since morning.

His second prowling circuit of the study discovered a glint of bright metal under a disturbed cushion. A watchcase lay there, carved, slender, slightly antique in appearance—and not remembered.

He lifted it by the edges and placed it on his blotter, anger changing to triumph. A smooth area intended for initials instead bore finger-marks—not his own.

He thought of the police and Millrow, and dismissed both. The former would ask too many questions and take too long. The latter was best undisturbed—so that the second Alexis Cutler might believe himself safe.

Thirty seconds search in his classified directory brought to light a name inspiring in its commonness and only three blocks away. He put the case in a cardboard box and drove.

The numbered door was two flights up and opened at his knock. Alexis paused. " You're Douglas Hopson, inquiry agent ?"

The man was fifty, grey-haired and slightly benign. " I am."

" You check fingerprints ?"

" Nothing easier."

" Then you can render these visible to begin with."

Inside, door closed, Alexis parted with the box. Hopson put on glasses and studied it. " With pleasure," he said. " You'll excuse me."

He was gone in a second room ten minutes and returned with damp prints large as a man's hand. Each showed a finger, whorls vastly magnified.

" Photo-enlarger," he said. " Jurymen like to see them."

Alexis took the prints. Each was so clear the pores stood like black fullstops amid lines sharp as a surveyor's contours. Only one was slightly blurred at one edge.

" You could put that aside," Hopson pointed out. " Those on the box are best. It was from the case."

Alexis was momentarily stone. He had wrapped the box in a handkerchief, primarily to keep the lid on.

" Those on the box ?"

" Of course—didn't you want them done as well ?"

Alexis lowered his gaze to the prints Hopson had made, loose now in unnerved fingers. " W-which were on the metal case, which on the box ?"

Hopson drew them from his grasp. " They're marked on the back. Jurymen ask questions like that."

Alexis spread them on the table, turned them over, examined them again, then realised Hopson was watching him queerly. He paid and went. Outside, he dropped the prints on the back seat of the car. He had not touched the case, except at its extreme edge. He *had* handled the slick surfaced cardboard box. And the prints on both were the same. He gnawed a lip, and as minutes wore by his annoyance at Millrow softened. The second Alexis Cutler was *that* good !

After an uneasy night Alexis returned to the *Messages* building. Only the certainty that no news of real importance would be coming through during the night had kept him away. Let the second Alexis Cutler remain, he thought. He would learn nothing and gain confidence. Confidence fore-ran many a fatal slip.

Ruth Finn had begun work. Efficient, slim as her brother, but feminine, she moved with bird quickness about his office. An admirable specimen of female humanity, Alexis decided. It was good to be human.

She drifted into the background when Millrow entered. He, too, appeared to have slept little, Alexis thought, and somehow he resembled a coiled spring about to jump free. His gaze ceased its darting motion and settled on Ruth Finn.

" We'd prefer to be alone."

" Yes, sir." She was gone and the door shut.

" You realise I don't know whether you're Alexis Cutler—or *Alexis Cutler*," Millrow said. " There are few hours in the twenty-four when *one* of you is not here. Likely enough you'll meet soon !"

Alexis experienced shock, but smiled. " I hadn't thought of it that way, but see it's difficult for you. I'll tell you exactly what happened last night. Someone's living in my suite :"

Millrow's face betrayed nothing as he listened. " Very similar to the story I was told just before midnight," he said finally. " *He* also said he was sure someone was living in *his* flat :"

Alexis tensed and his chair creaked. " Someone was here just before midnight ? Someone you thought was me ?"

" He was."

Irritation swept through Alexis. The situation was already so difficult Millrow did not know him from his double. He got up and went round the desk, gripping the other's arm.

" Look, *I'm* Cutler : You've known me years. Whoever was here at midnight was the fake :"

Millrow's gaze was unswerving. " You practically repeat what I was told at midnight. But *he* said, *who was here at noon was the fake* :"

" We'll see about that :"

Easy to say, but not easy to do, Alexis thought. The second Cutler was an image astonishing in its likeness of him if Millrow, shrewd and missing nothing, could not distinguish them apart.

" What worries me is the apparent lack of motive," Millrow stated. " *Jupiter Messages* has no rival. No one has the brains, money or men for that."

Alexis still felt irritated. " From which you deduce—? "

" That the threat comes from outside Earth."

" Outside Earth !" Alexis felt as if the words had keyed a reflex of astonishment in his mind.

" Just so—and perhaps from Jupiter."

Mixed emotions kept Alexis silent. Millrow's words showed trust in him, and that was comforting. It was nice to be human, to be trusted by other humans, and by Captain Millrow in particular. But behind the personal satisfaction was a larger unease.

" Jupiter was devoid of life." His voice sounded hollow.

" Was thought to be," Millrow corrected. His lips twitched. " There was a message months ago about life there—at least our men thought it *may* have been life. Stones that walk—if they were stones. The whole news was suppressed because the facts were hazy. Since then two ships have shuttled from Jupiter to Earth. Others came before—and we can't be quite sure what they brought."

Alexis realised that Captain Millrow's eyes were on him with an abnormal intensity. The Captain's lips were slightly parted, revealing strong, even teeth set like the jaws of a sprung rat-trap. Resentment came unbidden at the scrutiny.

" You're telling me a lot—considering you don't know whether I'm Alexis Cutler !"

Millrow veiled his eyes. " Perhaps. Perhaps again, I'm telling you nothing that matters. As I was saying—stones that walk. Or so they seemed, on a slope where there *were* stones. Nobody noticed until someone turned up seven crates of stores where there should have been only half a dozen. When they tried to get the lid off one they found appearances were deceptive—it ran back to the other stones and became a stone again. Odd, I think."

Alexis felt something was expected of him. " You mean it was adaptable, a chameleon ?" . .

" So it seems. A first class method of surviving, all considered. Drop in among your enemies or victims, look like them, then—" Millrow made a sweeping gesture. " Who knows ?"

Alexis drew a curve that meant nothing on his pad. " So you think one or more shipped back to Earth ?"

The other's silence was agreement. Alexis wondered how long Millrow had been working it all out. Jupiter was aged and huge. On Earth, the drive for survival had produced insects like leaves, creatures large and small, weak, strong, weird and unexpected—Man himself. Who could guess at the lines evolution might take elsewhere. A species must survive; all else was secondary.

Alexis got up. The chair felt hard, his long limbs cramped. " What do you plan—to lock the second Cutler and me in your basement and see who looks like a teletyper in the morning ?"

"No." Millrow's voice was devoid of amusement. "A species as successful as this would have intelligence. To some degree its adaption may be consciously controlled. It wouldn't give itself away. It may even be able to organise its cells to escape detection in any test we could devise. It may be the—*perfect chameleon.* Or so I'm assuming until I get contrary proof."

Alexis let his mind wander on the possibility of perfection, and all its implications. How nice, for example, to be a stone sitting safe amid a thousand other stones, or even a packing-case inconspicuous with half a dozen other cases? But absolute perfection would be more than mere outward appearance. The life-forms of Jupiter might conceivably *feel* like a stone, or like whatever form they adopted. That would be the absolute end product of protective adaptability, beyond which a million years of evolution could not progress.

He stretched, looking through the window at the aerials on the *Messages* block opposite. It was comforting to be an ordinary human being and not dwell too much on such possibilities.

Alone, he worked for an hour, half his mind dwelling on Millrow's idea. Assuming Jupiter's queer life-forms preferred a planet such as Earth, anyone could see that control of the *Messages* building would be an important step. Disquieting news could be suppressed, transport schedules discovered.

He liked Ruth Finn and she worked quickly and well, speaking little, and never unnecessarily. Finally he pushed aside the listings of cargo space, weight and value, upon which they had laboured.

"I saw you on the strip soon after the *Penngreen* came in from Jupiter," he said. "I remember it well because she'd been overdue."

She smiled momentarily. "I remember too. It was nice there."

"Walk often?"

"Quite often, when it's fine."

He studied her frankly. She left an hour before noon, her duty finished for the day. He was wondering if he would go to see Peter Finn, enquiring for old reports and listening to what was coming in, when the door opened violently. Alexis stared, astonished, at Finn himself, face white and eyes wide as a frightened child's.

"I—I've seen Ruth, *twice*," he stated.

Alexis pushed back his chair, conscious that the nerve in his cheek was jumping again. "Twice?"

"At the same time!"

Peter Finn backed against the door as if to prevent entry of some ghost.

"Tell me," Alexis said quietly.

"It was during a stand-by period. I was at the window overlooking the entry gates. Ruth went out, turned left, and was hidden behind the shelters where the public transports stop. Half a minute later she came back in the gates. I thought nothing of it until I looked on along the road to see if a transport was coming—and Ruth was walking on there—"

He halted, licked his lips, and Alexis saw the shock had been great. "You made a mistake—"

"Never!" The word carried conviction. "*I saw both at once!*"

"It was someone else—"

"Think a man doesn't know his own sister?"

A man should, Alexis admitted. If two Cutlers, why not two Ruth Finns?

A sound came at the door and Alexis realised someone was trying to open it. He drew Finn aside, felt him tense as the handle turned. Ruth Finn came in, smiling.

"Forgot my satchel. Is it here?"

The muscles were iron hard in Finn's arm, then shaking. He pulled free, gained the door, and was gone. Ruth frowned.

"What's the matter with Peter?"

"He's on duty."

He studied her, remembering Peter Finn's words. Ruth, or *Ruth*, as Millrow would put it? Twenty-four hours earlier he would have sworn she was Ruth Finn indeed. Since leaving Douglas Hopson's rooms he was less certain.

She shrugged, searched her desk, and went out. Two steps took Alexis to his inter-office communicator. "Get me Miss Finn's home on the phone!"

"Yes, sir."

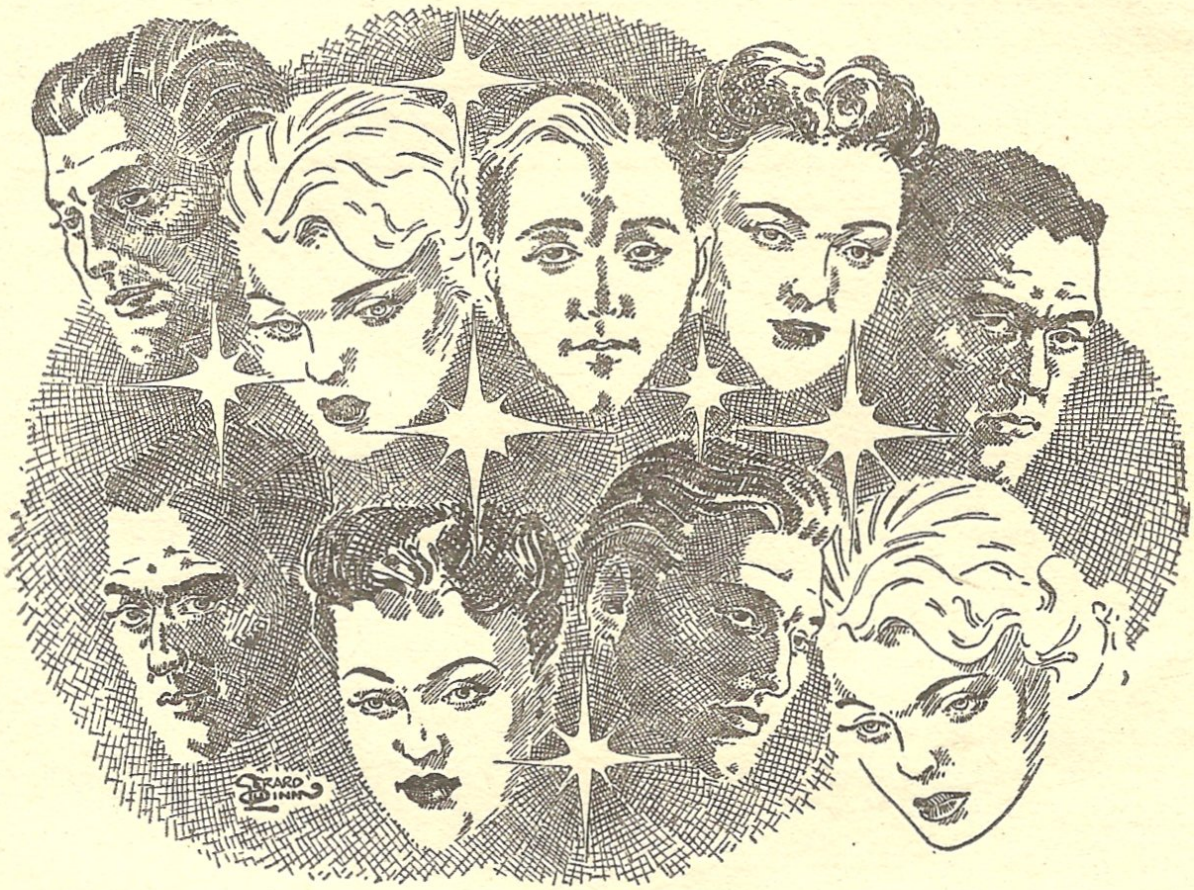
He fumed at the delay, jerked up the receiver when it buzzed. "Hello?" He disguised his voice. If someone answered who was not Ruth, it might be well they did not know who had rang.

The reply was immediate. "Hello. Ruth Finn here."

A question sprang to his lips. He suppressed it and replaced the receiver. It was Ruth's voice, unmistakable in tone. Yet so had been the voice of the second Ruth Finn. Furiously conflicting emotions and thoughts filled his mind. Which was the real Ruth—she who had worked with him that morning, or she who had come later? He knew that if his life depended on it he could not decide.

His thoughts were still bedlam when Millrow rang through. "I'm having a guard put on your door."

"A guard?" Alexis felt astonished unease. It was hateful for Captain Millrow to doubt him . . .



" Don't mistake me." Millrow's tone was laconic. " I'm simply afraid that if someone wishes to replace you they may eliminate you to make success more certain."

" I see—a bodyguard."

" Put it that way."

The line went dead. Trust Millrow to avoid uncertainties, Alexis thought. If the second Cutler turned up, he would doubtless have a guard too. He grinned crookedly at the idea.

The gunsmith's door closed with a faint hiss behind Alexis, and he wove quickly through the afternoon crowd. Feel of the .22 in his pocket was reassuring. An outmoded weapon—but one he understood, and readily fatal. As Millrow said, things would be simpler with only *one* Alexis Cutler, and a man must protect himself. Neither Ruth had reappeared before Alexis left the *Jupiter Messages* building. Alexis had contacted Millrow briefly, explaining.

" If either Ruth comes in, I'll hold her," Millrow had promised.

Alexis followed streets photographed on his retentive memory. A mile beyond the green belt where he had first seen Ruth Finn was the

Jupiter ship site, empty of vessels and topping slightly rising ground dotted with trees. Very easy for something to slip off a landing craft, he thought. Then to cross to the town, adapting to imitate the first life-form found in its new environment. Unluckily for the newcomer, it had overlooked one thing—an animal among others similar was hidden and safe, yet men and women were all different, so that the very exactitude of imitation proclaimed its falsity. For a moment he mused on the strangeness of beings that could be stick, stone or living flesh. It was much nicer to be human, he thought.

He set his back to the Jupiter site. A double task seemed to demand immediate attention: he must expose the fake Ruth Finn, and unmask *Alexis Cutler*. It was a task he had never anticipated facing.

The sunshine danced lazily among the trees of the belt and for ten minutes he watched people and traffic on the inner city road. Millrow's bodyguard had not caught up with him again. Some inner perversion and irritation had made Alexis deviate unobserved into a side alley and watch the man hurry amid the crowd.

He phoned the office, and Ruth Finn's voice replied. He wondered which Ruth she was.

" I'm going out of town," he said, " shan't be in until late tomorrow morning."

" I'll tell Captain Millrow, Mr. Cutler."

" Please do."

He rang off, glad all was in order so that his lie seemed to have been believed completely. He would wait a full hour, he decided, before returning unexpectedly to the *Messages* building.

Afternoon sun was warm on his back as he entered at the gates. He paused momentarily, enjoying the feel of it, pitying creatures condemned by circumstance to be stones on some frigid slope. The building hummed with usual activity, hub about which the Jupiter project rotated. He sought Captain Millrow's office at once. Millrow's gaze rose as the door opened and simultaneously his hand went to a desk push.

" I thought you were upstairs," he said.

Alexis closed the door softly. " Why so ?"

" Because I had this very moment been speaking to your office." Millrow released the push. " If it wasn't you who answered—"

" It must have been my double." Alexis felt keen satisfaction. " He's being watched ?"

" Of course. *You* slipped your guard."

Alexis shrugged. " He missed me. I wasn't sorry. How about Ruth Finn ?"

" We've got them both below !"

Satisfaction again flooded Alexis's mind. With two Ruth Finns side by side action would be possible. A sound outside the door told him Millrow's signal had not gone unheard, and he was glad. Self-protection was a strong element in human make-up, he thought, as was common sense.

" We'll have them up one at a time," he said.

The next hour was a species of hell. The first Ruth pleaded ignorance of the whole matter, swore, once, and wept, at the end. She had modified her regular hours because Mr. Cutler had asked it. Yes, she had realised something was amiss when she found her work was being carried on in her absence. White-faced, she went at last.

The second Ruth was equally certain. She did not understand how they could doubt her. No—her expletive was brief—she *wasn't* a fake. How could they suggest it ! A little later she sat with tears on her pale cheeks, but adamant.

When both had gone Millrow sat on his desk gnawing a lip. " Damn it," he said, " they're the living image of each other ! I'd have sworn the first was Ruth Finn—until I saw the second !"

Alexis paced the room. With matters standing thus it seemed he might have to shoot the second Cutler first, and explain why after.

" The imitation is as good as the real thing," he said flatly. " Can Peter Finn identify her ?"

" No. I've tried that."

Millrow took to pacing jerkily. He scowled from the window, fiddled with his desk, grunted, then halted, face brightening with inspiration.

" Whoever's the fake is pretty efficient at it !"

" Very efficient," Alexis agreed.

" A perfect fake in appearance—*and feeling* !" Millrow slapped a hand on the desk in triumph. " A fake that didn't trust itself would always be in doubt and uncertainty. Its own unease could betray it. Others, genuine members of the group it had joined, might sense that unease and attack it."

Alexis nodded slowly. " There's much in what you say. Where does it lead ?"

Millrow's fist rose, one finger pointing like a pistol. " *The most efficient, perfect alien fake wouldn't know he was a fake* !"

It sank in slowly and Alexis acceded the Captain was right. Adaptation so perfect as to simulate fingerprints—so absolute as to have at its disposal even the memories of the person imitated ! Partly unconscious, so that the fake took its place among the crowd as if one of them, *believing* itself to be one. That, indeed, would be the end-product of

survival by adopting a place in a host society ! The knowledge was a shock. He imagined the being of Jupiter existing as stones, on the dim borderline of unconsciousness, while centuries passed. Aeons before perhaps there had been strange living animals—creatures they could imitate. But all had passed away, leaving the spurious with no models but the stones on the slopes. Alexis shivered involuntarily. How terrible would be their situation ! He was thankful to be human, one of a noble race on a warm, fruitful world.

" I'm not letting Ruth or you leave this building until the thing's cleared up," Millrow said.

" You take a grim view of it."

" Very grim ! Where two have come, so can others, I'll not have *Jupiter Messages* used as a focus for the arrival of shiploads of—" He sought for a word, but abandoned the effort. " Call them what you will—this thing must be stopped at its outset !"

Alexis turned his gaze through the window. The sun looked very pleasant. " There may be a way—with the second Cutler and myself. If it works, you could try it on Ruth."

Millrow grew still. " How ?"

" Have him in here, and I'll show you !"

While Millrow used his desk communicator Alex stood with chin on chest. Plainly the Captain could not keep them all prisoners indefinitely. But one thing had so far been overlooked—the real Ruth and Cutler would have the wellbeing of Earth at heart, while somewhere in the hearts of their imitators would lie a greater regard for self, born of the desire for survival. All beings longed to live, hated to die . . .

*Alexis Cutler*, as Alexis thought of him, looked thin and a trifle tired when he came in. His back to the door, he studied Alexis, his brows drawn down. The silence grew, tension mounting, and a nerve on his cheek twitched.

" So we meet," he said. " You're the man who stole my new watch-case the day after I bought it, lived in my rooms, and took delivery of my new car !"

Alexis stirred uneasily, noting the eyes could never be cruel. Nor could his own. " *My* rooms," he said. " Naturally I've lived there. As for the car—I'd been waiting for it months." He snorted. " If an interloper leaves something in a room he's entered he can't accuse the occupier of theft !"

The armed silence grew again. " Quarrelling over little points won't help," Millrow put in tensely.

Alexis nodded. " As you say, it won't." He considered his words, choosing carefully. " I didn't bring him here for that. My point is very different."

The second Cutler watched him. "Then let's hear it."

"You shall." Alexis felt that triumph was his. "Humans are noble—brave. A man will die for his fellows, *for Earth.*"

Millrow's eyes flickered, his attention so intense his breathing was halted. Alexis saw uncertainty and a small fear arise in the gaze meeting his own.

"A man will, as a rule," the second Cutler admitted.

"An infiltration of alien beings, once organised, would be exceedingly dangerous." Alexis chose his words with care, pressing remorselessly to the point he must make.

"Deadly," Millrow whispered.

"So to be prevented—even at the cost of personal sacrifice." His gaze did not stray from the eyes like his own. "You have a .22 I believe. Place it on the desk."

He withdrew his own, holding it by the muzzle. The other .22 was exactly as he had expected from the image rising in his mind.

"Take both, Captain Millrow," he ordered.

Millrow did, hesitating. He backed, facing them, eyes showing he already guessed the part he must play.

The second Cutler followed the movement. "I've had that gun years. Any reason why I shouldn't carry it?"

"None," Alexis said. "That's not the point. But this is—one of us is a fake, and must die. Captain Millrow doesn't know which. Men are noble, and will die for Earth." His voice rang. "So, Millrow—*shoot us both.*"

This, he thought, was where the second Cutler would begin to break. Alien, fake, he would not be willing to die for Earth! The fear was already bright in his eyes, and his cheeks white. One cheek twitched and he licked his lips.

"As you say, men will die." Low words, emotion filled. "So—*shoot us both*!"

The two muzzles rose and from Millrow's expression Alexis knew he would carry out the order. There was no other way, and Millrow was a soldier. Two muzzles trained on two breasts; two forefingers contracting slowly . . . This was the final moment, Alexis thought. The alien must break. Fear was bright in the second Cutler's eyes and dew had sprung to his brow. Yet with the fear there was a measure of bitter triumph.

Seeing it, Alexis wondered, moments drawn out with expectancy. Men were noble, he thought. *Men were noble.* His brain screamed the words as he longed for the second Cutler to snap, his control to go, so that the tension could be ended. But the other was straight as a ramrod still, unflinching, waiting.

Under the bedlam howling in Alexis's mind another thought grew, forced up from below. This was not self-preservation any more, but self-destruction ! The whole point of adaptation and imitation was continued life. Now, imitation was bringing death. From lower levels of his mind a clamour grew, warning him . . .

Then the cells formed into eyes began to lose their organisation, and processes beyond his control took over, fulfilling their end—to preserve life. With his last fading vision he saw two men, one upright and noble, one holding two guns, but gaze now fully on him . . .

He strove to speak, but no words would come. Only in his mind did the phrase ring. *I thought I was a man.* It had been nice to be human. But better be a living stone than a dead man. *I was a man,* Alexis thought. The knowledge meant little, fading with the host of adopted memories taken from the first human he had seen when leaving the Jupiter ship. Seeing was gone; hearing was gone. From deep levels of his sentience feelers reached out, discovering the form and nature of objects nearby. Adapt, *adapt and live.* A quiet, semi-conscious tranquility came. *Nice to be a strong wooden desk,* he thought . . . *It was safe to be a desk.*

George Longdon.

*During the past ten years many fascinating stories have been written about* homo superior *the anticipated next step upward in the evolutionary scale from ourselves—*homo sapiens. *In the following thought-provoking article the writer points out that Man may well be by-passed in his climb to supremacy because of his specialisation in knowledge.*

# FUTURE INDEFINITE

## By Kenneth Johns

Man is in an evolutionary blind alley. Most people tend to think of the human race as the lords of present creation—and so they may very well be. But the further, quite natural, assumption—that when the next people destined to be lords of creation are born they will come from human parents—is not in any way justified.

We call ourselves homo sapiens, and the next stage of growth we grandiloquently term homo superior. But evolution is not a steady marching forward, so that superior species develop only from slightly less superior beings. The generality is that evolution occurs in spurts. A species forges ahead in the struggle for life. The species at the top is by-passed.

We should think in terms, not of *homo* superior, but of X superior. And in the evolutionary struggle X is *really* an unknown species.

Man, by his nature, alters his environment to fit his needs, instead of evolving to fit his environment. We have lost or are losing most of our adaptability because of our success in understanding and con-

trolling the use of natural laws. One of the apparent laws of evolution is that when a species becomes too highly specialised, gets itself in a rut as it were, it is well on the way to losing its mastery and faces eventual extinction. Without the ability to adapt, a species cannot withstand alterations in its environment such as abnormal fluctuations in climate, radiation, temperature and food supplies. Just as the giant reptiles perished from the face of the Earth because they became too highly specialised, so is man placing himself in a similar danger by providing himself with the optimum of environments. By assuring himself of plenty of standard foods, air conditioned buildings, mechanical transport and highly effective medical services, man, in his turn, may be laying the foundations of his own destruction.

What our mechanical civilisation is attempting to do, cradling us by machines, is to combat the iron principle that only the fittest shall survive.

Without our gadgets there is only a very limited range of conditions in which we can survive. A far narrower range than that within which other forms of life can live quite happily. Where humans would suffocate, die of heat or cold, starve, drown or be dehydrated or be compressed to a jelly, there are bacteria, spores, fish and plants living and multiplying. Just because we are the most intelligent race on Earth we cannot be sure that it is increased intelligence that will give the next spurt forward nor that the fittest to survive will eventually emerge, by mutation or evolution, from the human womb.

It has always been the insignificant, generally adaptable, non-specialised creature that jumps up the evolutionary ladder. Some creature that appears to have waited millions of years for just that one chance. Palaeontology shows us that it has been the specialised groups that have been left behind. We are now specialised in intelligence—and there are over a million known, separate forms of life sharing this Earth with us.

When the first fish crawled out of the oceans to become amphibians they were the smaller, persecuted, unsuccessful fish. The larger successful fish lorded it over their domain. But the amphibians founded a kingdom of their own—until their smaller members evolved into reptiles, who, in turn, gave rise to birds and mammals. But none of the giant reptiles who were undisputed lords of their creation is now alive, nor is a single descendent.

Man has evolved little during the last hundred thousand years, the fossil bones now being dug up in Africa preserved from that time long ago might well belong to present day homo sapiens. They have almost the same brain capacity and cranium structure. During all this time it is only man's culture that has altered radically—not man himself.

And it is very apparent from present day trends that man's culture has overstepped the mark his bodily and mental capacities can handle. But can we be sure that the substitution of learning for fang and claw and survival of the fittest will be sufficient for preservation in a time of planetary change ?

By specialising in intelligence we have placed all our eggs in one basket. We have decided to rely on the ability of the human brain to make up for all our other deficiencies. Can we further develop our ace in the hole ?

The chances of a major mutation are less than one in a million. But we must rely on mutational changes now that we have eliminated most of the natural evolutionary forces, and the rate of mutations in the human race is very small. The radiation released into the atmo-

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sphere from the explosion of a thousand H-bombs would double the rate of mutations. That, somehow, doesn't seem to be the answer.

Space travel, by exposing men to mutating cosmic rays, may play a part in furthering his evolution. There is a hint here of some vast cosmic plan, where any race that may venture into the deeps of space is subtly altered, changed, so ordered that they can never be the same again.

There are two brain mutations that we can envisage now that would have a survival value in our civilisation and would increase our chances of staying at the top of the ladder for a while longer.

If the natural alpha rhythms of the brain could be speeded up from eight to fifteen cycles a second it would be possible to react faster and make more rapid decisions. Both obviously highly useful aptitudes in a world of ever increasing speeds. A driver of a car travelling at fifty miles an hour would be able to save five feet over present braking distance—and pedestrians would have the faster reflexes necessary to escape from our present traffic chaos. The advantages would be most keenly appreciated by pilots of jets and spaceships.

The other favourable mutation involves the ability to learn and remember. With all the publicity attendent upon cybernetic machines and 'mechanical brains' it must not be forgotten that the human brain is a vastly more capable organism. But the amount of new knowledge that has been acquired by the human race during the last fifty years is several thousand times more than a single brain can absorb and digest. Facts have been accumulating at a far greater rate than they can be comprehended by any small group of people. As thought depends for action on an understanding of the relationship between a multiplicity of ideas and facts, this means that the possible relations between the vast numbers of facts is almost astronomical in number and quite beyond our brains' capacities.

An increase in the ability of the brain to remember and correlate facts and ideas would be of tremendous significance. There are enough cells in our brains, waiting to do the job. There is a missing factor, or the nerve paths are insufficient—whatever the block may be, removal of it would give an unprecedented spurt to man's evolution. Until, eventually, he exhausted the possibilities in the full use of his brain.

Evolution slows down once a species finds a balance with its environment. Take warning from the ants. They are perfectly adjusted to their environment, they are far older than the human race, they have changed little in something over 80 million years and are the end result

of the development of instinct. They have conquered a part of their environment to the extent that they build cities. But they have no intelligence. They have no chance of evolving further.

Before man finds a stagnant balance with his environment he must destroy part of the balance so that we are always at war with some phase of the universe, whether it be the climates of the other planets or the alienness of space itself. This is the only long term hope. As we expand from our planet we will find many new and near-lethal environments. If we do not rely too strongly on machines to make them Earthlike, or build small bubbles of air to reproduce terrestrial conditions, the new environments may well be the making of our race and provide us with the unspecialisation that we will need to cope with the competition that is to come.

Otherwise, sooner or later, the law of the unspecialised will catch up with us. Look around you—which animal is X ? Even we, with our specialised sciences, cannot foretell which creature it will be that will replace us.

*Kenneth Johns.*

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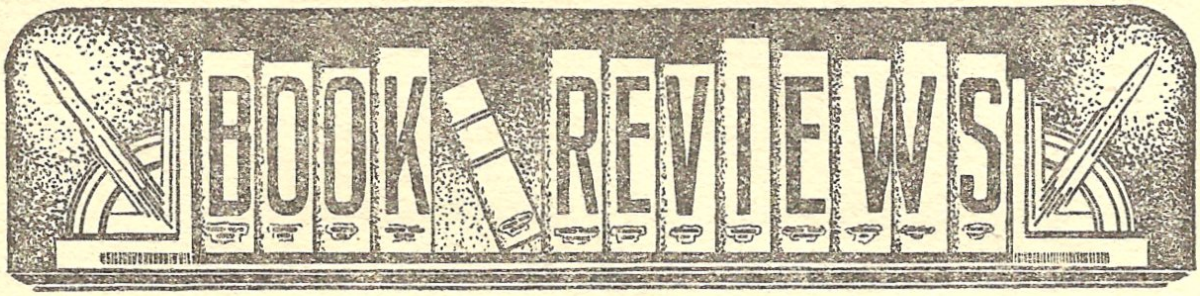
# ATV's Science Fiction Theatre

Viewers within range of Associated TeleVision's Birmingham transmitter which opens on February 17th are due to see some exciting science and science fiction features. Starting on Friday, February 24th, at 7.05 p.m., "Science Fiction Theatre" will present a weekly programme of filmed stories based on scientific fact of credible intelligently conceived possibilities. The programme will be introduced each week by a host-narrator who will demonstrate a scientific fact on which the current story is based. The first play, entitled "Beyond," stars William Lundigan as a faster-than-sound jet pilot who meets an apparent flying saucer—fact behind the fiction: weightlessness and the force of gravity.

On Thursdays at 7.05 p.m. the well-known *Superman* adventures will be serialised and at 10.00 p.m. each week over Birmingham *and* London popular science writer Maurice Goldsmith will conduct a Science Fiction Magazine designed for the whole family in "Meet The Professor."

Commencing in our next issue we shall publish a regular feature giving details of all such programmes for the month ahead.




Mr. Angus Wilson in his introduction to **A.D. 2500** (Heinemann, 15/-) a collection of the twenty-one prize-winning stories submitted for the 1954 *Observer* short story competition, adopts a somewhat condescending attitude to science-fiction in general. He admits that " science fiction is richest in plot, narrative, descriptive fantasy and social irony of a general or philosophical kind," but when he goes on to say that " it is poorest in character, psychological sensitivity, dialogue, and since by its nature it does not deal with the contemporary scene, it is completely deficient in the comedy of contemporary manners " I begin to sense a lack of discrimination in Mr. Wilson's own sampling of the science-fiction field.

Having previously allowed, very handsomely I thought coming from one whose alacrity to disclaim any " highbrow " connection is in itself suspect, that much science-fiction is written intelligently by intelligent people and has considerable merit, I feel that he is dividing his overall criticism unfairly. As in other arts (including the modern mainstream novels of contemporary manners) the top level of quality in science-fiction is supported by a host of less successful attempts. This is, unfortunately, a common situation, and one must agree with Mr. Wilson that a better literary standard in increasing proportion in science-fiction is desirable. I heartily agree in sentiment—if not in method. For in defence of his ideas of how good science-fiction should be written he maintains that " the most marked difference between the writers of the stories in A.D. 2500 and the mass of professional stf. writers, *even the best*, (my italics) is that the centre of their interest is always individual and human." Not only is this untrue, but I found the evidence on behalf of the former disappointing, and the reason for the non-professional status of the A.D. 2500 contributors (for the most part) is fairly obvious.

Collectively this group of writers (representative perhaps of the two thousand odd entries, and bearing in mind, no doubt, if they were astute enough, the type of short story which has flourished before under the *Observer* benefice) decided to be different—at all costs. Their only limiting condition was a story length of 3,000 words and a setting in the year 2500 A.D. It is therefore essential not to compare

this book with other labelled science-fiction anthologies. Do not expect a recognizable form of science-fiction; the shackles of plausible scientific extrapolation are cast off, and quite rightly, any sociological, psychological or semantic norm of the 20th Century should be inadmissable allowing for the logical changes after half a millenium. Quite a difficult task, and one which very few of the winning competitors succeeded in accomplishing. From the tenor of these it is fairly obvious what the judges were looking for, and I would guess that among the also-rans there was probably quite a lot of better *science*-fiction. It is the attempts to constrict the science-fiction theme into " comedies of contemporary manners " that have achieved recognition in this volume.

Some are mere nauseating whimsy, other transplant present day moralities into variously predicted futures five hundred years hence. Some have beauty and feeling for the mystic of science-fantasy, such as Arthur Sellings' " The Mission " and D. A. C. Morrison's " Another Antigone." Social satirization or sinister totalitarian trends are popular, as in " Jackson Wong's Story," " The Case of Omega Smith," and " Spud Failure Definite," or best of all, " The Blond Kid." Humour has its place—whether parody (" Return of the Moon Men"), mock fable (" The Three Brothers "), irony (" The Place of the Tigress ") or a la Thorne Smith (" Hitch-Hike to Paradise "). Straight science-fiction is confined to " Alpha in Omega," and there is at least one straight steal from Bradbury's style (" The Machine That Was Lonely "). Three deal with survivals of modern moralities (" The Right Thing," " Voice from the Gallery," and " Venus and the Rabbit "). Three defy classification and although trying desperately for effect, fail by their own arty embellishment (" Walkabout," " The Shadow Play," and " Man Manifold "). Also there are a few individual pieces which stand out, like Brian Aldiss's " Not for an Age " or " The Atavists " and—to my mind the best in the book—the finely written and emotional " The Knitting." An interesting experiment, and certainly required reading for science-fiction readers.

The inevitable extension of labelling national beauty contests from " Miss America " (pinpointing the culprit in this hyperbole) to " Miss World " and finally " Miss Universe " has been eagerly snapped up as a story gimmick by authors in the past. And if I remember a certain cartoon correctly, it showed a suitable alien flapper, emblazoned " Miss Saturn," disconcerting the judges watching a line-up of Terran pulchritude at a " Miss Universe " contest. Charles Eric Maine, in **Crisis 2000** (Hodder & Stoughton, 10/6) takes this basic idea and proceeds to hack out what is charitably known as a potboiler. An open invitation by a rhetorically minded American Senator to

visit the " Festival of Earth " is accepted by the inhabitants of Saturn, who arrive in a flying saucer and set up an operational base on the constructional site of the Festival. Since the Festival is to commemorate the culmination of a thousand years of scientific achievement and man's greatness (this after three atomic wars !), the defensive methods of the Saturnians to cloak their activities are naturally misunderstood. Despite the opposition of the humanely minded Senator, a hidebound military, inexplicably personified in a most unpleasant Colonel, adopts a warlike attitude and attacks ineffectually, even with an atom bomb inadvertently released against the force barrier of the supposed invaders. Aiding and abetting in these unconvincing proceedings is a beautiful lady scientist (sic) whose affections for a fellow boffin are unreasonably transferred to a stupid and conceited F.B.I. agent. All ends nauseatingly well and the harmless " little winkles from the methane seas of Saturn " (who in fifty thousand years of dodging more voracious denizens of the Saturnian deeps, have managed to develop space travel, force fields, interplanetary radio-transmission of matter, and humanoid robot-hosts, likened in the form of the dear old Senator) are admitted into the universal fellowship of the Festival of Earth. Pity.

Next on the list comes a " remarkable first novel (which) brings to the school of scientific fantasy a questing mind and a maturity of style rare indeed in this type of writing." Thus the jacket blurb of Reed R. deRouen's **Split Image** (Allan Wingate, 11/6) which also claims this as " the first adventure of its publishers into the imaginative outer reaches of interstellar space. An adult, credible, yet fantastic story, it follows the strict concepts of genuine scientific thought, being based on that remarkable pronouncement of Fred Hoyle that there are over a million habitable planets, among which it can be arithmetically demonstrated that at least two must be almost identical."

I finished this profoundly interesting book completely baffled. The colourful Mr. de Rouen can certainly write well, and the treatment of the first half describing the launching of the first manned space rocket is refreshingly different. Credible and apparently scientifically accurate it also has some excellent characterisation and philosophy and a vividly descriptive love-affair. The author's questing mind—and a penchant for the subtle and semi-mystic—becomes evident in an interlude hinting at the identity of one character (a " Passing of the Third Floor Back " creation which does not quite come to fruition). Then at the second action climax when the rocket en route to the moon runs into a huge cloud of solar dust, the author's imagination really runs riot. The crew are horribly injured and awake to find themselves on a strange

planet called Dextar, evidently many light years away, to be completely renovated by robots who are the remnants of a long-dead civilization. Eventually they find themselves back in the repaired rocket approaching what appears to be Earth. They land successfully to find it is a duplicate of the Earth they had left, identical in all respects (including the circumstances of a similar rocket experiment) except for one thing. Here I got somewhat confused, but anyway the fact of two identical heroines on this new Earth helps obscurely to round off the story to the author's satisfaction —if not to the reader's. I repeat, it left me baffled, with the feeling that I had somehow failed to get the author's intended message.

The contribution to the American science-fiction book field by part-time journalist Jerry Sohl has been to date five original hard-cover novels of consistently mediocre stf.-suspense, of which the third and easily the worst, has unfortunately been chosen to mark his debut on the British book scene. **Costigan's Needle** (Grayson & Grayson, 10/6) tells the story of a peculiar invention — an interdimensional force field through which living tissue only will pass. But to where? In the experimental model an arm pushed through the eye of the

Needle (as it becomes known) seems to disappear and a cross-section is observable from the opposite side of the eye—an invaluable aid to medical research in its various applications. The inventor contacts an electronics corporation, and for little more reason than to enable the author to make a whole novel out of the idea (or is there a better reason?) a million dollar development is started to build a bigger Needle for a man to go through. This happens, of course, and several characters disappear, convincing a certain religious fanatic that such sacriligious tampering needs fixing by a little sabotage. As a result the machine's power shorts and the sudden enormously exaggerated effect of the Needle encompasses a couple of street blocks and nearly four hundred people who find themselves, interestingly unclothed and minus details like dental fittings, in an empty and virgin world which may or may not be our own Earth at some place or time or other. The scene is now set for the dreary rehabilitation of these survivors to build up their little community to the extent of knocking together after ten years another Needle in an attempt to get back to their own world. Weaker themes than this, of course, have been successful; my criticism is that the quality of writing and the wooden characters and inept dialogue are insufficient to carry out the author's intentions.

On a similarly low level, John Taine's **G.O.G. 666** (Rich & Cowan, 10/6d) is science-fiction of the most boring and tasteless sort. The plot concerns three Communist scientists on an official visit to America, accompanied by a huge ape-like assistant. They are secretly after a serum which will prevent pulmonary disease in their new slave-labour recruits (actually creatures born of female gorrillas, artificially inseminated from humans). GOG, the hulking assistant, is one of these pitiful creatures. U.S. Intelligence suspects skullduggery and enlists an American plant geneticist for espionage work. The Russian villains and the American hero and heroine (inevitably comely lady scientist) are clearly cut black and white, mouthing stock naive dialogue. The story ploughs slowly through to its incredibly banal ending, and I sadly felt that this literary lapse of a once great fantasy author should have suffered the oblivion it deserved, had it not been for the over-enthusiasm of a specialist science-fiction press in America recently.

The one brightly gleaming experience this month is Poul Anderson's supremely effective **Brain Wave** (Heinemann, 12/6d). Here the author, one of America's newest young talents, takes an intriguing concept—the sudden releasing of the brake on neural responses in all Earthly animal life (including man) caused by our planet moving out of a blanketing force field which has affected it for millions of years.

Continued on Page 128

**GALAXY**
**GALAXY**
**GALAXY**

A really BIG anthology, selected by H. L. Gold from his own modern-slant magazine, is **THE GALAXY SCIENCE FICTION OMNIBUS.** Contributors include-amongst many others-Asimov, Wyndham, Leiber, McIntosh, Simak, Sturgeon and Clifton. **13/6**

**BLEI & DI**
**BLEI & DI**
**BLEI & DI**

The great editorial team of Bleiler and Dikty scores another triumph with **THE YEARS BEST SCIENCE FICTION NOVELS: Second Series.** Speculation, humour aud excitement are nicely blended in work by Leinster, Robinson, Foster Crossen and Gold-and-Krepps. **10/6**

**TIME JUMP**
**TIME JUMP**
**TIME JUMP**

Often S/F novels sag between a "gimmick" opening and a "will-he-make-it" ending. Jerry Sohl's people in **COSTIGAN'S NEEDLE** are convincing, so when they go through its eye and disappear we really WANT to know why-and where. **10/6**

**GRAYSON**
**GRAYSON**
**GRAYSON**

The above are only a few of the Science Fiction titles published by **GRAYSON AND GRAYSON** of 16 Maddox Street, London. Our list is not huge: like you we are only interested in the best.

I.Q.s jump to a norm of 500, and while former morons become intelligent by previous standards, the lower forms of animal life start climbing the bottom rungs of human intelligence. On this premise, Poul Anderson weaves a powerful and entertaining story. To do the theme full justice the scope of the novel should have been enlarged four-fold and built into a more emotional climax in perhaps surer hands than Anderson's. Then I think it would have been one of the finest science fiction books of our time. As it is, in two hundred pages, the author carefully and ingeniously works out the probable effects of the " brain wave "—the disruption of metropolitan life and its rescue by the new brilliant minds, the calamity in rural areas with the revolt of farm animals, the rising of the coloured peoples against the white oppressors —and scattered incidents all over the world. Then the rebuilding of a new civilization with its incredible science and new ways of speech communications, the building of the first star ship and its fantastic voyage, the subversive plot to synthesize the old order of dimmed thinking in a misguided (or was it ?) attempt to avoid the unknown but possibly glorious future of unleashed mankind. A tender emotional ending, and a serene feeling of magic entertainment is the reward for the reader. *Brain Wave* is a convincing, humanly realistic example of the wonders of the science fiction novel at its literary and thought-provoking best. Highly recommended.

*Leslie Flood.*

# American "Midwestcon" Convention

For the information of our North American readers the 7th Annual Midwestcon will be held at the North Plaza Hotel, 7911 Reading Road, Cincinatti 37, Ohio, on May 26th and 27th. Not to be confused with the annual National Convention in USA this smaller meeting is considered to be a preliminary warming-up session in readiness for the World Convention and is no longer a regional affair, professionals and amateurs attending from many States and Canada.

Reservations should be made direct with the hotel but readers desiring further information should write to: Don Ford 129 Maple Avenue, Sharonville, Ohio.