

# Galaxy<sup>®</sup>

MAGAZINE

SCIENCE FICTION

JULY 1969

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by

**FRANK HERBERT**

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**THE CITY THAT  
WAS THE WORLD**

by

**JAMES BLISH**

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# 1968

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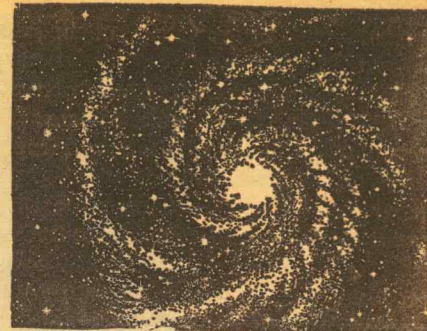
And April . . . well, save April for next ad, but remember:  
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# Galaxy

## MAGAZINE

ALL STORIES NEW

Galaxy is published in French, German, Italian, Japanese and Spanish. The U. S. Edition is published in Braille and Living Tape.



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Cover by ADKINS from  
**THE CITY THAT WAS THE WORLD**

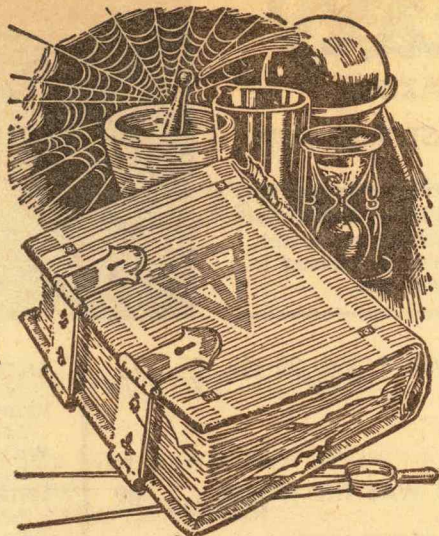
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Secrets  
entrusted  
to a  
few

## The Unpublished Facts of Life

THERE are some things that cannot be generally told — *things you ought to know*. Great truths are dangerous to some — but factors for *personal power and accomplishment* in the hands of those who understand them. Behind the tales of the miracles and mysteries of the ancients, lie centuries of their secret probing into nature's laws — their amazing discoveries of the *hidden processes of man's mind, and the mastery of life's problems*. Once shrouded in mystery to avoid their destruction by mass fear and ignorance, these facts remain a useful heritage for the thousands of men and women who privately use them in their homes today.

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## SF IN THE SUN

Almost threaded on the Tropic of Capricorn, most cosmopolitan of the world's cities in the Tropic Zone, Rio de Janeiro is a city of high-rise apartments and high-flying ambitions. In March of this year it spread its hospitality to an International Film Festival — not sf films in particular, just movies in general — and as an extra added attraction it threw in one of history's most lavish science-fiction conferences. Robert Heinlein came in from his new California home, Damon Knight from Florida, John Brunner from London. Fritz Lang was there, a lot older than when he was producing such early sf film classics as *Metropolis* and *The Girl in the Moon*, and nearly blind, but still vital, alert and ready to plan for the future. Every morning for a solid week there was a science-fiction symposium. Brian Aldiss told the audience that there was no such thing as science fiction, really, it being only a sort of label astute publishers invented for a product; Alfred Bester described the writing process; A. E. Van Vogt explained the reasoning behind his inventive plots. Robert Bloch and Robert Sheckley, Poul

Anderson and James Ballard, Harry Harrison and Forrest J. Ackerman — they were all there and participating, with many more, your editor included.

It was quite an occasion. In the afternoons there was the beach of Copacabana, just across the road. In the evenings were cocktail parties, receptions, midnight suppers at embassies. And in, at and between all the events was the endless serial debate that goes on wherever sf writers meet.

What do sf writers talk about at these events? Why, mostly they talk about sf, how to do it, why its worth doing, ways of making it better. The New Wave and the Old Reliables meet, and spar for a while, and compare notes and discover that they are, after all, not that far apart . . . a discovery which sometimes surprises some of them very much.

We all owe Cariocas thanks. Not just for hospitality, which was extreme, but even more for the chance for sf writers from half the world to sit down and think for a week about the things that unite them, rather than the things that keep them apart.

—FREDERIK POHL

# DUNE MESSIAH

by FRANK HERBERT

Illustrated by GAUGHAN

*They had forced godhead on Muad'dib.  
Now they fought to destroy him. And  
in all the plethora of futures he saw  
no place for Paul Atrides, the man!*

## PRECEDE

The leaders of the Qizarate, whose church was founded in Muad'dib's name, saw their Jihad ending. In just twelve standard years, the religious war of the Jihad had created an enormous wave of passive hate and active opposition. There was the obvious fact, as well, that religious colonialism, having annexed planet

## THE WEIRD OF DUNE

Dune was an arid planet of great deserts where life seemed almost impossible. The semi-nomadic Fremen based all their customs on water scarcity and faced the deserts in stillsuits which recovered all moisture. Gigantic sand worms and savage storms were a constant menace to them. Dune's only resource was the *melange*, an addictive drug produced by the worms. This "spice" aided longevity and gave an adept some ability to foresee the future.

PAUL ATRIDES was the son of Dune's ruler. When his father was killed in a war with the Harkonnen rival nobility, Paul fled into the desert, together with his friend and teacher, DUNCAN IDAHO, and his pregnant mother, the LADY JESSICA. She was also an adept, trained by the Bene Gesserit — a female order devoted to mental arts and the control of genetic lines. According to them, Paul was of a line that was to give them a "kwisatz haderach," a sort of messiah for the future.

Paul grew and earned acceptance by the Fremen and even learned to control and ride the sand worms. In one of their rituals, he was forced to take a massive overdose of spice; this produced a permanent change in him, so that he could gain visions of the future — or futures. His mother also took an overdose, trying to control it by Bene Gesserit methods. As a result Paul's sister, ALIA, was made aware of all her mother's knowledge while still in the womb and was fully cognitive at birth.

Paul fought his way to the leadership of the Fremen. He mated with a Fremen girl, CHANI, and adopted most of their customs. But his Atrides mind had been trained to disciplines unknown to them, and he gave them an organization and mission they had not known before. He also planned to change the climate of Dune and bring water to the planet.

Before his plans were fully developed, his hereditary enemy, the Harkonnen rulers, struck at Dune. With only the Fremen to oppose them, Paul struck back. In spite of their supposedly invincible Sardaukar soldiers, Paul's forces overcame them in a great battle. During this war, Duncan Idaho was killed.

In the treaty Paul imposed, he gained a power base that would enable them to begin carving out a star empire, with Dune as its base. He also took the Harkonnen heir, PRINCESS IRULAN, as his consort, though he refused to consummate the marriage, remaining true to Chani.

In the ensuing twelve years, he has created his empire. But now all the ancient power groups are beginning to unite and conspire against Muad'dib, as he is called, and against the future his visions have shown him.

after planet in that short span of years, was running out of new real estate to subdue.

Into this downward spiral came the ancient quasi-religious sisterhood of the Bene Gesserit, the Spacing Guild with its virtual monopoly on interstellar transport, and the scientific amoralists of the Bene Tleilax, all united in a plot to overthrow the Emperor Paul-Muad'dib, ne-Atreides.

The Qizarate cabal, led by Korba the Panygerist, fastened upon this plot as an ideal opportunity to stir up the sort of chaos from which they might gain new impetus. This was eminently practical a move of Judgment Strategy which might have originated in the old training manual written by Paul-Muad'dib's father, the Duke Leto. It called first for the creation of a martyr, Muad'dib himself. Next, it sought a universal object of hate, choosing Muad'dib's concubine, the Lady Chani. The plan was to saddle her with blame for Muad'dib's death.

Taken as a whole, this was a much better plan than that of the Guild-Tleilaxu-Bene Gesserit plotters and their allies among the Great Families of the Landsraad. This analysis, therefore, will examine in some detail where the Qizarate's plan succeeded and where it fell short.

— Analysis of History: Muad'dib by Bronso of Ix

## I

*There exists no separation between gods and men; one blends softly casual into the other.*

—Proverbs of Muad'dib

Despite the murderous nature of the plot he hoped to devise, the thoughts of Scytale, the Tleilaxu face dancer, returned again and again to rueful compassion.

*I shall regret causing death and misery to Muad'dib,* he told himself.

He kept this benignity carefully hidden from his fellow conspirators. Such feelings told him, though, that he found it easier to identify with the victim than with the attackers — a thing characteristic of the Tleilaxu.

Scytale stood in bemused silence somewhat apart from the others. The argument about psychic poison had been going on for some time now. It was energetic and vehement, but polite in that blindly compulsive way adepts of the Great Schools always adopted for matters close to their dogma.

"When you think you have him skewered, right then you'll find him unwounded!"

That was the old Reverend Mother of the Bene Gesserit, Gaius Helen Mohiam, their hostess

GALAXY

here on Wallach IX. She was a black robed stick figure, a witch crone seated in a floater chair at Scytale's left. Her aba hood had been thrown back to expose a leathery face beneath silver hair. Deeply pocketed eyes stared out of skull-mask features.

They were using a *mirabhassa* language, honed phalange consonants and jointed vowels. It was an instrument for conveying fine emotional subtleties. Edric, the Guild Steersman, replied to the Reverend Mother now with a vocal curtsy contained in a sneer — a lovely touch of disdainful politeness.

Scytale looked at the Guild envoy. Edric swam in a container of orange gas only a few paces away. His container sat in the center of the transparent dome which the Bene Gesserit had built for this meeting. The Guildsman was an elongated figure, vaguely humanoid with finned feet and hugely fanned membranous hands — a fish in a strange sea. His tank's vents emitted a pale orange cloud rich with the smell of the geriatric spice, *melange*.

"If we go on this way, we'll die of stupidity!"

That was the fourth person present — the *potential* member of the conspiracy — Princess Iru-lan, wife (*but not mate*, Scytale reminded himself) of their mutual foe. She stood at a corner DUNE MESSIAH

 **Ballantine**  
Books

No June *Galaxy*, alack. But the month was not completely dry. We published one of the most enchanting of our adult fantasies — Lord Dunsany's THE KING OF ELFLAND'S DAUGHTER. What an astonishingly powerful writer. We'll be doing a group of his shorts later; likewise Lovecraft, whose fantasy writing has been taken up by the psychedelic in-group, which is okay with us, too. The more the merrier.

Also in June we had the great pleasure of publishing our first by Dave Van Arnam — STARMIND — a smasher, really great. And for the Flipper fans, the third in that remarkable aquatic series, DESTINY AND THE DOLPHINS, by Roy Meyers.

June also saw the reissue of some of our nuggets from the past. One of Fritz Leiber's many Hugo Award winners, THE WANDERER, a richly satisfying book, and a much earlier, very funny jape on the publishing industry, writers, and creativity in general, titled THE SILVER EGGHEADS (the older ones among you may remember the original cover by Dick Powers which depicted a bare-breasted robot carrying a certain famous publisher in her arms.) Then we have Ray Bradbury's FAHRENHEIT, and also OCTOBER COUNTRY, and

John Wyndham's RE-BIRTH and OUT OF THE DEEPS.

July sees the introduction of two completely new writers for our list — and for the U.S. — Richard Cowper and Vincent King. You may be familiar with their work if you follow British magazines, but these are first novels on this side of the water — namely, Cowper's BREAKTHROUGH, a strange, almost occult tale of telepathic occupation. In the old days it was called possession, but this story is very much of our time and tensely exciting. All the more so since one gets to like the "other" people as well as one likes the "now" people.

Vincent King's LIGHT A LAST CANDLE is an incredibly jam-packed novel. Jam-packed with ideas, physical adventures, inventiveness, characters, you name it. We first began to realize just how much there was in it when we attempted a short precis to let others in the office know what we had. A precis pleases nobody. The only thing to do is read the book.

In July also, (my, this is a rich haul) we have five by Frederik Pohl and C.M. Kornbluth and one by Fred. The classic SPACE MERCHANTS, backed up by GLADIATOR-AT-LAW, SEARCH THE SKY, WOLFBANE, THE WONDER EFFECT and ALTERNATING CURRENTS.

And finally, as Lin Carter so aptly puts it, "the clean, morning world of William Morris." THE WOOD BEYOND THE WORLD. Give yourself to it. And a happy summer to all.

BB

of Edric's tank, a tall blonde beauty, splendid in a robe of blue whale fur and matching hat. Gold buttons glittered at her ears. She carried herself with an aristocrat's hauteur, but something in the absorbed smoothness of her features betrayed the controls of her Bene-Gesserit background.

Scytale's mind turned from nuances of language and faces to nuances of location. All around the dome lay hills mangy with melting snow which reflected mottled wet blueness from the small blue-white sun hanging at the meridian.

*Why this particular place?* Scytale wondered. The Bene Gesserit seldom did anything casually. Take the dome's open plan: a more conventional and confining space might have inflicted the Guildsman with claustrophobic nervousness. Inhibitions in his psyche were those of birth and life off-planet in open space.

To have built this place especially for Edric, though — what a sharp finger that pointed at his weakness. What here, Scytale wondered, was aimed at me?

"Have you nothing to say for yourself, Scytale?" the Reverend Mother demanded.

"You wish to draw me into this fool's fight?" Scytale asked. "Very well. We're dealing with a potential messiah. You don't

launch a frontal attack upon such a one. Martyrdom would defeat us."

They all stared at him.

"You think that's the only danger?" the Reverend Mother demanded, voice wheezing.

Scytale shrugged. He had chosen a bland, round-faced appearance for this meeting, jolly features and vapid full lips, the body of a bloated dumpling. It occurred to him now, as he studied his fellow conspirators, that he had made an ideal choice — out of instinct, perhaps. He alone in this group could manipulate fleshly appearance across a wide spectrum of bodily shapes and features. He was the human chameleon, a face dancer, and the shape he wore now invited others to judge him too lightly.

"Well?" the Reverend Mother pressed.

"I was enjoying the silence," Scytale said. "Our hostilities are better left unvoiced."

The Reverend Mother drew back, and Scytale saw her reassessing him. They were all products of profound prana-bindu training, capable of muscle and nerve control that few humans ever achieved. But Scytale, a face dancer, had muscles and nerve linkages the others didn't even possess plus a special quality of *sympatico*, a mimic's insight with which he could put on the psyche DUNE MESSIAH

of another as well as the other's appearance.

Scytale gave her enough time to complete the reassessment, then said: "Poison!" He uttered the word with the atonals which he said he alone understood its secret meaning.

The Guildsman stirred and his voice rolled from the glittering speaker globe which orbited a corner of his tank above Irulan. "We're discussing *psychic* poison, not a physical one."

Scytale laughed. Mirabhasa laughter could flay an opponent and he held nothing back now.

Irulan smiled in appreciation, but the corners of the Reverend Mother's eyes revealed a faint hint of anger.

"Stop that!" Mohiam rasped.

Scytale stopped, but he had their attention now; Edric was in a silent rage, the Reverend Mother alert in her anger, Irulan amused but puzzled.

"Our friend Edric suggests," Scytale said, "that a pair of Bene Gesserit witches trained in all their subtle ways have not learned the true uses of deception."

Mohiam turned to stare out at the cold hills of her Bene Gesserit homeworld. She was beginning to see the vital thing here, Scytale realized. That was good. Irulan, though, was another matter.

"Are you one of us or not, Scytale?" Edric asked. He stared out of tiny rodent eyes.

"My allegiance is not the issue," Scytale said. He kept his attention on Irulan. "You are wondering, Princess, if this was why you came all those parsecs, risked so much?"

She nodded agreement.

"Was it to bandy platitudes with a humanoid fish or dispute with a fat Tleilaxu face dancer?" Scytale asked.

She stepped away from Edric's tank, shaking her head in annoyance at the thick odor of *melange*.

Edric took this moment to pop a *melange* pill into his mouth. He ate the spice and breathed it and no doubt, drank it, Scytale noted. Understandable, because the spice heightened a steersman's prescience, gave him the power to guide a Guild heighliner across space at translight speeds. With spice awareness he found that line of the ship's future which avoided peril. Edric smelled another kind of peril now, but his crutch of prescience might not find it.

"I think it was a mistake for me to come here," Irulan said.

The Reverend Mother turned, opened her eyes and closed them, a curiously reptilian gesture.

Scytale shifted his gaze from Irulan to the tank, inviting the Princess to share his viewpoint.

She would, Scytale knew, see Edric as a repellent figure: the bold stare, those monstrous feet and hands moving softly in the gas, the smoky swirling of orange eddies around him. She would wonder about his sex habits, thinking how odd it would be to mate with such a one. Even the field force generator which recreated for Edric the weightlessness of space would set him apart from her now.

"Princess," Scytale said, "because of Edric here, your husband's oracular sight cannot stumble upon certain incidents, including this one . . . presumably."

"Presumably," Irulan said.

Eyes closed, the Reverend Mother nodded. "The phenomenon of prescience is poorly understood even by its initiates," she said.

"I am a full Guild navigator and have the Power," Edric said.

Again, the Reverend Mother opened her eyes. This time, she stared at the face dancer, eyes probing with that peculiar Bene Gesserit intensity. She was weighing minutiae.

"No, Reverend Mother," Scytale murmured, "I am not as simple as I appeared."

"We don't understand this Power of second sight," Irulan said. "There's a point. Edric says my husband cannot see, know or

predict what happens within the sphere of a navigator's influence. But how far does that influence extend?"

"There are people and things in our universe which I know only by their effects," Edric said, his fish mouth held in a thin line. "I know they have been here . . . there . . . somewhere. As water creatures stir up the currents in their passage, so the prescient stir up Time. I have seen where your husband has been; never have I seen him nor the people who truly share his aims and loyalties. This is the concealment which an adept gives to those who are his."

"Irulan is not yours," Scytale said. And he looked sidelong at the Princess.

"We all know why the conspiracy must be conducted only in my presence," Edric said.

Using the voice mode for describing a machine, Irulan said: "You have your uses, apparently."

*She sees him now for what he is, Scytale thought. Good!*

"The future is a thing to be shaped," Scytale said. "Hold that thought, Princess."

Irulan glanced at the face dancer.

"People who share Paul's aims and loyalties," she said. "Certain of his Fremmen legionaires, then, DUNE MESSIAH

wear his cloak. I have seen him prophesy for them, heard their cries of adulation for their Mahdi, their Muad'dib."

*It has occurred to her, Scytale thought, that she is on trial here, that a judgment remains to be made which could preserve her or destroy her. She sees the trap we set for her.*

Momentarily, Scytale's gaze locked with that of the Reverend Mother, and he experienced the odd realization that they had shared this thought about Irulan. The Bene Gesserit, of course, had briefed their Princess, primed her with the *lie adroit*. But the moment always came when a Bene Gesserit must trust her own training and instincts.

"Princess, I know what it is you most desire from the Emperor," Edric said.

"Who does not know it?" Irulan asked.

"You wish to be the founding mother of the royal dynasty," Edric said, as though he had not heard her. "Unless you join us, that will never happen. Take my oracular word on it. The Emperor married you for political reasons, but you'll never share his bed."

"So the oracle is also a voyeur," Irulan sneered.

"The Emperor is more firmly wedded to his Fremmen concubine than he is to you!" Edric snapped.

"And she gives him no heir," Irulan said.

"Reason is the first victim of strong emotion," Scytale murmured. He sensed the outpouring of Irulan's anger, saw his admonition take effect.

"She gives him no heir," Irulan said, her voice measuring out controlled calmness, "because I am secretly administering a contraceptive. Is that the sort of admission you wanted to hear from me?"

"It would not be a thing for the Emperor to discover," Edric said, smiling.

"I have lies ready for him," Irulan said. "He may have truth-sense, but some lies are easier to believe than the truth."

"You must make the choice, Princess," Scytale said, "but understand what it is that protects you."

"Paul is fair with me," she said. "I sit in his Council."

"In the twelve years you've been his Princess Consort," Edric asked, "has he shown you the slightest warmth?"

Irulan shook her head.

"He deposed your father with his infamous Fremen horde, married you to fix his claim to the throne, yet he has never crowned you Empress," Edric said.

"Edric tries to sway you with emotion, Princess," Scytale said. "Is that not interesting?"

She glanced at the face dancer, saw the bold smile on his features, answered it with raised eyebrows. She was fully aware now, Scytale saw, that if she left this conference under Edric's sway, part of their plot, these moments might be concealed from Paul's oracular vision. If she withheld commitment, though...

"Does it seem to you, Princess," Scytale asked, "that Edric holds undue sway in our conspiracy?"

"I've already agreed," Edric said, "that I'll defer to the best judgment offered in our councils."

"And who chooses the best judgment?" Scytale asked.

"Do you wish the Princess to leave here without joining us?"

"He wishes her commitment to be a real one," the Reverend Mother growled. "There should be no trickery between us."

Irulan, Scytale saw, had relaxed into a thinking posture, hands concealed in the sleeves of her robe. She would be thinking now of the bait Edric had offered: *to found a royal dynasty!* She would be wondering what scheme the conspirators had provided to protect themselves from her. She would be weighing many things.

"Scytale," Irulan said presently, "it is said that you Tleilaxu have an odd system of honor: your victims must always have a means of escape."





"If they can but find it," Scytale agreed.

"Am I a victim?" Irulan asked.

A burst of laughter escaped Scytale.

The Reverend Mother snorted.

"Princess," Edric said, his voice softly persuasive, "you already are one of us, have no fear of that. Do not spy upon the Imperial Household for your Bene Gesserit superiors?"

"Paul knows I report to my teachers," she said.

"But don't you give them the material for strong propaganda against your Emperor?" Edric asked.

Not 'our' Emperor, Scytale noted. *Your Emperor. Irulan is too much the Bene Gesserit to miss that slip.*

"The question is one of powers and how they may be used," Scytale said, moving closer to the Guildman's tank. "We of the Tleilaxu believe that in all the universe there is only the insatiable appetite of matter, that energy is the only true *solid*. And energy learns. Hear me well, Princess: energy learns. This, we call power."

"You haven't convinced me we can defeat the Emperor," Irulan said.

"We haven't even convinced ourselves," Scytale said.

"Everywhere we turn," Irulan said, "his power confronts us. He's

the *kwisatz haderach*, the one who can be many places at once. He's the Mahdi whose merest whim is absolute command to his Qizarate missionaries. He's the *mentat* whose occupational mind surpasses the greatest ancient computers. He is Muad'dib whose orders to the Fremem Legions depopulate planets. He possesses oracular vision which sees into the future. He had that gene pattern which we Bene Gesserits covet for . . ."

"We know his attributes," the Reverend Mother interrupted. "And we know the abomination, his sister Alia, possesses this gene pattern. But they're also humans, both of them. Thus they have weaknesses."

"And where are those human weaknesses?" the face dancer asked. "Shall we search for them in the religious arm of his Jihad? Can the Emperor's Qizara be turned against him? What about the civil authority of the Great Houses? Can the Landsraad Congress do more than raise a verbal clamor?"

I suggest the Combine Honnete Ober Advancer Mercantiles," Edric said, turning in his tank. "CHOAM is business and business follows profits."

"Or perhaps the Emperor's mother," Scytale said. "The Lady Jessica, I understand remains on Caladon, but is in frequent communication with her son."

"That traitorous witch," Mohian said, voice level. "Would I might disown my own hands which trained her."

"Our conspiracy requires a lever," Scytale said.

"We are more than conspirators," the Reverend Mother countered.

"Ah, yes," Scytale agreed. "We are energetic and we learn quickly. This makes us the one true hope, the certain salvation of humankind." He spoke in the speech mode for absolute conviction, which was perhaps the ultimate sneer coming, as it did, from a Tleilaxu.

Only the Reverend Mother appeared to understand the subtlety. "Why?" she asked, directing the question at Scytale.

Before the face dancer could answer, Edric cleared his throat and said: "Let us not bandy philosophical nonsense. Every question can be boiled down to the one: 'Why is there anything?', Every religious, business and governmental question has the single derivative: 'Who will exercise the power?' Alliances, combines, complexes, they all chase mirages unless they go for the power. All else is nonsense, as most thinking beings come to realize."

Scytale shrugged, a gesture designed solely for the Reverend Mother. Edric had answered her

question for him. The pontificating fool was their major weakness. To make sure the Reverend Mother understood, Scytale said: "Listening carefully to the teacher, one acquires an education."

The Reverend Mother nodded slowly.

"Princess," Edric said, "make your choice. You have been chosen as an instrument of destiny, the very finest . . ."

"Save your praise for those who can be swayed by it," Irulan said. "Earlier, you mentioned a ghost, a revenant with which we may contaminate the Emperor. Explain this."

"The Atrides will defeat himself!" Edric crowed.

"Stop talking riddles!" Irulan snapped. "What is this ghost?"

"A very unusual ghost," Edric said. "It has a body and a name. The body — that's the flesh of a renowned swordmaster known as Duncan Idaho. The name . . ."

"Idaho's dead," Irulan said. "Paul has mourned the loss often in my presence. He saw Idaho killed by my father's Sardaukar."

"Even in defeat," Edric said, "your father's Sardaukar did not abandon wisdom. Let us suppose a wise Sardaukar commander recognized the swordmaster in a corpse his men had slain. What then? There exist uses for such flesh and training . . . if one acts swiftly."

"A Tleilaxu gholā," Irulan whispered, looking sideways at Scytale.

Scytale, observing her attention, exercised his face dancer powers — shape flowing into shape moving and readjusting. Presently, a slender man stood before her. The face remained somewhat round, but darker and with slightly flattened features. High cheekbones formed shelves for eyes with definite epicanthic folds. The hair was black and unruly.

"A gholā of this appearance," Edric said, pointing to Scytale.

"Or merely another face dancer?" Irulan asked.

"No face dancer," Edric said. "A face dancer risks exposure under prolonged surveillance. No, let us assume that our wise Sardaukar commander had Idaho's corpse preserved for the axlotl tanks. Why not? This corpse held the flesh and nerves of one of the finest swordsmen in history, an adviser to the Atreides, a military genius. What a waste to lose all that training and ability when it might be revived as an instructor for the Sardaukar."

"I heard not a whisper of this and I was one of my father's confidants," Irulan said.

"Ah, but your father was a defeated man and within a few hours you had been sold to the new Emperor," Edric said.

"Was it done?" she demanded.

With a maddening air of complacency, Edric said: "Let us presume that our wise Sardaukar commander, knowing the need for speed, immediately sent the preserved flesh of Idaho to the Bene Tleilax. Let us suppose further that the commander and his men died before conveying this information to your father — who couldn't have made much use of it anyway. There would remain then a physical fact, a bit of flesh which had been sent off to the Tleilaxu. There was only one way for it to be sent of course, on a heighliner. We of the Guild naturally know every cargo we transport. Learning of this one, would we not think it additional wisdom to purchase the gholā as a gift befitting an Emperor?"

"You've done it then," Irulan said.

Scytale, who had resumed his roly-poly first appearance, said: "As our long-winded friend indicates, we've done it."

"How has Idaho been conditioned?" Irulan asked.

"Idaho?" Edric asked, looking at the Tleilaxu. "Do you know of an Idaho, Scytale?"

"We sold you a creature called Hayt," Scytale said.

"Ah, yes — Hayt," Edric said. "Why did you sell him to us?"

"Because we once bred a *kwi-*

*satz haderach* of our own," Scytale said.

With a quick movement of her old head, the Reverend Mother looked up at him. "You didn't tell us that!" she accused.

"You didn't ask," Scytale said.

"How did you overcome your *kwisatz haderach*?" Irulan asked.

"A creature who has spent his life creating one particular representation of his selfdom will die rather than become the antithesis of that representation," Scytale said.

"I do not understand," Edric ventured.

"He killed himself," the Reverend Mother growled.

"Follow me well, Reverend Mother," Scytale warned, using a voice mode which said: "You are not a sex object, have never been a sex object, cannot be a sex object."

The Tleilaxu waited for the blatant emphasis to sink in. She must not mistake his intent. Realization must pass through anger into awareness that the Tleilaxu certainly could not make such an accusation, knowing as he must the breeding requirements of the Sisterhood. His words though, contained a gutter insult, completely out of character for Tleilaxu.

Swiftly, using the *mirabhāsa* placative mode, Edric tried to smooth over the moment. "Scy-

tale, you told us you sold Hayt because you shared a desire on how to use him."

"Edric, you must remain silent until I give you permission to speak," Scytale said. And as the Guildsman started to protest, the Reverend Mother snapped: "Shut up, Edric!"

The Guildsman drew back into his tank in flailing agitation.

"Our own transient motions aren't pertinent to a solution of the mutual problem," Scytale said. "They cloud reasoning because the only relevant emotion is the basic fear which brought us to this meeting."

"We understand," Irulan said, glancing at the Reverend Mother.

"You must see the dangerous limitations of our shield," Scytale said. "The oracle cannot chance upon what it cannot understand."

"You are devious, Scytale," Irulan said.

*How devious she must not guess,* Scytale thought. *When this is done, we will possess a kwisatz haderach we can control. These others will possess nothing.*

"What was the origin of your *kwisatz haderach*?" the Reverend Mother asked.

"We've dabbled in curious blue essences," Scytale said. "Pure good and pure evil. A pure villain

who delights only in creating pain and terror can be quite educational."

"The old Baron Harkonnen, our Emperor's maternal grandfather, was he a Tleilaxu creation?" Irulan asked.

"Not one of ours," Scytale said. "But then nature often produces creations as deadly as ours. We merely produce them under conditions where we can study them."

"I will not be passed by and treated this way!" Edric protested. "Who is it hides this meeting from . . ."

"You see?" Scytale asked. "Whose best judgment conceals us? What judgment?"

"I wish to discuss our mode of giving Hayt to the Emperor," Edric insisted. "It's my understanding that Hayt reflects the old morality that the Atreides learned on his birthworld. Hayt is supposed to make it easy for the Emperor to enlarge his moral nature, to delineate the positive-negative elements of life and religion."

Scytale smiled, passing a benign gaze over his companions. They were as he'd been led to expect. The old Reverend Mother wielded her emotions like a scythe. Irulan had been well trained for a task at which she had failed, a flawed Bene Gesserit creation. Edric was no more (and no less) than the magician's hand:

he might conceal and distract. For now, Edric relapsed into sullen silence as the others ignored him.

"Do I understand that this Hayt is intended to poison Paul's psyche?" Irulan asked.

"More or less," Scytale said. "And what of the Qizarate?" Irulan asked.

"It requires only the slightest shift in emphasis, a glissade of the emotions, to transform envy into enmity," Scytale said.

"And CHOAM?" Irulan asked. "They will rally round profit," Scytale said.

"What of the other power groups?"

"One invokes the name of government," Scytale said. "We will annex the less powerful in the name of morality and progress. Our opposition will die of its own entanglements."

"Alia, too?"

"Hayt is a multi-purpose ghola," Scytale said. "The Emperor's sister is of an age when she can be distracted by a charming male designed for that purpose. She will be attracted by his maleness and by his abilities as a *mentat*."

Mohiam allowed her old eyes to go wide in surprise. "The ghola's a *mentat*? That's a dangerous move."

"To be accurate," Irulan said, "a *mentat* must have accurate data. What if Paul asks him to

define the purpose behind our gift?"

"Hayt will tell the truth," Scytale said. "It makes no difference."

"So you leave an escape door open for Paul," Irulan said.

"A *mentat*!" Mohiam muttered.

Scytale glanced at the old Reverend Mother, seeing the ancient hates which colored her responses. From the days of the Butlerian Jihad when thinking machines had been wiped from most of the universe, computers had inspired distrust. Old emotions colored the human computer as well.

"I do not like the way you smile," Mohiam said abruptly, speaking in the truth mode as she glared up at Scytale.

In the same mode, Scytale said: "And I think less of what pleases you. But we must work together. We all see that." He glanced at the Guildsman. "Don't we, Edric?"

"You teach painful lessons," Edric said. "I presume you wished to make it plain that I must not assert myself against the combined judgments of my fellow conspirators."

"You see, he can be taught," Scytale said.

"I see other things as well," Edric growled. "The Atreides holds a monopoly on the spice.

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Without it I cannot probe the future. The Bene Gesserits lose their truthsense. We have stockpiles, but these are finite. *Melange* is a powerful coin."

"Our civilization has more than one coin," Scytale said. "Thus, the law of supply and demand fails."

"You think to steal the secret of it," Mohiam wheezed. "And him with a planet guarded by his mad Fremens?"

"The Fremens are civil, educated and ignorant," Scytale said. "They're not mad. They're trained to believe, not to know. Belief can be manipulated. Only knowledge is dangerous."

"But will I be left with something to father a royal dynasty?" Irulan asked.

They all heard the commitment in her voice, but only Edric smiled at it.

"Something," Scytale said. "Something."

"It means the end of this Atreides as a ruling force," Edric said.

"I should imagine that others less gifted as oracles have made that prediction," Scytale said. "For them, *mektub al mellah*, as the Fremens say."

"The thing was written with salt," Irulan translated.

As she spoke, Scytale recognized what the Bene Gesserit had arrayed here for him — a beautiful and intelligent female who

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could never be his. *Ah well*, he thought, *perhaps I'll copy her for another.*

## II

The streets had been ankle deep in sand blown over the Shield Wall on the stratus wind. Foot traffic had churned it into choking dust which clogged stillsuit filters. He could smell the dust even now despite a blower cleaning at the portals of his Keep. It was an odor full of desert memories.

*Other days . . . other dangers.*

Compared to those other days the peril in his lonely walks remained minor. But putting on a stillsuit, he put on the desert. The suit with all its apparatus for reclaiming his body's moisture, guided his thoughts in subtle ways, fixed his movements in a desert pattern. He became wild Fremmen. More than a disguise, the suit made of him a stranger to his city self. In the stillsuit, he abandoned security and put on the old skills of violence. Pilgrims and townfolk passed him then with eyes downcast. They left the wild ones strictly alone out of prudence. If the desert had a face for city folk, it was a Fremmen face concealed by a stillsuit's mouth-nose filters.

In truth, there existed now only the small danger that someone

from the old *sietch* days might mark him by his walk, by his odor or by his eyes. Even then, chances of meeting an enemy remained small.

A swish of door hangings and a wash of light broke his reverie. Chani entered bearing his coffee service on a platinum tray. Two slaved glowglobes followed her, darting to their positions: one at the head of their bed, one hovering beside her to light her work.

Chani moved with an ageless air of fragile power—so self-contained, so vulnerable. Something about the way she bent over the coffee service reminded him then of their first days. Her features remained darkly elfin, seemingly unmarked by their years — unless one examined the outer corners of her whiteless eyes, noting the lines there: “sandtracks,” the Fremmen of the desert called them.

Steam wafted from the pot as she lifted the lid by its Hagar emerald knob. He could tell the coffee wasn't yet ready by the way she replaced the lid. The pot — fluting silver female shape, pregnant — had come to him as a *ghanima*, a spoil of battle won when he'd slain the former owner in single combat. Jamis, that'd been the man's name . . . Jamis. What an odd immortality death had earned for Jamis. Knowing death to be inevitable, had Jamis

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carried that particular one in his mind?

Chani put out cups: blue pottery squatting like attendants beneath the immense pot. There were three cups, one for each drinker and one for all the former owners.

“It'll only be a moment,” she said.

She looked at him then, and Paul wondered how he appeared in her eyes. Was he yet the exotic offworlder, slim and wiry but water-fat when compared to Fremmen? Had he remained the Usul of his tribal name who'd taken her in “Fremmen tau” while they'd been fugitives in the desert?

Paul stared down at his own body: hard muscles, slender . . . a few more scars, but essentially the same despite twelve years as Emperor. Looking up, he glimpsed his face in a shelf mirror — blue-blue Fremmen eyes—mark of spice addiction — and a sharp Atreides nose. He looked the proper grandson for an Atreides who'd died in the bull ring creating a spectacle for his people.

Something the old man had said slipped then into Paul's mind: “*One who rules assumes irrevocable responsibility for the ruled. You are a husbandman. This demands, at times, a selfless act of love which may only*

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*be amusing to those who rule.*”

People still remembered that old man with affection.

*And what have I done for the Atreides name?* Paul asked himself. *I've loosed the wolf among the sheep.*

For a moment, he contemplated all the death and violence going on in his name.

“Into bed now!” Chani said in a sharp tone of command that Paul knew would have shocked his Imperial subjects.

He obeyed, lay back with his hands behind his head, letting himself be lulled by the pleasant familiarity of Chani's movements.

The room around them struck him suddenly with amusement. It was not at all what the populace must imagine as the Emperor's bedchamber. The yellow light of restless glowglobes moved the shadows in an array of colored glass jars on a shelf behind Chani. Paul named their contents silently — the dry ingredients of the desert pharmacopeia, unguents, incense, mementos . . . a pinch of sand from Sietch Tabr, a lock of hair from their firstborn . . . long dead . . . twelve years dead . . . an innocent bystander killed in the battle that had made Paul Emperor.

The rich odor of spice coffee filled the room. Paul inhaled, his glance falling on a yellow bowl beside the tray where Chani was

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preparing the coffee. The bowl held ground nuts. The inevitable poison snooper mounted beneath the table waved its insect arms over the food. The snooper angered him. They'd never needed snoopers in the desert days!

"Coffee's ready," Chani said. "Are you hungry?"

His angry denial was drowned in the whistling scream of a spice lighter hurling itself spaceward from the field outside Arrakeen.

Chani saw his anger, though; she poured their coffee, put a cup near his hand. She sat down on the foot of the bed, exposed his legs and rubbed them where the muscles were knotted from walking in the stillsuit. Softly, with a casual air which did not deceive him, she said: "Let us discuss Irulan's desire for a child."

Paul's eyes snapped wide open. He studied Chani carefully. "Irulan's been back from Wallach less than two days," he said. "Has she been at you already?"

"We've not discussed her frustrations," Chani said.

Paul forced his mind to mental alertness, examined Chani in the harsh light of observational minutiae, the Bene Gesserit Way his mother had taught him in violation of her vows. It was a thing he didn't like doing with Chani. Part of her hold on him lay in the fact he so seldom need-

ed his tension-building powers with her. Chani mostly avoided indiscreet questions. She maintained a Fremen sense of good manners. Hers were more often practical questions. What interested Chani were facts which bore on the position of her man — his strength in Council, the loyalty of his Legions, the abilities and talents of his allies. Her memory held catalogs of names and cross-indexed details. She could rattle off the major weakness of every known enemy, the potential dispositions of opposing forces, battle plans of their military leaders, the tooling and production capacities of basic industries.

Why now, Paul wondered, did she ask about Irulan?

"I've troubled your mind," Chani said.

"What was your intention?"

She smiled shyly, meeting his gaze. "If you're angered, love, please don't hide it."

Paul sank back against the headboard. "Shall I put her away?" he asked. "Her use is limited now, and I don't like the things I sense about her trip home to the Sisterhood."

"You'll not put her away," Chani said. She went on massaging his legs, spoke matter of factly: "You've said many times she's your contact with our enemies, that you can read their plans through her actions."

"Then why ask about her desire for a child?"

"I think it'd disconcert our enemies and put Irulan in a vulnerable position should you make her pregnant."

He read by the movements of her hands on his legs what that statement had cost her. A lump rose in his throat. Softly, he said: "Chani, beloved, I swore an oath never to take her into my bed. A child would give her too much power. Would you have her displace you?"

"I have no place."

"Not so, Sihaya, my desert springtime. What is this sudden concern for Irulan?"

"It's concern for you, not for her! If she carried an Atrides child, her friends would question her loyalties. The less trust our enemies place in her, the less she is to them."

"A child for her could mean your death," Paul said. "You know the plotting in this place." A movement of his arm encompassed the Keep.

"You must have an heir!" she husked.

"Ahhh," he said.

So that was it: Chani had not produced a child for him. Someone else, then, must do it. Why not Irulan? That was the way Chani's mind worked. And it must be done in an act of love because all the Empire avowed

strong taboos against artificial ways. Chani had come to a Fremen decision.

Paul studied her face in this new light. It was a face soft with passion, in the sweetness of sleep, awash in fears and angers and griefs.

He closed his eyes, and Chani came into his memories as a girl once more — veiled in springtime, singing, waking from sleep beside him — so perfect that the very vision of her consumed him. In his memory, she smiled . . . shyly at first, then strained against the vision as though she longed to escape.

Paul's mouth went dry. For a moment, his nostrils tasted the smoke of a devastated future and the voice of another kind of vision commanding him to disengage . . . disengage . . . disengage. His prophetic visions had been eavesdropping on eternity for such a long while, catching snatches of foreign tongues, listening to stones and to flesh not his own. Since the day of his first encounter with terrible purpose, he had peered at the future, hoping to find peace.

There existed a way, of course. He knew it by heart without knowing the heart of it — a rote future, strict in its instructions to him: disengage, disengage, disengage . . .

Paul opened his eyes, looked at the decision in Chani's face. She had stopped massaging his legs, sat still now — purest Fremmen. Her features remained familiar beneath the blue *nezhoni* scarf she often wore about her hair in the privacy of their chambers. But the mask of decision sat on her, an ancient and alien-to-him way of thinking. Fremmen women had shared their men for thousands of years — not always in peace, but with a way of making the fact non-destructive. Something mysteriously Fremmen in this fashion had happened in Chani.

"You'll give me the only heir I want," he said.

"You've seen this?" she asked, making it obvious by her emphasis that she referred to prescience.

As he had done many times, Paul wondered how he could explain the delicacy of the oracle, the Timelines without number which vision waved before him on an undulating fabric. He sighed, remembered water lifted from a river in the hollow of his hands — trembling, draining. Memory drenched his face in it. How could he drench himself in futures growing increasingly obscure from the pressures of too many oracles?

"You've not seen it, then," Chani said.

That vision-future scarce any

longer accessible to him except at the expenditure of life-draining effort, what could it show them except grief? He felt that he occupied an inhospitable middle zone, a wasted place where his emotions drifted, swayed, swept outward, in unchecked restlessness.

Chani covered his legs and said: "An heir to House Atreides, this is not something you leave to chance or one woman."

That was a thing his mother might have said, Paul thought. He wondered if the Lady Jessica had been in secret communication with Chani. His mother would think in terms of House Atreides. It was a pattern bred and conditioned into her by the Bene Gesserit, and would hold true even now when her powers were turned against the Sisterhood.

"You listened when Irulan came to me today," he accused.

"I listened." She spoke without looking at him.

Paul focused his memory on the encounter with Irulan. He'd let himself into the family salon, noted an unfinished robe on Chani's loom. There'd been an acrid wormsmell to the place, an evil odor which almost hid the underlying cinnamon bite of *melange*. Someone had spilled unchanged spice essence and left it to combine there with a spice-

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based rug. It had not been a felicitous combination. Spice essence had dissolved the rug. Oily marks lay concealed on the plaste-floored floor where the rug had been. He'd thought to send for someone to clean away the mess, but Harah, Stilgar's wife and Chani's closest feminine friend, had slipped in to announce Irulan.

He'd been forced to conduct the interview in the presence of that evil smell, unable to escape a Fremmen superstition that evil smells foretold disaster.

Harah withdrew as Irulan entered.

"Welcome," Paul said.

Irulan wore a robe of gray whale fur. She pulled it close, touched a hand to her hair. He could see her wondering at her mild tone. The angry words she had obviously prepared for this meeting could be sensed leaving her mind in a welter of second thoughts.

"You came to report that the Sisterhood has lost its last vestige of morality," he said.

"Isn't it dangerous to be that ridiculous?" she asked.

"To be ridiculous and dangerous, a questionable alliance," he said. His renegade Bene Gesserit training detected her putting down an impulse to withdraw. The effort exposed a brief glimpse of underlying fear, and DUNE MESSIAH

he saw she'd been assigned a task not to her liking.

"They expect a bit too much from a princess of the blood royal," he said.

Irulan grew very still, and Paul became aware that she had locked herself into a viselike control. A heavy burden, indeed, he thought. And he wondered why prescient visions had given him no glimpse of this possible future.

Slowly, Irulan relaxed. There was no point in surrendering to fear, no point in retreat, she had decided.

"You've allowed the weather to fall into a very primitive pattern," she said, rubbing her arms through the robe. "It was dry and there was a sandstorm today. Are you never going to let it rain here?"

"You didn't come here to talk about the weather," Paul said. He felt that he had been submerged in double meanings. Was Irulan trying to tell him something which her training would not permit her to say openly? It seemed that way. He felt that he had been cast adrift suddenly and now must thrash his way back to some steady place.

"I must have a child," she said.

He shook his head from side to side.

"I must have my way!" she snapped. "If need be, I'll find an-

other father for my child. I'll cuckold you and dare you to expose me."

"Cuckhold me all you wish," he said, "but no child."

"How can you stop me?"

With a smile of utmost kindness, he said: "I'd have you garroted, if it came to that."

Shocked silence held her for a moment, and Paul sensed Chani listening behind the heavy draperies into their private apartments.

"I am your wife," Irulan whispered.

"Let us not have these silly games," he said. "You play a part, no more. We both know who my wife is."

"And I am a convenience, nothing more," she said, voice heavy with bitterness.

"I have no wish to be cruel to you," he said.

"You chose me for this position."

"Not I," he said. "Fate chose you. The Guild chose you. And they have chosen you once more. For what have they chosen you, Irulan?"

"Why can't I have your child?"

"Because that's a role for which you weren't chosen."

"It's my right to bear the royal heir! My father was . . ."

"Your father was and is a beast. We both know he'd lost almost all touch with the humani-

ty he was supposed to rule and protect."

"Was he hated less than you're hated?" she flared.

"A good question," he agreed, a sardonic smile touching the edges of his mouth.

"You say you've no wish to be cruel to me, yet . . ."

"And that's why I agree that you can take any lover you choose. But understand me well: take a lover, but bring no sour-fathered child into my household. I would deny such a child. I don't begrudge you any male alliance as long as you are discreet . . . and childless. I'd be silly to feel otherwise under the circumstances. But don't presume upon this license which I freely bestow. Where the throne is concerned, I control what blood is heir to it. The Bene Gesserit doesn't control this, nor does the Guild. This is one of the privileges I won when I smashed your father's Sardaukar legions out there on the Plain of Arrakeen."

"It's on your head, then," Irulan said. She whirled and swept out of the chamber.

Remembering the encounter now, Paul brought his awareness out of it and focused on Chani seated beside him on their bed. He could understand his ambivalent feelings about Irulan, understand Chani's Fremen de-

cision. Under other circumstances Chani and Irulan might have been friends.

"What have you decided?" Chani asked.

"No child," he said.

Chani made the Fremen crysknife sign with index finger and thumb of her right hand.

"It could come to that," he agreed.

"You don't think a child would solve anything with Irulan?" she asked.

"Only a fool would think that."

"I am not a fool, my love."

Anger possessed him. "I've never said you were! But this isn't some damned romantic novel we are discussing. That's a real princess down the hall. She was raised in all the nasty intrigues of an Imperial Court. Plotting is as natural to her as writing her stupid histories!"

"They are not stupid, love."

"Probably not." He brought his anger under control, took her hand in his. "Sorry. But that woman has many plots — plots within plots. Give in to one of her ambitions and you could advance another of them."

Her voice mild, Chani said: "Haven't I always said as much?"

"Yes, of course you have." He stared at her. "Then what are you really trying to say to me?"

She lay down beside him, placed her head against his neck.

"They have come to a decision on how to fight you," she said. "Irulan reeks of secret decisions."

Paul stroked her hair.

Chani had peeled away the cross.

Terrible purpose brushed him. It was a coriolis wind in his soul. It whistled through the framework of his being. His body knew things then never learned in consciousness.

"Chani, beloved," he whispered, "do you know what I'd spend to end the Jihad — to separate myself from the damnable godhead the Qizarate forces onto me?"

She trembled. "You have but to command it," she said.

"Oh, no. Even if I died now, my name would still lead them. When I think of the Atreides name tied to this religious butchery . . ."

"But you're the Emperor! You have . . ."

"I'm a figurehead. When god-head's given, that's the one thing the so-called god no longer controls." A bitter laugh shook him. He sensed the future looking back at him out of dynasties not even dreamed. He felt his being cast out, crying, unchained from the rings of fate — only his name continued. "I was chosen," he said. "Perhaps at birth . . . certainly before I had much say in it. I was chosen."

"Then un-choose," she said. His arm tightened around her shoulder. "In time, beloved. Give me yet a little time."

Unshed tears burned his eyes. "We should return to Sietch Tabr," Chani said. "There's too much to contend with in this tent of stone."

He nodded, his chin moving against the smooth fabric of the scarf which covered her hair. The soothing spice smell of her filled his nostrils.

*Sietch.* The ancient *Chakobsa* word absorbed him: a place of retreat and safety in a time of peril. Chani's suggestion made him long for vistas of open sand, for clean distances where one could see an enemy coming from a long way off.

"The tribes expect Muad'dib to return to them," she said. She lifted her head to look at him. "You belong to us."

"I belong to a vision," he whispered.

He thought then of the Jihad, of the gene mingling across parsecs and the vision which told him how he might end it. Should he pay the price? All the hatefulness would evaporate, dying as fires die — ember by ember. But . . . oh! The terrifying price!

*I never wanted to be a god, he thought. I wanted only to disappear like a jewel of trace dew caught by the morning. I wanted*

*to escape the angels and the damned — alone . . . as though by an oversight.*

"Will we go back to the *Sietch*?" Chani pressed.

"Yes," he whispered. And he thought: *I must pay the price.*

Chani heaved a deep sigh, settled back against him.

*I've loitered,* he thought. And he saw how he'd been hemmed in by boundaries of love and the Jihad. But what was one life, no matter how beloved, against all the lives the Jihad was certain to take? Could single misery be weighed against the agony of multitudes?

"Love?" Chani said, questioning.

He put a hand against her lips.

*I'll yield up myself,* he thought. *I'll rush out while I yet have the strength, fly through a space a bird might not find.* It was a useless thought, and he knew it. The Jihad would follow his ghost.

What could he answer? he wondered. How explain when people taxed him with brutal foolishness? Who might understand?

*I wanted only to look back and say: 'There! There's an existence which couldn't hold me. See! I vanish! No restraint or net of human devising can trap me ever again. I renounce my religion! This glorious instant is mine! I'm free!'*

*What empty words these are!*

"A big worm was seen below the Shield Wall yesterday," Chani said. "More than a hundred meters long, they say. Such big ones come rarely into this region any more. The water repels them, I suppose. They say this one came to summon Muad'dib home to his desert." She pinched his chest. "Don't laugh at me!"

"I'm not laughing."

Paul, caught by wonder at the persistent Fremem mythos, felt a heart constriction, a thing inflicted upon his lifeline: *adab*, the demanding memory. He recalled his childhood room on Caladan then . . . dark night in the stone chamber . . . a vision! It'd been one of his earliest prescient moments.

He felt his mind dive into the vision, saw through a veiled cloud-memory (vision-within-vision) a line of Fremem, their robes trimmed with dust. They paraded past a gap in tall rocks. They carried a long, cloth-wrapped burden.

And Paul heard himself say in the vision: "It was mostly sweet . . . but you were the sweetest of all . . ."

*Adab* released him.

"You're so quiet," Chani whispered. "What is it?"

Paul shuddered, sat up, face averted.

"You're angry because I've

been to the desert's edge," Chani said.

He shook his head without speaking.

"I only went because I want a child," Chani said.

Paul was unable to speak. He felt himself consumed by the raw power of that early vision. Terrible purpose! In that moment, his whole life was a limb shaken by the departure of a bird . . . and the bird was *chance*.

*I succumbed to the lure of the oracle,* he thought.

And he sensed that succumbing to this lure might be to fix himself upon a single-track life. Could it be, he wondered, that the oracle didn't *tell* the future? Could it be that the oracle *made* the future? Had he exposed his life to some web of underlying threads, trapped himself there in that long-ago awakening, victim of a spider-future which even now advanced upon him with terrifying jaws.

**A** Bene Gesserit axiom slipped into his mind: "*To use raw power is to make yourself infinitely vulnerable to greater powers.*"

"I know it angers you," Chani said, touching his arm. "It's true that the tribes have revived the old rites and the blood sacrifices, but I took no part in those."

Paul inhaled a deep, trembling breath. The torrent of his vision



dissipated, became a deep, still place whose currents moved with absorbing power beyond his reach.

"Please," Chani begged. "I want a child, our child. Is that a terrible thing?"

Paul caressed her arm where she touched him, pulled away. He climbed from the bed, extinguished the glowglobes, crossed to the balcony window, opened the draperies. The deep desert could not intrude here except by its odors. A windowless wall climbed to the night sky across from him. Moonlight slanted down into an enclosed garden, sentinel trees and broadleaves, wet foliage. He could see a fishpond reflecting stars among the leaves, pockets of white floral brilliance in the shadows. Momentarily, he saw the garden through Fremmen eyes: alien, menacing, dangerous in its waste of water.

He thought of the Water Sellers, their way destroyed by the lavish dispensing from his hands. They hated him. He'd slain their past. And there were others, even those who'd fought for the sols to buy precious water, who hated him for changing the old ways. As the ecological pattern dictated by Muad'dib remade the planet's landscape, human resistance increased. Was it not presumptuous, he wondered, to think he could make over an entire planet — everything growing where and

how he told it to grow? Even if he succeeded, what of the universe waiting out there? Did it fear similar treatment?

Abruptly, he closed the draperies, sealed the ventilators. He turned toward Chani in the darkness, felt her waiting there. Her water rings tinkled like the almsbells of pilgrims. He groped his way to the sound, encountered her outstretched arms.

"Beloved," she whispered. "Have I troubled you?"

Her arms enclosed his future as they enclosed him.

"Not you," he said. "Oh . . . not you."

### III

*The advent of the Field Process shield and the lasgun with their explosive interaction, deadly to attacker and attacked, placed the current determinatives on weapons technology. We need not go into the special role of atomics. The fact that any Family in my Empire could so deploy its atomics as to destroy the planetary bases of fifty or more other Families causes some nervousness, true. But all of us possess precautionary plans for devastating retaliation. Guild and Landsraad contain the keys which hold this force in check. No, my concern goes to the development of humans as special weapons. Here is*

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*a virtually unlimited field which a few powers are developing.*

—Muad'dib: Lecture to the War College from the Stilgar Chronicle

The old man stood in his doorway peering out with blue-in-blue eyes. The eyes were veiled by that native suspicion all desert folk held for strangers. Bitter lines tortured the edges of his mouth where it could be seen through a fringe of white beard. He wore no stillsuit, and it said much that he ignored this fact in the full knowledge of the moisture pouring from his house through the open door.

Scytale bowed, gave the greeting signal of the conspiracy.

From somewhere behind the old man came the sound of a rebeck wailing through the atonal dissonance of *semuta* music. The old man's manner carried no drug dullness, an indication that *semuta* was the weakness of another. It seemed strange to Scytale, though, to find that sophisticated vice in this place.

"Greetings from afar," Scytale said, smiling through the flat-featured face he had chosen for this encounter. It occurred to him, then, that this old man might recognize the chosen face. Some of the older Fremmen here on Dune had known Duncan Idaho.

The choice of features, which

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he had thought amusing, might have been a mistake, Scytale decided. But he dared not change the face out here. He cast nervous glances up and down the street. Would the old man never invite him inside?

"Did you know my son?" the old man asked.

That, at least, was one of the countersigns. Scytale made the proper response, all the time keeping his eyes alert for any suspicious circumstance in his surroundings. He did not like his position here. The street was a cul-de-sac ending in this house. The houses all around had been built for veterans of the Jihad. They formed a suburb of Arrakeen which stretched into the Imperial Basin past Tiemag. The walls which hemmed in this street presented blank faces of dun plasmeld broken by dark shadows of sealed doorways and, here and there, scrawled obscenities. Beside this very door someone had chalked a pronouncement that one Beris had brought back to Arrakis a loathsome disease which deprived him of his manhood.

"Do you come in partnership," the old man asked.

"Alone," Scytale said,

The old man cleared his throat, still hesitating in that maddening way.

Scytale cautioned himself to patience. Contact in this fashion

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carried its own dangers. Perhaps the old man knew some reason for carrying on this way. It was the proper hour, though. The pale sun stood almost directly overhead. People of this quarter remained sealed in their houses to sleep through the hot part of the day.

Was it the new neighbor who bothered the old man? Scytale wondered. The adjoining house, he knew, had been assigned to Otheym, once a member of Muad'dib's dreaded Fedaykin death commandos. Bijaz, the catalyst-dwarf waited with Otheym.

Scytale returned his gaze to the old man, noted the empty sleeve dangling from the left shoulder and the lack of a stillsuit. An air of command hung about this old man. He'd been no foot slogger in the Jihad.

"May I know the visitor's name?" the old man asked.

Scytale suppressed a sigh of relief. He was to be accepted, after all. "I am Zaal," he said, giving the name assigned him for this mission.

"I am Farok," the old man said, "once Bashar of the Ninth Legion in the Jihad. Does this mean anything to you?"

Scytale read menace in the words. He said: "You were born in Sietch Tabr with allegiance to Stilgar."

Farok relaxed, stepped aside. "You are welcome in my house."

Scytale slipped past him into a shadowy atrium — blue tile floor, glittering designs worked in crystal on the walls. Beyond the atrium was a covered courtyard. Light admitted by translucent filters spread an opalescence as silvery as the white-night of First Moon. The street door grated into its moisture seals behind him.

"We were a noble people," Farok said, leading the way toward the courtyard. "We were not of the cast-out. We lived in no graben village . . . such as this! We had a proper sietch in the Shield Wall above Habbanya Ridge. One worm could carry us into Kedem, the inner desert.

"Not like this," Scytale agreed, realizing now what had brought Farok into the conspiracy. The Fremmen longed for the old days and the old ways.

They entered the courtyard.

Farok struggled with an intense dislike for his visitor, Scytale realized. Fremmen distrusted eyes that were not the total blue of Ibad. Offworlders, Fremmen said, had unfocused eyes which saw things they were not supposed to see.

The *semuta* music had stopped at their entrance. It was replaced now by the strum of a baliset, first a nine-scale chord, then the clear notes of a song which was

popular on the Naraj worlds.

As his eyes adjusted to the light, Scytale saw a youth sitting cross-legged on a low divan beneath arches to his right. The youth's eyes were empty sockets. With that uncanny facility of the blind, he began singing the moment Scytale focused on him. The voice was high and sweet:

*"A wind has blown the land*

*away*

*And blown the sky away*

*And all the men!*

*Who is this wind?*

*The trees stand unbent,*

*Drinking where men drank.*

*I've known too many worlds,*

*Too many men,*

*Too many trees,*

*Too many winds."*

Those were not the original words of the song, Scytale noted. Farok led him away from the youth and under the arches on the opposite side, indicated cushions scattered over the tile floor. The tile was worked into designs of sea creatures.

"There is a cushion once occupied in sietch by Muad'dib," Farok said, indicating a round, black mound. "It is yours now."

"I am in your debt," Scytale said, sinking to the black mound. He smiled. Farok displayed wisdom. A sage spoke of loyalty even while listening to songs of hidden meaning and words with secret messages. Who could deny

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the terrifying powers of the tyrant Emperor?

Inserting his words across the song without breaking the meter, Farok said: "Does my son's music disturb you?"

Scytale gestured to a cushion facing him, put his back against a cool pillar. "I enjoy music."

"My son lost his eyes in the conquest of Naraj," Farok said. "He was nursed there and should have stayed. No woman of the People will have him thus. I find it curious, though, to know I have grandchildren on Naraj that I may never see. Do you know the Naraj worlds, Zaal?"

"In my youth, I toured there with a troupe of my fellow face dancers," Scytale said.

"You are a face dancer, then," Farok said. "I had wondered at your features. They reminded me of a man I knew here once."

"Duncan Idaho?"

"That one, yes. A swordmaster in the Emperor's pay."

"He was killed, so it is said."

"So it is said," Farok agreed.

"Are you truly a man, then? I've heard stories about face dancers that . . ." He shrugged.

"We are *Jadacha* hermaphrodites," Scytale said, "either sex at will. For now, I am a man."

Farok pursed his lips in thought, then: "May I call for refreshments? Do you desire wa-

ter? Iced fruit? Anything at all?"

"Talk will suffice," Scytale said.

"The guest's wish is a command," Farok said, settling to the cushion which faced Scytale.

"Blessed is Abu d' Dhur, Father of the Indefinite Roads of Time," Scytale said. And he thought: *There! I've told him straight out that I come from a Guild Steersman and wear the Steersman's concealment.*

"Thrice blessed," Farok said, folding his hands into his lap in the ritual clasp. They were old, heavily veined hands.

"An object seen from a distance betrays only its principle," Scytale said, revealing that he wished to discuss the Emperor's fortress Keep.

"That which is dark and evil may be seen for evil at any distance," Farok said, advising delay.

Why? Scytale wondered. But he said: "How did your son lose his eyes?"

"The Naraj defenders used a stone burner," Farok said. "My son was too close. Cursed atomics! Even the stone burner should be outlawed."

"It skirts the intent of the law," Scytale agreed. And he thought: *A stone burner on Naraj! We weren't told of that. Why does this old man speak of stone burners here?*

"I offered to buy Tleilaxu eyes for him from your masters," Farok said. "But there's a story in the Legions that Tleilaxu eyes enslave their users. My son told me that such eyes are metal and he is flesh, that such a union must be sinful."

"The principle of an object must fit its original intent," Scytale said, trying to turn the conversation back to the information he sought.

Farok's lips went thin, but he nodded. "Speak openly of what you wish," he said. "We must put our trust in your Steersman."

"Have you ever entered the Imperial Keep?" Scytale asked.

"I was there for the feast celebrating the Molitor victory. It was cold in all that stone despite the best Ixian space heaters. We slept on the terrace of Alia's Fane the night before. He has trees in there, you know — trees from many worlds. We Bashars were dressed in our finest green robes and had our tables set apart. We ate and drank too much. I was disgusted with some of the things I saw. The walking wounded came, dragging themselves along on their crutches. I do not think our Muad'dib knows how many men he has maimed."

"You objected to the feast?" Scytale asked, speaking from a knowledge of the Fremen orgies

which were ignited by spice beer.

"It was not like the mingling of our souls in the sitch," Farok said. "There was no tau. For entertainment, the troops had slave girls, and the men shared the stories of their battles and their wounds."

"So you were inside that great pile of stone," Scytale said.

"Muad'dib came out to us on the terrace," Farok said. "Good fortune to us all," he said. The greeting drill of the desert in that place!"

"Do you know the location of his private apartments?" Scytale asked.

"Deep inside," Farok said. "Somewhere deep inside. I am told he and Chani live a nomadic life and that all within the walls of their Keep. Out to the Great Hall he comes for the public audiences. He has reception halls and formal meeting places, a whole wing for his personal guard, places for the ceremonies and an inner section for communications. There is a room far beneath his fortress, I am told, where he keeps a stunted worm surrounded by a water moat with which to poison it. Here is where he reads the future."

*Myth all tangled up with facts,* Scytale thought.

"The apparatus of government accompanies him everywhere,"

Farok grumbled. "Clerks and attendants and attendants for the attendants. He trusts only the ones such as Stilgar who were very close to him in the old days."

"Not you," Scytale said.

"I think he has forgotten my existence," Farok said.

"How does he come and go when he leaves that building?" Scytale asked.

"He has a tiny 'thopter landing which juts from an inner wall," Farok said. "I am told Muad'dib will not permit another to handle the controls for a landing there. It requires an approach, so it is said, where the slightest miscalculation would plunge him down a sheer cliff of wall into one of his accursed gardens."

Scytale nodded. This, most likely, was true. Such an aerial entry to the Emperor's quarters would carry a certain measure of security. The Atreides were superb pilots all.

"He uses men to carry his distrans messages," Farok said. "It demeans men to implant wave translators in them. A man's voice should be his own to command. It should not carry another man's message hidden within its sounds."

Scytale shrugged. All great powers used the distrans in this age. One could never tell what

obstacle might be placed between sender and addressee. The distrans defied political cryptology because it relied on subtle distortions of natural sound patterns which could be scrambled with enormous intricacy.

"Even his tax officials use this method," Farok complained. "In my day, the distrans was implanted only in the lower animals."

*But revenue information must be kept secret, Scytale thought. More than one government has fallen because people discovered the real extent of official wealth.*

"How do the Fremen cohorts feel now about Muad'dib's Jihad?" Scytale asked. "Do they object to making a god out of their Emperor?"

"Most of them don't even consider this," Farok said. "They think of the Jihad the way I thought of it — most of them. It is a source of strange experiences, adventure, wealth. This graben hovel in which I live . . ." Farok gestured at the courtyard. "... it cost sixty lidas of spice. Ninety kontars! There was a time when I could not even imagine such riches." He shook his head.

Across the courtyard, the blind youth took up the notes of a love ballad on his baliset.

*Ninety kontars, Scytale thought. How strange. Great riches, certainly. Farok's hovel would be a*

*palace on many another world, but all things were relative — even the kontar. Did Farok, for example, know whence came his measure for this weight of spice? Did he ever think of himself that one and a half kontar once limited a camel load? Not likely. Farok might never even have heard of a camel or of the Golden Age of Earth.*

His words oddly in rhythm to the melody of his son's baliset, Farok said: "I owned a crysknife, water rings to ten liters, my own lance which had been my father's, a coffee service, a bottle made of red glass older than any memory in my sietch. I had my own share of our spice, but no money. I was rich and did not know it. Two wives I had: one plain and dear to me, the other stupid and obstinate, but with form and face of an angel. I was a Fremen naib, a rider of worms, master of the leviathan and of the sand."

The youth across the courtyard picked up the beat of his melody.

"I knew many things without the need to think about them," Farok said. "I knew there was water far beneath our sand, held there in bondage by the Little Makers. I knew that my ancestors sacrificed virgins to Shai-hulud . . . before Liet-Kynes made us stop. It was wrong for us to stop. I had seen the jewels

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in the mouth of a worm. My soul had four gates and I knew them all."

He fell silent, musing.

"Then the Atreides came with his witch mother," Scytale said.

"The Atreides came," Farok agreed. "The one we named Usul in our sietch, his private name among us. Our Muad'dib, our Mahdi! And when he called for the Jihad, I was one of those who asked: 'Why should I go to fight there? I have no relatives there.' But other men went — young men, friends, companions of my childhood. When they returned, they spoke of wizardry, of the power of this Atreides savior. He fought our enemy, the Harkonnen. Liet-Kynes, who had promised us paradise upon our planet, blessed him. It was said this Atreides came to change our world and our universe, that he was the man to make the golden flower blossom in the night."

Farok held up his hands, examined the palms. "Men pointed to First Moon and said: 'His soul is there.' Thus, he was called Muad'dib. I did not understand all this."

He lowered his hands, stared across the courtyard at his son. "I had no thoughts in my head. There were thoughts only in my heart, my belly and my loins.

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Again, the tempo of the background music increased.

"Do you know why I enlisted in the Jihad?" The old eyes stared hard at Scytale. "I heard there was a thing called a sea. It is very hard to believe in a sea when you have lived only here among our dunes. We have no seas. Men of Dune have never known a sea. We had our wind-traps. We collected water for the great change Liet-Kynes promised us . . . this great change Muad'dib is bringing with a wave of his hand. I could imagine a qanat, water flowing across the land in a canal. From this, my mind could picture a river. But a sea?"

Farok gazed at the translucent cover of his courtyard as though trying to probe into the universe beyond. "A sea," he said, voice low. "It was too much for my mind to picture. Yet, men I knew said they had seen this marvel. I thought they lied, but I had to know for myself. It was for this reason that I enlisted."

The youth struck a loud final chord on the baliset, took up a new song with an oddly undulating rhythm.

"Did you find your sea?" Scytale asked.

Farok remained silent and Scytale thought the old man had not heard. The baliset music rose

around them and fell like a tidal movement. Farok breathed to its rhythm.

"There was a sunset," Farok said presently. "One of the elder artists might have painted such a sunset. It had red in it the color of the glass in my bottle. There was gold . . . blue. It was on the world they call Enfeil, the one where I led my Legion to victory. We came out of a mountain pass where the air was sick with water. I could scarcely breathe it. And there below me was the thing my friends had told me about: water as far as I could see and farther. We marched down to it. I waded out into it and drank. It was bitter and made me ill. But the wonder of it has never left me."

Scytale found himself sharing the old Fremens' awe.

"I immersed myself in that sea," Farok said, looking down at the water creatures worked into the tiles of his floor. "One man sank beneath that water . . . another man arose from it. I felt that I could remember a past which had never been. I stared around me with eyes which could accept anything . . . anything at all. I saw a body in the water — one of the defenders we had slain. There was a log nearby supported on that water, a piece of a great tree. I can close my eyes now and see that log. It was

black on one end from a fire. And there was a piece of cloth in that water — no more than a yellow rag . . . torn, dirty. I looked at all these things and I understood why they had come to this place. It was for me to see them."

Forak turned slowly, stared into Scytale's eyes. "The universe is unfinished, you know," he said.

*This one is garrulous, but deep,* Scytale thought. And he said: "I can see it made a profound impression on you."

"You are a Tleilaxu," Farok said. "You have seen many seas. I have seen only this one, yet I know a thing about seas which you do not."

Scytale found himself in the grip of an odd feeling of disquiet.

"The Mother of Chaos was born in a sea," Farok said. "A Qizara Tafwid stood nearby when I came dripping from that water. He had not entered the sea. He stood on the sand . . . it was wet sand . . . with some of the men who shared his fear. He watched me with eyes that knew I had learned something which was denied to him. I had become a sea creature and I frightened him. The sea healed me of the Jihad and I think he saw this."

Scytale realized that somewhere in this recital the music had stopped. He found it disturbing that

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he could not place the instant when the baliset had fallen silent.

As though it were relevant to what he'd been recounting, Farok said: "Every gate is guarded. There's no way into the Emperor's fortress."

"That's its weakness," Scytale said.

Farok stretched his neck upward, peering.

"There's a way in," Scytale explained. "The fact that most men — including, we may hope, the Emperor — believe otherwise . . . that's to our advantage." He rubbed his lips, feeling the strangeness of the visage he'd chosen. The musician's silence bothered him. Did it mean Farok's son was through transmitting? That had been the way of it, naturally: the message condensed and transmitted within the music. It had been impressed upon Scytale's own neural system, there to be triggered at the proper moment by the distrans imbedded in his adrenal cortex. If it was ended, he had become a container of unknown words. He was a vessel sloshing with data: every cell of the conspiracy here on Arrakis, every name, every contact phrase — all the vital information.

With this information, they could brave Arrakis, capture a sandworm, begin the cul-

ture of melange somewhere beyond Muad'dib's writ. They could break the monopoly as they broke Muad'dib. They could do many things with this information.

"We have the woman here," Farok said. "Do you wish to see her now?"

"I've seen her," Scytale said. "I've studied her with care. Where is she."

Farok snapped his fingers.

The youth took up his rebeck, drew the bow across it. *Semuta* music wailed from the strings. As though drawn by the sound, a young woman in a blue robe emerged from a doorway behind the musician. Narcotic dullness filled her eyes which were the total blue of the Ibad. She was a Fremens, addicted to the spice, and now caught by an off-world vice. Her awareness lay deep within the *semuta*, lost somewhere and riding the ecstasy of the music.

"Otheym's daughter," Farok said. "My son gave her the narcotic in the hope of winning a woman of the People for himself despite his blindness. As you can see, his victory is empty. *Semuta* has taken what he hoped to gain."

"Her father doesn't know?" Scytale asked.

"She doesn't even know,"

Farok said. "My son supplies false memories with which she accounts to herself for her visits. She thinks herself in love with him. This is what her family believes. They are outraged because he is not a complete man, but they won't interfere, of course."

The music trailed away to silence.

At a gesture from the musician, the young woman seated herself beside him, bent close to listen as he murmured to her.

"What will you do with her?" Farok asked.

Once more, Scytale studied the courtyard. "Who else is in this house?" he asked.

"We are all here now," Farok said. "You've not told me what you'll do with the woman. It is my son who wishes to know."

As though about to answer, Scytale extended his right arm. From the sleeve of his robe, a glistening needle darted, imbedded itself in Farok's neck. There was no outcry, no change of posture. Farok would be dead in a minute, but he sat unmoving, frozen by the dart's poison.

Slowly, Scytale climbed to his feet, crossed to the blind musician. The youth was still murmuring to the young woman when the dart whipped into him.

Scytale took the young woman's arm, urged her gently to her

feet, shifted his own appearance before she looked at him. She came erect, focused on him.

"What is it, Farok?" she asked.

"My son is tired and must rest," Scytale said. "Come. We'll go out the back way."

"We had such a nice talk," she said. "I think I've convinced him to get Tleilaxu eyes. It'd make a man of him again."

"Haven't I said it many times?" Scytale asked, urging her into a rear chamber.

His voice, he noted with pride, matched his features precisely. It unmistakably was the voice of the old Fremmen, who certainly was dead by this time.

Scytale sighed. It had been done with sympathy, he told himself, and the victims certainly had known their peril. Now, the young woman would have to be given her chance.

#### IV

*Empires do not suffer emptiness of purpose at the time of their creation. It is when they have become established that aims are lost and replaced by vague ritual.*

— Words of Muad'dib  
by Princess Irulan

It was going to be a bad session, this meeting of the Imperial Council, Alia realized. She

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sensed contention gathering force, storing up energy — the way Irulan refused to look at Chani, Stilgar's nervous shuffling of papers, the scowls Paul directed at Korba the Qizara.

She seated herself at the end of the golden council table so she could look out the balcony windows at the dusty light of the afternoon.

Korba, interrupted by her entrance, went on with something he'd been saying to Paul. "What I mean, m'Lord, is that there aren't as many gods as once there were."

Alia laughed, throwing her head back. The movement dropped the black hood of her aba robe. Her features lay exposed—blue-in-blue spice eyes, her mother's oval face beneath a cap of bronze hair, small nose, mouth wide and generous.

Korba's cheeks went almost the color of his orange robe. He glared at Alia, an angry gnome, bald and fuming.

"Do you know what's being said about your brother?" he demanded.

"I know what's being said about your Qizarate," Alia countered. "You're not divines, you are god's spies."

Korba glanced at Paul for support, said: "We are sent by the writ of Muad'dib, that He shall know the truth of His people and

they shall know the truth of Him."

"Spies," Alia said.

Korba pursed his lips in injured silence.

Paul looked at his sister, wondering why she provoked Korba. Abruptly, he saw that Alia had passed into womanhood, beautiful with the first blazing innocence of youth. He found himself surprised that he hadn't noticed it until this moment. She was fifteen — almost sixteen, a Reverend Mother without motherhood, virgin priestess, object of fearful veneration for the superstitious masses — Alia of the Knife.

"This is not the time or place for your sister's levity," Irulan said.

Paul ignored her, nodded to Korba "The square's full of pilgrims. Go out and lead their prayer."

"But they expect you, m'Lord," Korba said.

"Put on your turban," Paul said. "They'll never know at this distance."

Irulan smothered irritation at being ignored, and watched Korba arise to obey. She'd had the sudden disquieting thought that Edric might not hide her actions from Alia. *What do we really know of the sister?* she wondered.

Chani, hands tightly clasped in her lap, glanced across the ta-

ble at Stilgar, her uncle, Paul's Minister of State. Did the old Fremmen naib ever long for the simpler life of his desert *sietch*? she wondered. Stilgar's black hair, she noted, had begun to gray at the edges, but his eyes beneath heavy brows, remained far-seeing. It was the eagle stare of the wild, and his beard still carried the catchtube indentation of life in a stillsuit.

Made nervous by Chani's attention, Stilgar looked around the Council Chamber. His gaze fell on the balcony window and Korba standing outside. Korba raised outstretched arms for the benediction, and a trick of the afternoon sun cast a red halo onto the window behind him. For a moment, Stilgar saw the Court Qizara as a figure crucified on a fiery wheel. Korba lowered his arms and destroyed the illusion, but Stilgar remained shaken by it. His thoughts went in angry frustration to the fawning supplicants waiting in the Audience Hall, and to the hateful pomp which surrounded Muad'dib's throne.

Convening with the Emperor, one hoped for a fault in him, to find mistakes, Stilgar thought. He felt this might be sacrilege, but wanted it anyway.

Distant crowd murmuring entered the chamber as Korba re-

turned. The balcony door thumped into its seals behind him, shutting off the sound.

Paul's gaze followed the Qizara. Korba took his seat at Paul's left, dark features composed, eyes glazed by fanaticism. He'd enjoyed that moment of religious power.

"The spirit presence has been invoked," he said.

"Thank the lord for that," Alia said.

Korba's lips went white.

Again, Paul studied his sister, wondered at her motives. Her innocence masked deception, he told himself. She'd come out of the same Bene Gesserit breeding program as he had. What had the *kwisatz haderach* genetics produced in her? There was always that mysterious difference: she'd been an embryo in the womb when her mother had survived the raw melange poison. Mother and unborn daughter had become Reverend Mothers simultaneously. But simultaneity didn't carry identity.

Of the experience, Alia said that in one terrifying instant she had awakened to consciousness, her memory absorbing the uncounted other-lives which her mother was assimilating.

"I became my mother and all the others," she said. "I was unformed, unborn, but I became an old woman then and there."

Sensing his thoughts on her, Alia smiled at Paul. His expression softened. *How could anyone react to Korba with other than cynical humor?* he asked himself. *What is more ridiculous than a death commando transformed into a priest?*

Stilgar tapped his papers. "If my liege permits," he said. "These are matters urgent and dire."

"The Tupile treaty?" Paul asked.

"The Guild maintains that we must sign this treaty without knowing the precise location of the Tupile Entente," Stilgar said. "They've some support from Landsraad delegates."

"What pressures have you brought to bear?" Irulan asked.

"Those pressures which my Emperor has designated for this enterprise," Stilgar said. The stiff formality of his reply contained all his disapproval of the Princess Consort.

"My Lord and husband," Irulan said, turning to Paul, forcing him to acknowledge her.

**E**mphasizing the titular difference in front of Chani, Paul thought, is a weakness. In such moments, he shared Stilgar's dislike for Irulan, but sympathy tempered his emotions. What was Irulan but a Bene Gesserit pawn?

"Yes?" Paul said.

Irulan stared at him. "If you

withheld their melange . . ."

Chani shook her head in dissent.

"We tread with caution," Paul said. "Tupile remains the place of sanctuary for defeated Great Houses. It symbolizes a last resort, a final place of safety for all our subjects. Exposing the sanctuary makes it vulnerable."

"If they can hide people they can hide other things," Stilgar rumbled. "An army, perhaps, or the beginnings of melange culture which . . ."

"You don't back people into a corner," Alia said. "Not if you want them to remain peaceful." Ruefully, she saw that she'd been drawn into the contention which she'd forseen.

"So we've spent ten years of negotiation for nothing," Irulan said.

"None of my brother's actions are for nothing," Alia said.

Irulan picked up a scribe, gripped it with white knuckled intensity. Paul saw her marshal emotional control in the Bene Gesserit way: the penetrating inward stare, deep breathing. He could almost hear her repeating the litany. Presently, she said: "What have we gained?"

"We've kept the Guild off balance," Chani said.

"We want to avoid a showdown confrontation with our enemies,"

Alia said. "We have no special

desire to kill them. There's enough butchery going on under the Atreides banner."

*She feels it, too,* Paul thought. Strange, what a sense of compelling responsibility they both felt for that brawling, idolatrous universe with its ecstasies of tranquility and wild motion. *Must we protect them from themselves?* he wondered. *They play with nothingness every moment — empty lives, empty words. They ask too much of me.* His throat felt tight and full. How many moments would he lose? What sons? What dreams? Was it worth the price his vision had revealed? Who would ask the living of some far distant future, who would say to them: 'But Muad'dib, you would not be here.?'

"Denying them their melange would solve nothing," Chani said. "So the Guild's navigators would lose their ability to see into time-space. Your sisters of the Bene Gesserit would lose their truth-sense. Some people might die before their time. Communication would break down. Who would be blamed?"

"They wouldn't let it come to that," Irulan said.

"Wouldn't they?" Chani asked. "Why not? Who could blame the Guild? They be helpless, demonstrably so."

"We'll sign the treaty as it stands," Paul said.

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"M'Lord," Stilgar said, concentrating on his hands, "there is a question in our minds."

"Yes?" Paul gave the old Fremmen his full attention.

"You have certain . . . powers," Stilgar said. "Can you not locate the Entente despite the Guild?"

*Powers!* Paul thought. Stilgar couldn't just say: "You're prescient. Can't you trace a path in the future that leads to Tupile?"

**P**aul looked at the golden surface of the table. Always the same problem: How could he express the limits of the inexpressible? Should he speak of fragmentation, the natural destiny of all power? How could someone who'd never experienced the spice change of prescience conceive of an awareness containing no localized spacetime, no personal image-vector nor associated sensory captives?

He looked at Alia, found her attention on Irulan. Alia sensed his movement, glanced at him, nodded toward Irulan. Ahhh, yes: any answer they gave would find its way into one of Irulan's special reports to the Bene Gesserit. They never gave up seeking an answer to their *kwisatz haderach*.

Stilgar, though, deserved an answer of some kind. For that matter, so did Irulan.



"The uninitiated try to conceive of prescience as obeying a *Natural Law*," Paul said. He steeped his hands in front of him. "But it'd be just as correct to say it's heaven speaking to us, that being able to read the future is a harmonious act of man's being. In other words, prediction is a natural consequence in the wave of the present. It wears the guise of nature, you see. But such powers cannot be used from an attitude that pre-states aims and purposes. Does a chip caught in the wave say where it's going? There is no cause and effect in the oracle. Causes become occasions or convections and confluences, places where the currents meet. Accepting prescience, you fill your being with concepts repugnant to the intellect. Your intellectual consciousness, therefore, rejects them. In rejecting, intellect becomes a part of the processes, and is subjugated."

"You cannot do it?" Stilgar asked.

"Were I to seek Tupile with prescience," Paul said, speaking directly to Irulan, "this might hide Tupile."

"Chaos!" Irulan protested. "It has no . . . no . . . consistency."

"I did say it obeys no *Natural Law*," Paul said.

"Then there are limits to what you can see or do with your powers?" Irulan asked.

Before Paul could answer, Alia said: "Dear Irulan, prescience has no limits. Not consistent? Consistency isn't a necessary aspect of the universe."

"But he said . . ."

"How can my brother give you explicit information about the limits of something which has no limits? The boundaries escape the intellect."

*That was a nasty thing for Alia to do*, Paul thought. It would alarm Irulan, who had such a careful consciousness, so dependent upon values derived from precise limits. His gaze went to Korba, who sat in a pose of religious reverie — *listening with the soul*. How could the Qizarate use this exchange? More religious mystery? Something to evoke awe? No doubt.

"Then you'll sign the treaty in its present form?" Stilgar asked.

Paul smiled. The issue of the oracle, by Stilgar's judgment, had been closed. Stilgar aimed only at victory, not at discovering truth. Peace, justice and a sound coinage — these anchored Stilgar's universe. He wanted something visible and real — a signature on a treaty.

"I'll sign it," Paul said.

Stilgar took up a fresh folder. "The latest communication from our field commanders in

Sector Ixian speaks of agitation for a constitution." The old Fremmen glanced at Chani, who shrugged.

Irulan, who'd closed her eyes and put both hands to her forehead in mnemonic impressment, opened her eyes, studied Paul intently.

"The Ixian Confederacy offers submission," Stilgar said, "but their negotiators question the amount of the Imperial Tax which they . . ."

"They want a legal limit to my Imperial will," Paul said. "Who would govern me, the Landsraad or CHOAM?"

Stilgar removed from the folder a note on *instroy* paper. "One of our agents sent this memorandum from a caucus of the CHOAM minority." He read the cipher in a flat voice: "The Throne must be stopped in its attempt at a power monopoly. We must tell the truth about the Atreides, how he maneuvers behind the triple sham of Landsraad legislation, religious sanction and bureaucratic efficiency." He pushed the note back into the folder.

"A constitution," Chanti murmured.

Paul glanced at her, back to Stilgar. *Thus the Jihad falters*, Paul thought, *but not soon enough to save me*. The thought produced emotional tensions. He DUNE MESSIAH

remembered his earliest visions of the Jihad-to-be, the terror and revulsion he'd experienced. Now, of course, he knew visions of greatest terrors. He had lived with the real violence. He had seen his Fremmen, charged with mystical strength, sweep all before them in the religious war. The Jihad gained a new perspective. It was finite, of course, a brief spasm when measured against eternity, but beyond lay horrors to overshadow anything in the past.

*All in my name*, Paul thought.

"Perhaps they could be given the *form* of a constitution," Chani suggested. "It needn't be actual."

"Deceit is a tool of statecraft," Irulan agreed.

"There are limits to power, as those who put their hopes in a constitution always discover," Paul said.

Korba straightened from his reverent pose. "M'Lord?"

"Yes?" And Paul thought, *Here now! Here's one who may harbor secret sympathies for an imagined rule of Law.*

"We could begin with a religious constitution," Korba said, "something for the faithful who . . ."

"No!" Paul snapped. "We will make this an Order In Council. Are you recording this, Irulan?"

"Yes, m'Lord," Irulan said, voice frigid with dislike for the

menial role he forced upon her.

"Constitutions become the ultimate tyranny," Paul said. "They are organized power on such a scale as to be overwhelming. The constitution is social power mobilized and it has no conscience. It can crush the highest and the lowest, removing all dignity and individuality. It has an unstable balance point and no limitations. I, however have limitations. In my desire to provide an ultimate protection for my people, I forbid a constitution. Order In Council, this date, etcetera, etcetra."

"What of the Ixian concern about the tax, m'Lord?" Stilgar asked.

Paul forced his attention away from the brooding, angry look on Korba's face, said: "You have a proposal, Stil?"

"Our price to the Guild for my signature on the Tupile treaty," Paul said, "is the submission of the Ixian Confederacy to our tax. The Confederacy cannot trade without Guild transport. They'll pay."

"Very good, m'Lord." Stilgar produced another folder, cleared his throat. "The Qizarate's report on Salusa Secundus. Irulan's father has been putting his legions through landing maneuvers."

Irulan found something of interest in the palm of her left

hand. A pulse throbbed at her neck.

"Irulan," Paul asked, "do you persist in arguing that your father's one legion is nothing more than a toy?"

"What could he do with only one legion?" she asked. She stared at him out of slitted eyes.

"He could get himself killed," Chani said.

Paul nodded. "And I'd be blamed."

"I know a few commanders in the Jihad," Alia said, "who'd pounce if they learned of this."

"But it's only his police force!" Irulan protested.

"Then they have no need for landing maneuvers," Paul said. "I suggest that your next little

note to your father contain a frank and direct discussion of my views about his delicate position."

She lowered her gaze. "Yes, m'Lord. I hope that will be the end of it. My father would make a good martyr."

"Mmmmmmm," Paul said. "My sister wouldn't send a message to those commanders she mentioned unless I ordered it."

"An attack on my father carries dangers other than the obvious military ones," Irulan said. "People are beginning to look back on his reign with a certain nostalgia."

"You'll go too far one day,"

Chani said in her deadly serious Fremem voice.

"Enough!" Paul ordered.

He weighed Irulan's revelation about public nostalgia — ah, now! That had carried a note of truth. Once more, Irulan had proved her worth.

"The Bene Gesserit send a formal supplication," Stilgar said, presenting another folder. "They wish to consult you about the preservation of your bloodline."

Chani glanced sideways at the folder as though it contained a deadly device.

"Send the Sisterhood the usual excuses," Paul said.

"Must we?" Irulan demanded. "Perhaps . . . this is the time to discuss it," Chani said.

Paul shook his head sharply. They couldn't know that this was part of the price he had not yet decided to pay.

But Chani wasn't to be stopped. "I have been to the prayer wall of Stiech Tabr where I was born," she said. "I have submitted to doctors. I have knelt in the desert and sent my thoughts into the depths where dwells Shai-hulud. Yet . . ." she shrugged. ". . . nothing avails."

*Science and superstition, all have failed her, Paul thought. Do I fail her, too, by not telling her what bearing an heir to House Atreides will precipitate?* He looked up to find an expres-

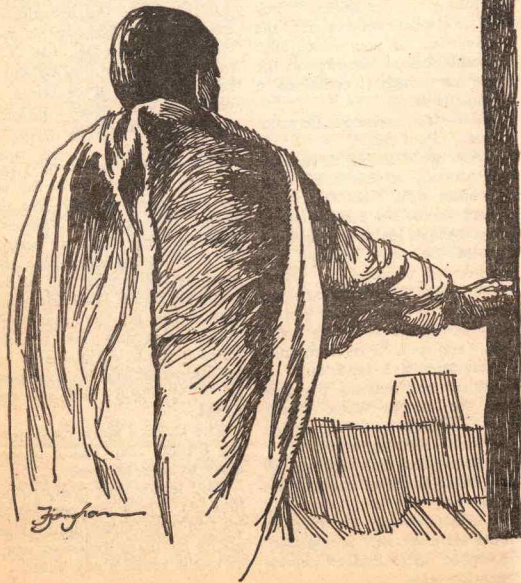
sion of pity in Alia's eyes. The idea of pity from his sister repelled him. Had she, too, seen that terrifying future?

"My Lord must know the dangers to his realm when he has no heir," Irulan said, using her Bene Gesserit powers of voice with an oily persuasiveness. "These things are naturally difficult to discuss, but they must be brought into the open. An Emperor is more than a man. His figure leads the realm. Should he die without an heir, civil strife must follow. As you love your people, you cannot leave them thus?"

Paul pushed himself away from the table, strode to the balcony windows. A wind was flattening the smoke of the city's fires out there. The sky presented a darkening silver-blue softened by the evening fall of dust from the Shield Wall. He stared southward at the escarpment which protected his northern lands from the coriolis wind, and he wondered why his own peace of mind could find no such shield.

The Council sat silently waiting behind him, aware of how close to rage he was.

Paul sensed time rushing upon him. *As I love my people?* He tried to force himself into a tranquility of many balances where he might shape a new future.



*Disengage . . . disengage . . . disengage*, he thought. What would happen if he took Chani, just picked up and left with her, sought sanctuary on Tupile? His name would remain behind. The Jihad would find new and more terrible centers upon which to turn. He'd be blamed for that, too. He felt suddenly fearful that in reaching for any new thing he might let fall what was most precious, that even the slightest noise from him might send the universe crashing back, receding until he never could recapture any piece of it.

Below him the square had become the setting for a band of pilgrims in the green and white of the *hajj*. They wended their way like a disjointed snake behind a striding Arrakeen guide. They reminded Paul that his reception hall would be packed with supplicants by now. Pilgrims! Their exercise in homelessness had become a disgusting source of wealth for his Imperium. The *hajj* filled the spaceways with religious tramps. They came and they came and they came.

*How did I set this in motion?* he asked himself.

It had, of course, set itself in motion. It was in the genes which might labor for centuries to achieve this brief spasm.

Driven by that deepest reli-

gious instinct, the people came, seeking their resurrection. The pilgrimage ended here: "Arrakis, the place of rebirth, the place to die."

Snide old Fremien said he wanted the pilgrims for their water.

What was it the pilgrims really sought? Paul wondered. They said they came to a holy place. But they must know the universe contained no Eden-source, no Tupile for the soul. They called Arrakis the place of the unknown where all mysteries were explained. This was a link between their universe and the next. And the frightening thing was that they appeared to go away satisfied.

*What do they find here?* Paul asked himself.

Often in their religious ecstasy, they filled the streets with screeching like some odd aviary. In fact, the Fremien called them "passage birds." And the few who died here were "winged souls."

With a sigh, Paul thought how each new planet his legions subjugated opened new sources of pilgrims. They came out of gratitude for the "peace of Muad'dib."

*Everywhere there is peace*, Paul thought. *Everywhere . . . except in the heart of Muad'dib.*

He felt that some element of himself lay immersed in frosty

hoar-darkness without end. His prescient power had tampered with the image of the universe held by all mankind. He had shaken the safe cosmos and replaced security with his Jihad. He had out-fought and out-thought and out-predicted the universe of men, but a certainty filled him that this universe still eluded him.

This planet beneath him which he had commanded be remade from desert into a water-rich paradise, it was alive. It had a pulse as dynamic as that of any human. It fought him, resisted, slipped away from his commands . . .

A hand crept into Paul's. He looked down to see Chani peering up at him, concern in her eyes. Those eyes drank him, and she whispered: "Please, love, do not battle with your ruhself." An out pouring of emotion swept upward from her hand, buoyed him.

"Sihaya," he whispered.

"We must go to the desert soon," she said in a low voice.

He squeezed her hand, released it, returned to the table where he remained standing.

Chani took her seat.

Irulan stared at the papers in front of Stilgar, her mouth a tight line.

"Irulan proposes herself as

mother of the Imperial heir," Paul said. He glanced at Chani, back to Irulan, who refused to meet his gaze. "We all know she holds no love for me."

Irulan went very still.

"I know the political arguments," Paul said. "It's the human arguments which concern me. I think if the Princess Consort were not bound by the commands of the Bene Gesserit, if she did not seek this out of desires for personal power, my reaction might be very different. As matters stand, though, I reject this proposal."

Irulan took a deep, shaky breath.

Paul, resuming his seat, thought he had never seen her under such poor control. Leaning toward her, he said: "Irulan, I am truly sorry."

She lifted her chin, a look of pure fury in her eyes. "I don't want your pity!" she hissed. And turning to Stilgar she asked: "Is there more that's urgent and dire?"

Holding his gaze firmly on Paul, Stilgar said:

"One more matter, m'Lord. The Guild again proposes a formal embassy here on Arrakis."

"One of the deep-space kind?" Korba asked, his voice full of fantastic loathing.

"Presumably," Stilgar said.

"A matter to be considered with

the utmost care, m'Lord," Korba warned. "The Council of Naibs would not like it, an actual Guildman here on Arrakis. They contaminate the very ground they touch."

"They live in tanks and don't touch the ground," Paul said, letting his voice reveal irritation.

"The Naibs might take matters into their own hands, m'Lord," Korba said.

Paul glared at him.

"They are Fremen, after all, m'Lord," Korba insisted. "We will remember how the Guild brought those who oppressed us. We have not forgotten the way they blackmailed a spice ransom from us to keep our secrets from our enemies. They drained us of every . . ."

"Enough!" Paul snapped. "Do you think I have forgotten?"

As though he had just awakened to the import of his own words, Korba stuttered unintelligibly. "M'Lord, forgive me. I did not mean to imply you are not Fremen. I did not . . ."

"They'll send a Steersman," Paul said. "It isn't likely a Steersman would come here if he could see danger in it."

Her mouth dry with sudden fear, Irulan said: "You've . . . seen a Steersman come here?"

"Of course I haven't seen a Steersman," Paul said, mimicking her tone. "But I can see where

one's been and where one's going. Let them send us a Steersman. Perhaps I have a use for one."

"So ordered," Stilgar said.

And Irulan, hiding a smile behind her hand, thought: *It's true then. Our Emperor cannot see a Steersman. They are mutually blind. The conspiracy is hidden.*

## V

*"Once more the drama begins."*

—The Emperor Paul Muad'dib on his ascension to the Lion Throne

Alia peered down from her spy window into the great reception hall to watch the advance of the Guild entourage.

The sharply silver light of noon poured through clerestory windows onto a floor worked in green, blue and eggshell tiles to simulate a bayou with water plants.

Guildsmen moved across the tile pattern like hunters stalking their prey in a strange jungle. They formed a moving design of gray robes, black robes, orange robes — all arrayed in a deceptively random way around the transparent tank where the Steersman-Ambassador swam in his orange gas. The tank slid on its supporting field, towed by two gray-robed attendants, like

a rectangular ship being warped into its dock.

Directly beneath her Paul sat, the Lion Throne on its raised dais. He wore the new formal crown with its fish and fist emblems. The jeweled golden robes of state covered his body. The shimmering of a personal shield surrounded him. Two wings of bodyguards fanned out on both sides along the dais and down the steps. Stilgar stood two steps below on Paul's right hand in a white robe with a yellow rope for a belt.

Sibling empathy told her that Paul seethed with the same agitation she was experiencing, although she doubted another could detect it. His attention remained on an orange-robed attendant whose blindly staring metal eyes looked neither to right nor left. This attendant walked at the right front corner of the Ambassador's troupe like a military outrider. A rather flat face beneath curly black hair, such of his figure as could be seen beneath the orange robe, every gesture shouted a familiar identity.

It was Duncan Idaho.

It could not be Duncan Idaho, yet it was.

Captive memories absorbed in the womb during the moment of her mother's spice change identified this man for Alia by a *Rihani* decipherment which cut

through all camouflage. Paul was seeing him, she knew, out of countless personal experiences, out of gratitudes and youthful sharing.

It was Duncan.

Alia shuddered. There could be only one answer: this was a *Tleilaxu ghola*, a being reconstructed from the dead flesh of the original. That original had perished saving Paul. This could only be a product of the axlotl tanks.

The *ghola* walked with the cock-footed alertness of a master swordsman. He came to a halt as the Ambassador's tank glided to a stop ten paces from the steps of the dais.

In the Bene Gesserit way she could not escape, Alia read Paul's disquiet. He no longer looked at the figure out of his past. Not looking, his whole being stared. Muscles strained against restrictions as he nodded to the Guild Ambassador and said: "I am told your name is Edric. We welcome you to our Court in the hope this will bring new understanding between us."

The Steersman assumed a sybaritic reclining pose in his orange gas, popped a melange capsule into his mouth before meeting Paul's gaze. The tiny transducer orbiting a corner of the Guildsman's tank reproduced a coughing sound, then the rasp-

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ing, uninvolved voice: "I abase myself before my Emperor and beg leave to present my credentials and offer a small gift."

An aide passed a scroll up to Stilgar, who studied it, scowling, then nodded to Paul. Both Stilgar and Paul turned then toward the *ghola*.

"Indeed, my Emperor has discerned the gift," Edric said.

"We are pleased to accept your credentials," Paul said. "Explain the gift."

Edric rolled in the tank, bringing his attention to bear on the *ghola*. "This is a man called Hayt," he said, spelling the name. "According to our investigators, he has a most curious history. He was killed here on Arrakis... a grievous head wound which required many months of regrowth. The body was sold to the Bene Tleilax as that of a master swordsman, an adept of the Ginnaz School. It came to our attention that this must be Duncan Idaho, the trusted retainer of your household. We bought him as a gift befitting an Emperor." Edric peered up at Paul. "Is it not Idaho, Sire?"

Restraint and caution gripped Paul's voice. "He has the aspect of Idaho."

Does Paul see something I don't? Alia wondered. No! It's Duncan!

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The man called Hayt stood impassively, metal eyes fixed straight ahead, body relaxed. No sign escaped him to indicate he knew himself to be the object of discussion.

"According to our best knowledge, it's Idaho," Edric said.

"He's called Hayt now," Paul said. "A curious name."

"Sire, there's no divining how or why the Tleilaxu bestow names," Edric said. "But the names can be changed. The Tleilaxu name is of little importance."

This is a Tleilaxu thing, Paul thought. There's the problem. The Bene Tleilax held little attachment to phenomenal nature. Good and evil carried strange meanings in their philosophy. What might they have incorporated in Idaho's flesh — out of design or whim?

Paul glanced at Stilgar, noted the Fremens' superstitious awe. It was an emotion echoed all through his Fremens' guard. Stilgar's mind would be speculating about the loathsome habits of Guildsmen, of Tleilaxu and of *gholas*.

Turning toward the *ghola*, Paul said: "Hayt, is that your only name?"

A serene smile spread over the *ghola's* dark features. The metal eyes lifted, centered on Paul, but maintained their mechanical stare. "That is how I

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am called, my Lord: Hayt."

In her dark spy hole, Alia trembled. It was Idaho's voice, a quality of sound so precise she sensed its imprint upon her cells.

"May it please my Lord," the *ghola* added, "if I say his voice gives me pleasure. This is a sign, say the Bene Tleilax, that I have heard the voice . . . before."

"But you don't know this for sure," Paul said.

"I know nothing of my past for sure, my Lord. It was explained that I can have no memory of my former life. All that remains from before is the pattern set by the genes. There are, however, niches into which once-familiar things may fit. There are voices, places, foods, faces, sounds, actions — a sword in my hand, the controls of a 'thopter . . ."

Noting how intently the Guildmen watched this exchange, Paul asked: "Do you understand that you're a gift?"

"It was explained to me, my Lord."

Paul sat back, hands resting on the arms of the throne.

*What debt do I owe Duncan's flesh?* he wondered. *The man died saving my life. But this is not Idaho, this is a gholia.* Yet, here were body and mind which had taught Paul to fly a 'thopter as though the wings grew from his own shoulders. Paul

knew he could not pick up a sword without leaning on the harsh education Idaho had given him. A *ghola*. This was flesh full of false impressions, easily misread. Old associations would persist. *Duncan Idaho*. It wasn't so much a mask the *ghola* wore as it was a loose, concealing garment of personality which moved in a way different from whatever the Tleilaxu had hidden there.

"How might you serve us?" Paul asked.

"In any way my Lord's wishes and my capabilities agree."

Alia, watching from her vantage point, was touched by the *ghola's* air of diffidence. She detected nothing feigned. Something ultimately innocent shone from the new Duncan Idaho. The original had been worldly, devil-may-care. But this flesh had been cleansed of all that. It was a pure surface upon which the Tleilaxu had written . . . what?

She sensed the hidden perils in this gift then. This was a Tleilaxu thing. The Tleilaxu displayed a disturbing lack of inhibitions in what they created. Unbridled curiosity might guide their actions. They boasted they could make anything from the proper raw material — devils or saints. They sold killer-mentats. They'd produced a killer medic, overcoming the Suk inhibitions against the taking of human life

to do it. Their wares included willing menials, pliant sex toys for any whim, soldiers, generals, philosophers, even an occasional moralist.

Paul stirred, looked at Edric. "How has this gift been trained?" he asked.

"If it please my Lord," Edric said, "it amused the Tleilaxu to train this *ghola* as a mentat and a philosopher of the Zensunni. Thus, they sought to increase his abilities with the sword."

"Did they succeed?"

"I do not know, my Lord."

Paul weighed the answer. Truthsense told him Edric sincerely believed the *ghola* to be Idaho. But there was more. The waters of Time through which this oracular Steersman moved suggested dangers without revealing them. *Hayt*. The Tleilaxu name spoke of peril. Paul felt himself tempted to reject the gift. Even as he felt the temptation, he knew he couldn't choose that way. This flesh made demands on House Atreides — a fact the enemy well knew.

"Zensunni philosopher," Paul mused, once more looking at the *ghola*. "You've examined your own role and motives?"

"I approach my service in an attitude of humility, Sire. I am a cleansed mind washed free of the imperatives from my human past."

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"Would you prefer we called you Hayt or Duncan Idaho?"

"My Lord may call me what he wishes, for I am not a name."

"But do you enjoy the name Duncan Idaho?"

"I think that was my name, Sire. It fits within me. Yet . . . it stirs up curious responses. One's name, I think, must carry much that's unpleasant along with the pleasant."

"What gives you the most pleasure?" Paul asked.

Unexpectedly, the *ghola* laughed and said: "Looking for signs in others which reveal my former self."

"Do you see such signs here?"

"Oh, yes, my Lord. Your man Stilgar there is caught between suspicion and admiration. He was friend to my former self, but this *ghola* flesh repels him. You, my Lord, admired the man I was . . . and you trusted him."

"Cleansed mind," Paul said. "How can a cleansed mind put itself in bondage to us?"

"Bondage, my Lord? The cleansed mind makes decisions in the presence of unknowns and without cause and effect. Is this bondage?"

Paul scowled. It was a Zensunni saying, cryptic, apt — immersed in a creed which denied objective function in all mental activity. *Without cause*

and effect! Such thoughts shocked the mind. *Unknowns?* *Unknowns* lay in every decision, even in the oracular vision.

"You'd prefer we called you Duncan Idaho?" Paul asked.

"We live by differences, my Lord. Choose a name for me."

"Let your Tleilaxu name stand," Paul said. "Hayt — there is a name that inspires caution."

Hayt bowed, moved back one step.

And Alla wondered: *How did he know the interview was over? I knew it because I know my brother. But there was no sign a stranger could read. Did the Duncan Idaho in him know?*

Paul turned toward the Ambassador, said: "Quarters have been set aside for your embassy. It is our desire to have a private consultation with you at the earliest opportunity. We will send for you. Let us inform you further, before you hear it from an inaccurate source, that a Reverend Mother of the Sisterhood, Gaius Helen Mohiam, has been removed from the heighliner which brought you. It was done at our command. Her presence on your ship will be an item in our talks."

A wave of Paul's left hand dismissed the envoy. "Hayt," Paul said, "stay here."

The Ambassador's attendants backed away towing the tank.

Edric became orange motion in orange gas — eyes, a mouth, gently waving limbs.

Paul watched until the last Guildsman was gone, the great doors swinging close behind them.

*I've done it now, Paul thought. I've accepted the ghola.* The Tleilaxu creation was bait, no doubt of it. Very likely the old hag of a Reverend Mother played the same role. But it was the time of the tarot which he'd forecast in an early vision. The damnable tarot! It muddied the waters of Time until the prescient strained to detect moments but an hour off. Many a fish took the bait and escaped, he reminded himself. And the tarot worked for him as well as against him. What he could not see, others might not detect as well.

The *ghola* stood, head cocked to one side, waiting.

Stilgar moved across the steps, hid the *ghola* from Paul's view. In Chiakobsa, the hunting language of their *sietch* days, Stilgar said: "That creature in the tank gives me the shudders, Sire, but this *gift!* Send it away!"

In the same tongue, Paul said: "I cannot."

"Idaho's dead," Stilgar argued. "This isn't Idaho. Let me take its water for the tribe."

"The *ghola* is my problem, Stil. Your problem is our prisoner. I want the Reverend Mother

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guarded most carefully by the men I trained to resist the wiles of Voice."

"I like this not, Sire."

"I'll be cautious, Stil. See that you are, too."

"Very well, Sire." Stilgar stepped down to the floor of the hall, passed close to Hayt, sniffed him and strode out.

*Evil can be detected by its smell,* Paul thought. Stilgar had planted the green and white Atrides banner on a dozen worlds, but remained superstitious Fremem, proof against any sophistication.

Paul studied the gift.

"Duncan, Duncan," he whispered. "what have they done to you?"

"They gave me life, m'Lord," Hayt said.

"But why were you trained and given to us?" Paul asked.

Hayt pursed his lips, then: "They intend me to destroy you."

The statement's candor shook Paul. But then, how else could a Zensunni-mentat respond? Even in a *ghola*, a mentat could speak no less than the truth, especially out of Zensunni inner calm. This was a human computer, mind and nervous system fitted to the tasks relegated long ago to hated mechanical devices. To condition him also as a Zensunni meant a double raudine messiah

tion of honesty . . . unless the Tleilaxu had built something even more odd into this flesh.

Why, for example, the mechanical eyes? Tleilaxu boasted their metal eyes improved on the original. Strange then, that more Tleilaxu didn't wear them out of choice.

Paul glanced up at Alla's spy hole, longed for her presence and advice, for counsel not clouded by feelings of responsibility and debt.

Once more, he looked at the *ghola*. This was no frivolous gift. It gave honest answers to dangerous questions.

*It makes no difference that I know this is a weapon to be used against me,* Paul thought.

"What should I do to protect myself from you?" Paul asked. It was direct speech, no royal "we," but a question as he might have put it to the old Duncan Idaho.

"Send me away, m'Lord."

Paul shook his head from side to side. "How are you to destroy me?"

Hayt looked at the guards, who'd moved closer to Paul after Stilgar's departure. He turned, cast his glance around the hall, brought his metal eyes back to bear on Paul, nodded.

"This is a place where a man draws away from people," Hayt said. "It speaks of such power

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that one can contemplate it comfortably only in the remembrance that all things are finite. Did my Lord's oracular powers plot his course into this place?"

Paul drummed his fingers against the throne's arms. The mentat sought data, but the question disturbed him. "I came to this position by strong decision . . . not always out of my other . . . abilities."

"Strong decisions," Hayt said. "These temper a man's life. One can take the temper from fine metal by heating it and allowing it to cool without quenching."

"Do you divert me with Zensunni prattle?" Paul asked.

"Zensunni has other avenues to explore, Sire, than diversion and display."

Paul wet his lips with his tongue, drew in a deep breath, set his own thoughts into the counterbalance poise of the mentat. Negative answers arose around him. It wasn't expected that he'd go haring after the *ghola* to the exclusion of other duties. No, that wasn't it. Why a Zensunni-mentat? Philosophy . . . words . . . contemplation . . . inward searching . . . He felt the weakness of his data.

"We need more data," he muttered.

"The facts needed by a mentat do not brush off onto one as you might gather pollen on your robe

while passing through a field of flowers," Hayt said. "One chooses his pollen carefully, examines it under powerful amplification."

"You must teach me this Zensunni way with rhetoric," Paul said.

The metallic eyes glittered at him for a moment, then: "M-Lord, perhaps that's what was intended."

*To blunt my will with words and ideas?* Paul wondered.

"Ideas are most to be feared when they become actions," Paul said.

"Send me away, Sire," Hayt said, and it was Duncan Idaho's voice full of concern for the young master.

Paul felt trapped by that voice. He couldn't send that voice away, even when it came from a *ghola*. "You will stay," he said, "and we'll both exercise caution."

Hayt bowed in submission.

Paul glanced up at the spy hole, eyes pleading for Alia to take this *gift* off his hands and ferret out its secrets. *Gholas* were ghosts to frighten children. He'd never thought to know one. To know this one, he had to set himself above all compassion . . . and he wasn't certain he could do it. Duncan . . . Duncan . . . Where was Idaho in this shaped-to-measure flesh? It wasn't flesh . . . it was a shroud in fleshy

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shape. Idaho lay dead forever on the floor of an Arrakeen cavern. His ghost stared out of metal eyes. Two beings stood side by side in this revenant flesh. One was a threat with its force and and nature hidden behind unique veils.

Closing his eyes, Paul allowed old visions to sift through his awareness. He sensed the spirits of old love and hate spouting there in a rolling sea from which no rock lifted above the chaos. No place at all from which to survey turmoil.

*Why has no vision shown me this new Duncan Idaho?* he asked himself. *What concealed Time from an oracle? Other oracles, obviously.*

Paul opened his eyes, asked: "Hayt, do you have the power of prescience?"

"No, m'Lord."

Sincerity spoke in that voice. It was possible the *ghola* didn't know he possessed this ability, of course. But that'd hamper his working as a mentat. What was the hidden design?

Old visions surged around Paul. Would he have to choose the terrible way? Distorted Time hinted at this *ghola* in that hideous future. Would that way close in upon him no matter what he did?

*Disengage . . . disengage . . . disengage . . .*

DUNE MESSIAH

The thought tolled in his mind.

In her position above Paul, Alia sat with chin cupped in left hand, stared down at the *ghola*. A magnetic attraction about this Hayt reached her. Tleilaxu restoration had given him youth, an innocent intensity which called out to her. She'd understood Paul's unspoken plea. When oracles failed, one turned to real spies and physical powers. She wondered, though, at her own eagerness to accept this challenge. She felt a positive desire to be near this new man, perhaps to touch him.

*He's a danger to both of us, she thought.*

—FRANK HERBERT



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# FULL COMMITMENT

by ROBERT S. MARTIN

*Morale had never been higher.  
It was so good that it was quite  
baffling — and terribly dangerous!*

Senator Clint of California followed his intense young guide out of the underground prefab bunker.

"All clear, sir," the guard told him. "For a little while, at least."

The senator exhaled a deep breath. "No wonder I had a hard time forcing this trip. Washington probably had my safety in mind." But then he frowned. "Among other things."

"At that," the guide said, "you must move a lot of air, sir. You are the first official here in Burma in years." He coughed. "Uh— you've had similar answers from all of the ten you've questioned, so far. So why bother any more of these kids?"

Clint stared at such impudence. To a United States senator. From a kid of maybe twenty calling others kids.

"I haven't undertaken this dangerous mission merely to 'bother' anyone," he answered coldly. He halted his steps brusquely — and thereby forced the guide to stop. "I'll question this young man," he said decisively.

The young man he indicated was cleaning a carbine. The guide wet his lips and said nothing. The senator asked his usual question.

"What's your opinion of this conflict you're in? I am Senator Clint of California."

The boy looked into the distance, as if shy at meeting a Sen-

ator. "I've thought it all out myself," he said, "and if they are to be stopped, this is the place. Neo-colonialism must not be allowed to make slaves of all men. This terror has to be kept from engulfing the world."

"Thank you," Clint said. He moved on then, his suspicion additionally confirmed, the suspicion that had made him risk his life getting into this sub-radiation zone. Keeping his head down as directed by the guide, he crept to the other side of the shelter, where a boy was leaning on a bunker, his face knotted in apparent confusion.

Clint thought of speaking, but the guide tugged gently at his sleeve and motioned him away.

The senator didn't object this time, not being sure if he should have spoken to the boy. "He did not seem busy," he said. "Just seemed to be mulling over something as if puzzled or confused."

"Confused is the word all right, Senator. He's due in."

"Battle fatigue?"

"You could say that. Yes."

"Might help if I visit him in the hospital." The senator knew how far that would get, having tried to visit service hospitals back home.

"They don't allow that." The guide was being impudently sharp again. "Question this one." It was almost an order.

Clint wasted no further words on the sick boy, but turned to the one indicated. "Why are you here?" he asked. "I'm Senator Clint."

"I've given it a lot of thought," the baby face said. "And if the march of imperialism is to be halted, I have to help. These slave-masters must not be allowed to dominate mankind. This terror must be stopped here in Southeast Asia or it will engulf the world surely in a tide of evil capitalist imperialism."

"Thank you," Clint said.

He turned away from the boy, and spoke to his guide. "I've seen and heard all I need. Now about getting out of this hellfire?"

"Good idea, Senator, for your own safety," the guide said. "First, though, the tape."

Clint thought his slight tape-control motions had been undetected. The guide hadn't given a sign he noticed.

"It's my property," he said.

"Care to stay here in Burma with it?" the guide said. "Or leave without it?"

There was no "sir," and there was an ominous frown.

Clint took the recorder from his cigarette package and handed it over.

Back in Los Angeles Clint took a cab to the downtown induction center on Broadway. A

line there queued halfway up the block and straggled around the corner. He could peer inside the building and see the room filled with young men moving first toward a desk, then singly into a rear room, the door of which was guarded by two grim men with machine-guns.

"Excuse me," he said to the young man first in line. A boy of perhaps fourteen. He thought here he would get less abashed answers if he did not identify himself. "If you don't mind — what is your reason for going into the service?"

"They tapped me," the boy said, seeming almost cynical.

"How about you?" he asked the boy next in line.

"I kicked and I screamed," the boy said. "But they still said I had to fight."

No one smiled.

The senator moved to the next boy.

"What can I do?" the boy said without being asked. "Go to jail?"

"Thanks, boys," Clint said, and turned toward the building.

"I am Senator Clint," he said to the rocky-jawed sergeant at the desk.

The sergeant stood, nodded, smiled. He was not surprised, or if he was, he hid it well. "An honor, sir."

Had word gone ahead of him?

Clint wondered. He felt they expected him. And he wanted to see behind that guarded door.

"I know you won't mind," he said, "if I speak to some of the new recruits after you talk to them?"

The sergeant widened his smile. "Sorry, Senator." He spread a hand apologetically. "Regulations, you know. Red tape keeps our hands tied. No one is allowed to talk to a man after he passes this desk." He added: "We don't like the rule either," after looking directly into the senator's glaring eyes.

"Where do they go from here?"

"From here? After a complete physical here, to a service hospital for any minor thing. Maybe a tooth filled — or some may even need a major operation."

"Well, thanks, Sergeant, for the courtesy," the senator said, and left the still-smiling sergeant.

He took another cab to his home in Beverly Hills. His wife was out. He had not wired her, for a purpose. Senator Clint started a search for a once-discarded but now precious and rare paperback book. A curiosity, he just didn't believe when he had found it. A fantasy of a type once written, now frowned upon — but this one had not been represented as a fantasy, but as factual.

There are different ways of

changing history. One is by effecting change, and so making history; another is by changing history after it happens. To do the latter, a government must call in from time to time any book which contradicts the newer truth. Once gold had been called in when the government decided private possession of the metal was against the public interest.

Another time, books. Of course, replacements were issued, and holders of valid receipts were reimbursed in kind on a one-to-one basis.

Finding the paperback finally, Senator Clint flew back to Washington, leaving only a scribbled note for his wife.

In the cloakroom of the Senate he collared McAdam of Illinois, one man the years of intimacy had shown he could trust. "Let's take a stroll before breakfast," he said to McAdam quietly. Three blocks from the Capitol the two exchanged glances. Safe. Without a word both turned on their transistor radios, and turned up the volume.

"Now," Clint said. "I'm going to drop a bomb today, on the Senate floor."

"Were you inside a service hospital?"

Clint shook his head. "I tried. You just don't get in — senator or no. He turned up the transistor

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again. "That — that 'cloak' I mentioned?"

"Oh, yes." McAdam nodded without finding it their code word.

"I've found it. We *did* start to fight against communism, just as I remembered reading. But somewhere back there Russia and the others realized they had failed, and they adopted capitalism. But they had undermined us from within — and we traded systems."

"I'd like to back you up, Joe," McAdam said. "But we can't prove it without the — er — 'cloak.'"

Silently Clint handed him the paperback book. "Don't mislay that."

"I'll glance at it between now and then. And I'll be behind you all the way. Meantime, let's have breakfast."

McAdam added as they strolled back toward the Capitol: "And take it easy. You're not looking well. Better relax more." "Nonsense. The trip did me good. I noticed my pink cheeks this morning shaving."

"Pink, Joe? Flushed is the word. You're the heart type. Slow down."

He pondered that. Heart type? No one had ever said so before. McAdam had started out to be a doctor, though. He should know.

"For one thing," McAdam said,

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as the waitress waited for a decision: "You've eaten enough breakfast, with your heart. And better taper off on the smoking."

The latter was said as Clint reached for a cigar.

"Taper off with cigarettes," McAdam said. "Here." He held out his own case for Clint. "We need you, you know."

That sounded ominous. Clint took a cigarette without arguing.

He lit it — then felt himself blacking out a minute later.

It was three days before he came out of it and was able to read of his seizure flying home for a needed vacation. Heart attack. In fact, as a waitress verified (though he could not remember) he had just been discussing his heart condition with Senator McAdam of Illinois. Working too hard, emotions aroused.

They certainly had been, Clint thought. Seeing those fine boys even laying down their lives to stop the terror of the bloody-fanged capitalist imperialists.

His wife was waiting at the airport, new clothes, new hairdo.

"It's been a long time," she said, kissing him. "Let's hurry."  
"Yes, we'll hurry home," Clint said. "But to get you under a cold shower. I don't want to divert needed energy from my life's great program.

—ROBERT S. MARTIN

GALAXY

# THE CITY THAT WAS THE WORLD

By James Blish

Illustrated by ADKINS

*From his mile-high tower  
in the mile-high city,  
John Hillary Dane saw a future  
he hoped would never be.*

I  
Nobody but John Hillary Dane would even have considered trying to build a major conservatory in the snow-rimmed crater of Coropuna, and nobody — unless you counted a government as somebody — but Dane could actually have done it.

The next question was "Why?"

But Toby Walker had asked himself that question about Dane hundreds of times since they had met, the first night of their freshman year in college, without getting more than ten or a dozen satisfactory answers. Even those few had been enough for Toby's newspaper to make Dane Toby's intermittently permanent assignment.

The paper had been only mildly disappointed at Toby's failure to get any answer to his last such question: Why had Dane put up an office building in Denver *one mile high*? One answer out of twenty-five from Dane was the highest score of any journalist in the world, and they knew it.

Only this consideration, which Toby knew as well as his employers, prevented him from considering the present segment of his assignment as a sort of punishment. Coropuna has few competitors as one of the Godforsaken spots in Peru.

Just getting a look at the extinct volcano had been difficult enough. It lies well more than 14° south of the equator, where most of the country consists of an altiplano, or *puna*, a basin about twelve thousand feet high, which is overshadowed on both sides by the two ranges of the Cordillera de los Andes. To get to the *puna*, you first had to cross the Cordillera Real (by plane, there was no other way). You then found yourself looking across tiny Indian fields to a salt swamp, far south of which glittered the northernmost reach of Lake Titicaca; on the other side of that, a grassy, uninhabited plain which ended in a tremendous plateau of ancient lava. From this horizon the volcanic

cones of the Cordillera Occidental broke into the sky with the isolated violence of gunshots.

And the king of these was Coropuna, 21,700 feet high, the second-highest peak in Peru. The original estimate for building Dane Observatory in such a spot had been thirty million dollars: half of it for a 200-inch telescope, five million more for a 1000-inch radio telescope, another two million for buildings and instrumentation, and all the rest for transportation. Everything had to come in by air as far as the *puna*. From there to the *ceja* or eyebrow of Coropuna, Dane had built a single-track cogwheel railroad; from the *ceja* to the crater, everything went by human hand and back, brick by brick, girder by girder.

Dane had already spent the thirty million, plus five million more contributed by the Ford Foundation, and still the thing wasn't done. He had started on it in 1986, and that had been ten years ago.

The mile-high skyscraper had gone up in the meantime. There was one thing about John Hillary Dane that was no secret: he was the richest man not only in the world, but in all of history.

Toby had already asked all the usual journalistic "whys" and

been answered readily. He already knew why a 200-inch optical telescope was desirable in the Southern Hemisphere: the skies down there offer a multitude of relatively neglected objects, including the Magellanic Clouds, the nearest galaxies to our own, and Shapely Center, the heart of our own galaxy.

Well, but in that case, wouldn't Chile have been still better, because farther south? Certainly, but the Peruvian government had put up fewer roadblocks. All right, then why the *second* highest peak in Peru — why not Huascarán? Many reasons: Huascarán is less than a thousand feet higher, it's six degrees further north, and the only manpower available around it is a few Indians living in burrows like animals; but above all, Coropuna is topped by a crater, whereas Huascarán has a peak like a convention of machetes. Could not you have blown the top off it? No, because the United States has treaty obligations against giving me any bomb for the purpose, and the Peruvians would have understandable objections to such an explosion within their borders; anyhow, all the other objections to Huascarán still stand. But aren't there a lot of earthquakes in the Coropuna area? Yes, but we're building for them.

All of these answers would not satisfy Toby's editors, because Dane would give them to anyone who asked. The real, the essential question was: Why was Dane, who as an instrument-maker qualified as a sort of physicist who previously had been innocent of any interest in astronomy, committing such a vast philanthropy?

Dane would not answer that one. Toby had some knowledge of the man's personal life which had led him to some guesses, but all they added up to was parlor psychoanalysis — certainly nothing he would even consider printing. His newspaper was not that kind of newspaper; Toby was not that kind of a reporter, and above all, Dane was a friend of his.

For Dane, time was the evil. Time present, time past, time to come; *Time is, Time was, Time is past!* Nothing that he did gave reason to what he was but this; at his heart's core was the word, tolling like a bell. Time, Time, Time!

And yet every man knows, as one unregretful poet said, that Time is the bridge that burns behind us. Why was Dane, who was so powerful, and by all ordinary standards so free, so desperate to revise the ages, and even the fleeing minutes?

And why, for that matter, did he have to build physical bridges

from one second to another?

Toby was not to learn the answer to that question for twenty years, and even then, not the whole answer — not even Dane ever learned that. Nevertheless, the burden of knowledge — and not only about Dane — that the observatory in Coropuna was to bring him was very nearly more than he could bear.

## II

They were standing at the moment on the platform which would eventually bear the radio telescope, both of them heavily clad in furs and wearing oxygen masks. The air was so thin that it would not carry sound any useful distance; Toby had a button in his ear, a mike at his mouth.

The crumbling rim of the crater, much eroded but with the raggedness of its outline softened by permanent snow, was their horizon. Some distance away, the completed dome of the optical observatory, in which the great mirror had already been installed and was being cooled degree by degree, at about half a degree a day, toward the permanent temperature of the crater, frowned down upon them. Behind it and to the right was the solar observatory, atop a hundred-foot tower in order to clear the crater ramps.

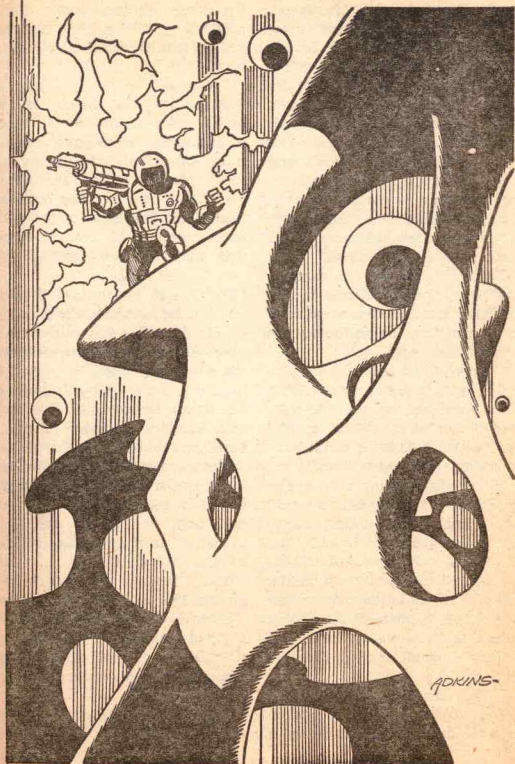
The radio telescope thus far consisted of the circular metal platform, like that for some unimaginably huge anti-aircraft gun, which in turn was encircled by a railroad track. On the track were two flatcars, 180° apart from each other and connected by a cantilever bridge which was to bear the trunnions (bought at surplus from a mothballed Argentinian battleship; no part of the cost of Dane Observatory was waste) which eventually would support the 1000-inch dish of the telescope itself.

The bridge was still under construction and in fact was only provisionally moored on one of the two flatcars; exact, non-warping alignment was essential and couldn't be made sure of until more of the final load, or a test version of it, had been put on the structure. Five men were aloft on it, with torches — one Northerner and four Indians. Thick black power cables ran back and forth across the platform, like a nest of copulating snakes.

The simile was not brilliantly original, but as a journalist Toby was not accustomed to pausing to search for the *mot juste*. Besides, one of the cables actually was moving slowly, very much in fact like a boa awakening.

Toby pointed. "John, what makes that thing move?"

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Dane's goggle-eyes glinted in the heatless sunlight. "Hysteresis, probably," he said, his voice sounding doubly remote in the low fidelity of the walkie-talkie. "Up here we're working at virtually cryogenic temperatures, which means those cables carry even more power than their size would suggest. So if there's any flaw that sets up resistance heating, the effect is considerable. . . . Still, it shouldn't be great enough to cause mechanical motion; I'd better have it checked."

There was no copy in that, or anyhow, not more than a line or so. Toby tried one more journalistic question, as indirectly as he could manage.

"You couldn't have found a remoter spot, it seems to me. Why didn't you just put the two-hundred-incher on the Moon and be done with it? At least you'd have no seeing troubles up there."

"Now, you're being obtuse, Toby. Putting it on the Moon would mean putting it in a deeper crater, which would restrict its field of view by ten; it would still be a hundred times as vulnerable; and a thousand times as expensive. The government's spent more than twice what I have, just getting a small orbital observatory up."

"True enough."

Dane turned away, to beckon to a distant figure, probably a

foreman. At the same moment, the slowly writhing snake hitched itself upward a little, and began to smoke along its sharpest bend.

"John —"  
Abruptly, the black sheath boiled away on the inside curve of the kink, exposing a basket-work of metal underneath already glowing white. The cable, which had been bending outward toward the perimeter of the platform roughly in Dane's direction, snapped back toward Toby.

Toby was not a fast thinker, but he had battlefield reflexes. He dived for the cable, grabbing for the opposite sides of the white-hot lesion. It parted in his face, the ends pulling out of his hands in opposite directions and drawing between them a screaming blue-green electric arc.

Toby's mittens vanished in two black puffs. The ends of the cable, still connected by the arc, rose high in the air and then skimmed low over the surface of the nearer flatcar, the arc cutting through the provisional girders like so much soft cheese. The arc went out and the cables flopped lifelessly to the deck, but the bridge at once began to topple, shedding screaming Indians like fruit.

Toby was already on his feet and charging, low, like a foot-

ball tackle. His shoulder took Dane low over one hip and they both went down with a slam, sliding along the searingly cold metal of the platform. Dane rolled and scrambled to a crouch as if instantly ready to fight, but as he reached his knees his eyes flicked skyward and he saw the great spread of metal girders descending upon them both like the spiderweb of God. He ran for the railroad track, Toby close behind him.

The whole mountain seemed to shudder as the bridge fell on its side to the platform, though the noise was absurdly tinny in the almost non-existent air.

Dane rose slowly and looked from side to side, his masked head scanning like a radar tracker. It took him thirty or forty seconds, apparently, to figure out the wreckage and what had caused it. Then he looked down at Toby and his shoulders jerked as if only this had caused him any shock.

Toby looked down too. He was still in shock, and though he remembered having seen his mittens vaporized in the great arc, he still seemed to be wearing them. Then he realized that it was his hands themselves he was looking at, their skin completely carbonized. And of course he could feel nothing; the hands were probably already frozen.

Dane bawled for a medico in a voice that nearly broke the eardrum of the ear in which the walkie-talkie button was lodged — first in Spanish, then in English, and then in what Toby suspected was Inca.

It was about here that the pain came through, and Toby passed out, with gratitude.

He came to, slowly, in what he recognized as the sickbay of Dane's personal supersonic jet, which was already airborne. He was alone and in bed, and in no pain at all. He looked down the counterpane at his own hands; they were only two immense balls of snow-white wrappings. On a shelf beside his head were several glasses, a bottle of pills and a bent plastic drinking tube. Nothing was to be seen through the nearest window but indigo sky, with two stars in it.

There was no difficulty in figuring out what had happened. He had been given an immense shot of morphine or something similar, some quick first aid, and lowered by portage and by cogwheel to the *puna*; thence flown in some small craft to the town of Puna itself; and then put aboard Dane's business aircraft. Evidently the drug was still holding the pain back. That, and his inability to guess what day it was — or even what time of day,

for at the altitudes Dane's plane had to fly, the sky was always starred and indigo—both helped him to think and made him feel peculiarly detached, almost as though he were floating in some cloud-like medium much softer than any possible linen.

After a while, he dozed and was awakened by the sound of the door to the sickbay being opened. Dane's physician peered in at him, ducked back, beckoned and vanished.

Dane himself came in and sat down beside the bed, resting his elbows on his knees and bending over Toby. His perennially impassive face, topped by its crew-cut of only slightly graying red hair, now wore something akin to an expression, although Toby could not figure out what it was. At a guess, it was a mixture of concern, self-reproach, grimness and pain; but no man's face could show such a mixture all at once, and Toby had had enough experience at mis-reading Dane's iron countenance to discount the guess out of hand.

"How do you feel?" Dane said.

"I don't feel a thing, thank God," Toby said. "Where are we going? And as long as you raise the question, how do I feel?"

"Rotten," Dane said. "You've got second-degree burns all over both hands, but luckily they froze so fast that the tendons

don't seem to be involved. Or so Charley says. We're going to Denver. I've got some good people there who can probably regrow the skin for you. I doubt that they could have done a thing about the musculature."

"That's good," Toby said, beginning to feel floaty again. "I'll be able to type, and hold a pencil, and all that?"

"Charley says so. If we get there on time — and we will."

Toby sighed. "John, I don't know why the hell I follow you around. It isn't the job. You've done nothing but get me into one jam after another since I was sixteen, beginning with that monumental drunk on cooking sherry. I still remember how I hated you the next morning in Advanced Algebra, when you showed up without a hangover."

"I had the world's worst," Dane said in a low voice. "Nobody can get drunk on cooking sherry without paying for it. I just wouldn't let it show."

Hmm. Add one note to the parlor psychoanalysis.

"If it comes to that," Dane said, "this is the second time you have saved my life. You don't even know what the first time was, and I'm not ever going to tell you, either. But I owe you an answer to another question, now. A small payment for a favor, but I have to weigh such

things in my own balance."

"You're saving my hands," Toby pointed out. "They're my life. But don't let me talk you out of an answer! What's the question?"

"That's very far from being the issue," Dane said slowly. "You won't thank me for it. For one thing, you won't be able to publish it. But what really counts is this: The reason why I don't answer some questions is because I think the answers are fatal. You're in no condition to take me seriously, but think it over. I mean what I say."

"I know you do. But curiosity is proverbially fatal. Come on, John. What is the question? The telescope?"

"NO. No, indeed. But if you still want it, I'm going to show you why I built a mile-high office building. Not just tell you — show you."

"You are a fiend, John Hillary Dane. You know I've been stewing over that for ten years."

"Yes," Dane said, "and I plan to use that. Please remember, Toby, that I warned you. The answers to these questions are killers. This one will almost surely kill you."

Toby looked down at his hands and listened to the expensively faint sound of the jet's engines. At last he said: "Hang out more banners along the castle walls." THE CITY THAT WAS THE WORLD

III

The Dane Tower still stands, and probably will continue to stand for at least another century, empty though it is. It was well built, and the Denver area is not notable for earthquakes (if one excepts the artificial ones of 1968-80).

From any point of view, it looks in silhouette like this: ) (, except that the two parentheses are pulled skyward so far that their inward curvature takes the acutest of eyes to detect. It is the first thing one sees poking up over the horizon as one approaches the Denver plateau, and of course it utterly dominates the city. Black silhouette, it turns out to be black also in closeup, and windowless.

The central offices of all Dane's business interests had been relocated into it, but although these occupied more space than would have been taken up by the offices of more than four or five of the world's governments, they did not fill a third of the Tower; and because the Tower was so forbidding and had no windows, the remaining space for rent went mostly unrented, and half of the firms that originally located there for prestige moved out again after only a few years. An elevator trip that carries one half a mile or more is not a good

way to begin a business day, or to end one, either, and the one core of elevator banks in the Tower gave mysteriously slow service even within their designed capacity. The esplanade around the base of the building was small, and there was no provision for shops; and after a while, nobody but Dane's employees went to the Tower at all, on Dane busses.

Altogether, it was an enterprise completely out of character for Dane, who had built much of his fortune on a system of cost accounting that would have been the envy of any Bureau of Inland Revenue. At the very least, one would have thought, a man who owned the only mile-high building in the world — built on countryside that was itself a mile above sea level — would have thought to have put a veranda and an expensive restaurant on top of it; but on the contrary, the top of Dane Tower, which looked like it was wearing a very tiny black derby, was as closed to visitors as the file room of a Swiss bank.

Instead, Toby found, the great rotunda under the derby (which was not in fact black, but made of panels of one-way window glass) was encircled by small cubicles which might have been either offices or laboratories; and

its center was totally taken up by huge, crouching, whining machines, reminding him irresistibly of a Siemens-Schuekert dynamo shed somehow hoisted two miles into the air as if on top of some tectonic piston. Most of the scurrying employees he saw wore business trousers, but with white coats over them, like pharmacists. He found this vaguely comforting, since his hands, although healing, were still lightly swathed; but it offered him no clue as to what was going on here. These people could be clerks, scientists, engineers, all three, or none of the three.

"Wait here," Dane said, parking Toby outside a double door. Toby waited. He was still a little light-headed, too; after all, in addition to having been near death, he had spent some months miles up in the air, and here he was again.

After a while, the double doors opened, and Dane took him into what proved to be quite an ordinary sort of conference room, complete with table, discreet hangings and a not-quite-concealed outlet for a projection room. There were even yellow pads and pencils neatly laid out, and ashtrays mathematically in place; but some of the trays were half-filled, and some of the pads scribbled upon, suggesting that Dane had just evicted an on-go-

ing meeting. Toby sniffed for smoke, but he himself smoked so heavily that it was only a token sniff.

Besides, he was feeling not less, but more light-headed, and light-bodied, too. When Dane gestured him to a seat, he almost seemed to float to it. He could not guess why, for his first assumption — that he was still convalescent — had been contradicted by his observation of the staff. They too had seemed to be moving in long, gliding steps, like people in a dream, or on the Moon. Toby knew very well that being in a fixed position only two miles above sea level did not noticeably dilute gravity; after all, in Coropuna he had been nearly twice as high up and had noticed no such effect.

He tried automatically to pick up a pencil, but his hands were still too bundled up for that — and in any case, Dane had warned him that the story was unpublizable. Dane smiled gently at the aborted gesture, and said:

"You'll be too busy to write pretty soon, Toby. In the meantime, I want to lay out for you a few facts that you'll need to know, before either of us can behave sensibly. To begin with, I will answer your question.

"I built the Dane Tower here, in Denver, because in exactly fifty-seven years from now, Den-

ver will be the capital of the world. And I built it a mile high because, fifty-seven years from now, almost all of the land areas of the Northern Hemisphere, and much of them in the Tropic of Capricorn, too, will be covered by a continuous city running from a mile to two miles deep. This platform on which we're now sitting will be the center of — of a sort of public square, which will be both a center of government and a shrine for all of the land-bound world."

"How do you know that?" Toby said. "Just from population statistics? Those wouldn't help you to predict the — the continuous city you're talking about."

"No, they wouldn't. Such computations of course suggested such an outcome — along with many other possibilities. But I'd never have built a Tower like this if I hadn't been sure. Come with me a moment and look at something; I see I'm not making it graphic enough. I've never talked to anybody with imagination about this before."

Dane stood up — yes, that strange lightness of body was not just a drug illusion — and skimmed to a wall hanging, which he parted to reveal a big window. Beyond the window was nothing but sky — no, not quite, for



shadowy peaks of the Rockies were barely visible in a stratospheric haze.

"In that direction," Dane said soberly, "in fifty-seven years, there will be a broad avenue, bordered by rather ramshackle buildings most of which will be four or five stories higher than where we are standing now. Most of them look quite inflammable. It's my impression that all the lower levels are nearly as ramshackle for several thousand feet down, and then become sturdier; and that even so, none of the whole complex would bear its own weight for an instant, if it weren't tied horizontally to a great many central, vertical members like the Dane Tower."

"You talk as though you've seen it."

"I have seen it. In a way. But before I explain that — and I'll do more than that, I'll also show you what I've seen — I want you to look at another, more immediate thing. It won't make instant sense to you, but I've got good reasons for presenting my evidence in this exact order and no other."

"You're the boss, John."

"No, but I'm trying. All right, come on out again. We'll be back."

Dane led Toby out into the humming, busy rotunda once more, and down the line of cubi-

cles to a door which was heavily sealed and insulated. There was a microphone mounted in the center of it, into which Dane spoke in a low voice. It was several minutes before he got an answer, and another long minute before the door was unsealed and pulled guardedly ajar, by another one of those ubiquitous people in white coats — this one a pale girl who gave Toby a strange impression that she was trying not to cry.

Inside, the cubicle had a mixed smell of animals and ozone and was quite hot. Along the right wall as Toby and Dane entered was a row of small cages, each of which contained two black kittens, all of whom set up a faint feeeping noise at the new visitors and began to mill around each other. Toby grinned at them, amused as always at the way only two kittens can imitate a mob scene when trying to draw attention.

"Look closer," Dane said. "You have no idea how hard they are to breed."

Toby looked closer, but for a moment saw nothing new. Then, all at once, he saw a whole series of singularities. All the kittens were the same age — about two months; all bore a white star on the forehead and a white blaze on the chest; and

each pair in each cage were identical twins.

"Breeding show cats is difficult enough," Dane added, "because they revert to alley-cats at the first cross — everything is double-recessive. But these are alley-cats to begin with, and they have to come out almost exactly alike. It took two Nobelists — a molecular biologist and a geneticist — to get this line started and guarantee that it'd keep on coming out like this. But it's required."

"By whom?"

"I'm not ready to answer that quite yet. But soon. In the meantime, look on the other side."

The other side consisted of a laboratory bench of formica or some such substance, set at the same level as the shelf on which the cats' cages sat. In the middle of it stood an object like a gallon jug of very thick glass, except that it had no neck, and had been opened vertically down the middle as though hinged at the back. Above it, on the shaft of a ringstand, hovered a tall torus of closely wound wire, obviously big enough in diameter to surround the jug when the jug was closed and the coil slid down around it.

"Time's short, I won't explain further yet," Dane said, and then to the pale girl: "This is close to transmission time, isn't it?"

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"Yes, Mister Dane, but —"  
"Go ahead. I'll vouch for Mister Walker."

Turning to the cages, the girl deftly extracted a kitten, swung to the apparatus, popped the kitten into the parted jug, and closed the sides. The kitten was now in a sitting position inside the jug, with only its head protruding. She now lowered the torus so that it surrounded the belly of the jug. In so doing, she brought into view an attachment like a shallow copper cap, which fitted snugly over the kitten's head between its ears; and, behind the "up" position of the coil, a wall clock.

*Feeep!* the kitten said, more in puzzlement than in protest.

The girl turned a switch, producing a heavy hum of power, so deep as to sound more like the warming up of a subway generator than anything that might be heard in a small laboratory. Her hand now moved to a key, and she began to watch the clock.

As the clock's sweep-hand passed whatever point she was awaiting, she depressed the key. There was a soft *pop!*, like the breaking of a small light bulb but without the accompanying glassy sound, and the kitten's head vanished.

Up went the coil and open came the jug, revealing that the rest of the kitten was gone too.

The girl repeated the operation with its twin, and then shut off the power.

"That's all there is to see here; we only send two on any given day, one day a week," Dane said. "Now let's go back to the board room."

"Send them where?" Toby said, already afraid he knew the answer.

"Into the future, of course. Come on, and I'll give you your own look. It won't be a very good one, but you'll see everything that we've managed to see. We can't very well do better than that."

All this trotting back and forth was not exactly decreasing Toby's confusion. Except for the spectacle of the vanishing kittens, he would have begun to suspect that Dane was losing his grip on reality, a phenomenon not infrequent in lonely men possessed, of, or by, virtually unlimited power.

In the conference room, Dane sat Toby down at the table with his back to the projection booth; and then, instead of picking up the conversation, picked up a telephone instead.

"Dane here," he said. "Get me Accounting . . . Hello, Sal? I want to arrange an open transfer of funds, in such a way that the remaining sum after income and gift taxes is one million dol-

lars. The recipient is Tobias R. Walker —"

"Hey, wait, damnit —"

Dane cut Toby off with a sharp gesture. "You'll find a dossier on him in the press file, including his bank and account number — oh, you know who he is. Good, that simplifies things. Yes, effective immediately."

"Now look here," Toby said, the instant Dane had hung up. "Maybe I did save your goddam life. But I did it out of friendship, and for that matter I would have done it out of simple decency for one of your Indians, or anybody. I damn well don't want to be paid off for it. Being shown what you're doing up here is more than enough!"

"My dear Toby, this is not a payoff. It is either a bribe or a commission, depending upon how you come to look at it after you have all the facts. Will you give me time to explain?"

"Well . . . I suppose so. But I warn you, the chances are ninety to one that I'll send the money right back, the moment I have the chance."

"I can't prevent that. I in my turn warned you that my answers tend to be fatal. In the present instance, even if you keep the money, you will have relatively little time to spend it, and perhaps none at all. Now, let's look at some pictures."

He touched one of a small portable rank of buttons, and hangings opposite the projection booth pulled aside. Another touch, and the room went dark.

#### IV

"As is now obvious," Dane's voice said in the blackness, "I've been fooling around with Time. The discovery of the effect was an accident, and the theory is dead secret; I intend to explain it to nobody, and to see to it that none of my experts leaks it, either. What matters for your purposes is what we found.

"Effectively, we can see a short distance into the future — not directly, but through a process which allows us to take still photographs, all of rather bad quality. We've taken thousands, and spent the better part of the last five years interpreting them. It took us several years just to realize that the altitude above the surface of the Earth of the camera is exactly matched to the altitude in the future. We got hundreds of murky, useless photos before we found that we had to be up two miles before we could see the surface of the world-city. Hence, the Dane Tower.

"I've had slides made of the key pictures. Here's the first one."

The screen lit up. The photo  
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— if that was what it was — was in black and white and seemed to show a street scene rather like the one Dane had described to Toby while they had been looking out of the window at the Rockies. Details, however, were impossible to make out; not only was the picture badly out of focus, but it had an overall milky quality, as if the camera had leaked light even before the shot had been taken.

"In general, they're all this bad," Dane said, "but in a given series of shots of the same scene, each one comes close to being sharp in a different small area. We've had composites made up of all the sharp spots which I can show you later, but I wanted you to see the originals first. Now, these are the people — a microscopic fraction of them."

The next slide showed the same scene, but there were figures in the street. They were vaguely graceful, and seemed to be clad in loose garments with long sleeves, like Arab robes. One face was almost in focus, and it was startlingly handsome, but Toby could not tell what sex it was.

"We know relatively little about the people who live in the lower levels. However, there seems to be no doubt that social status depends upon nearness to the surface, just as in *The Time Machine* or *Metropolis* or scores

of later works on the same theme. The people you see in the picture are not the ruling class, which is essentially an engineers' guild, but parasites of some sort, like Wells' 'Eloi'. They may be the children of the ruling class, or they may represent some more complicated social setup. We haven't been able to settle that.

"Not all the world-city is two miles high, by the way, but it's almost nowhere less than a mile high. I should think that this would be a distinction without a difference to the poor slobs who have to live at the bottom. We don't know how deep *under* the Earth all this runs, either, but again that's almost an academic question.

"Here is another shot of the people. You'll see that they seem to be conducting some sort of ceremony or celebration, or whatever. Or maybe it's just their equivalent of a Saturday night dance."

*Or maybe John Hillary Dane has just lost his marbles.* Toby recalled with a pang the fix Sir Arthur Conan Doyle had developed on Spiritualism, one outcome of which had been a passionate tract disguised as a novel called *The Land of Mist*. And Doyle, though remembered now almost solely for Sherlock

Holmes, had been one of the noblest, most versatile and most brilliant men of his era.

"The pictures in this series led us to a complicated but lucky accident. We had been trying to see if we could pull anything back from the future besides patterns of energy. Theoretically it was possible, but we found that we just couldn't muster the necessary power for it. The general energy level of the universe — what Milne called the  $t$ -tau relationship — is higher in the future than it is in the present, and given that plus the basic Einsteinian equation, grabbing even a tiny object from up there would call for a surge of power equivalent to several megatons. We couldn't confine it, not usefully.

"However, something else was working for us. Have you noticed anything odd about the gravity on top of this building?"

"Yes. I feel lighter. I thought it was just the drugs and so on, but I noticed that people move differently."

"Precisely," Dane said. "The  $t$ -tau spread increases with time, but the gravitational constant — which, obviously, isn't a constant at all — weakens. You wouldn't think fifty years would make so noticeable a difference, but it seems that in the course of our tampering with Time, we've created some kind of leak in which

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gravitational energy is flowing from here into the future. This has all kinds of theoretical implications which I won't bother you with, but what it meant for us, in practice, was that although we couldn't pull an object back from the future, we *could send* one forward.

"Of course this instantly made us wonder if we could send a *live* object . . . not just a rock, but an assemblage of matter which also carried a characteristic energy pattern, just like the pictures we were getting back. The  $t$ -tau relationship said No, because the life energy pattern is unique in that it has negative entropy, but we tried it anyhow.

"The first animal we tried, as it happened, was a black kitten. It showed up on one of these feast days, or dances, or whatever they are, and produced a sensation. Here is one of the pictures."

The slide showed more graceful figures, bending blurrily over something which might have been a black kitten, or a lump of coal. Toby now remembered also that Conan Doyle had been completely taken in by two little girls who had produced photographs of what they claimed were fairies, but later had been shown to be pictures cut out of advertisements in popular magazines. The noblest intellect of his time

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had published a book which had include the photographs. Dane's slides strongly resemble them.

"A lot of experiments showed that if we sent forward two such kittens, people came boiling out of the building to look at them, and the more the kittens resembled each other, the greater the excitement. Our breeding program was the result, and we now have a whole new ceremony in the future organized around the weekly appearance of these twins.

"Again, the details aren't important. The essence of the matter is that the development gave us immense amounts of new sociological data to work with. The mathematical biology of social behavior has come a long distance since Rashevsky. Also, it helped that we get the kittens back in a week; they revert to the energy level they were born into, along the world-line widened by the gravity flow. Their disappearance, just before the new batch arrives, creates more excitement, and more data for us. It also makes the inbreeding program simpler for us. You'll be interested to see this week's pair pop out of nothingness next week, if you're still with me then . . . especially if you're still thinking about all this in terms of ectoplasm, apports and the like."

Toby grinned feebly, but did not deny the accusation. He was

just as pleased that the grin was invisible in the darkness, but he would not have been surprised to be told that Dane had sensed it anyhow.

"Now, Toby, it seems clear that this isn't a very happy society, at least from our point of view; but it's also clear that it functions, more or less. It was also clear, almost from the beginning, that it couldn't function without computer control of almost everything. The magnitude of data involved — people, energy flow, food, repair, logistics of every sort — precluded any other possibility. We searched a long time for that computer, because we thought anything so advanced would be the most worthwhile thing to study of anything in the future that might be accessible to us.

"We had a hell of a time finding it — we looked in all the logical but wrong places. It seemed to be utterly invisible. Well, it was, and for a good reason: it was all around us — or will be. It's based right on this floor of this building, and goes on up in the air about a hundred feet. We took our camera up on the roof when we figured this out, and here's one of the pictures we got."

Toby would have found it hard to say what he expected the slide to show, but certainly

nothing like this. Against a background of dark sky appeared a fragment of thick, irregular web-work; it was not only senseless, but so obviously incomplete that Toby at first could not even think of anything to compare it to. It was, it was, well, a little like a photograph of Dane's radio-telescope bridge, after the thing had not only collapsed but somehow been partially melted (at a height of more than two miles? Ridiculous.) At the same time, the thing looked almost biological; it might have been a medium-power photomicrograph of a piece of sponge. In the background floated several spherical objects, all with highlights along the same side — they were, in fact, lit from the same direction as the web-work was — of which he could make no sense at all, unless the Earth of half a century in the future had acquired a whole flock of artificial satellites big enough to compete with the natural one.

"As you can see," Dane's voice went on evenly, "it's not at all like any existing such machine. Insofar as we've been able to figure it out, it is most closely analogous to the Golgi network in the human cerebrum — a web of conducting members enclosing, or underlying, a force field where the real work is being done. Those small round bodies

you see actually number in at least the hundreds; they circulate in and out of the web in irregular pathways and may prevent specific bodies of information, or . . . well, we just don't know, not reliably.

"Now, here is where you come in, Toby — you and your million dollars. Or where we hope you'll come in."

The projector went out, the drapes rustled, and the lights went on. Toby was completely dazzled. While he was still trying to get his eyesight back, Dane said in the same even and unemotional tone:

"I want you to go up there and sabotage that machine."

"Why?"

The same old question. But this time, Dane had to answer.

"Sabotage' is the wrong word; actually we want you to repair it, but the machine is a sacred object — nobody is allowed to touch it — so we'll have to equip you just as if you were a saboteur, and you'll have to behave as if you were.

"The reason is inherent in the worship. You'll recall my telling you that we've been studying this society for nearly a decade. In the course of the study, we became convinced that the computer was suffering some kind of

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slow breakdown. I also mentioned fifty-seven years, but actually the period we see is *fifty-five* years in the future; we think the breakdown will reach a crisis two years from now, after which we won't be able to do a thing for it.

"The people themselves know less about the machine than we do — much less. They've taken it for granted for all of their lifetimes, which appear to be short — for obvious reasons, when you come to think of it. We, on the other hand, now think we know which component of the machine is going haywire. We can show you diagrams of the apparatus which will give you a pretty good idea of its gross workings, and we can also supply you with a map of its layout, its geography, so to speak.

"We've prepared a replacement; you'll go forward, locate the failing part, rip it out, and insert our replacement."

"John," Toby said, "this time you have to go all the way to the end. And so again I ask you, why?"

Dane spread his hands. "I should think that would be self-evident. Repugnant as that universal tenement, or hive, or whatever-it-is may look to us, it's the society those people have got, and all they've got. If it collapses, the disaster will be unimaginable."

ble. Many millions will die; billions will suffer; they are incapable of running their world without that computer."

Talk about philanthropies! The Dane Observatory was peanuts, compared to this. But Toby knew that there lay the ultimate *why*, and to ask it would be to question Dane's good will. He said instead:

"I see the point. Once I'm convinced, I'll probably be willing to try it, as I'm sure you knew. So, John — why did you feel obliged to offer me a million dollars for the job?"

"Because," Dane said, "one way or another, you will probably die. We get the kittens back, but kittens are not people, and we have no way of asking them their state of mind. Two, I don't know whether we can get you back at all. Three, if the people up there catch you messing around with their god-brain, they may tear you slowly to shreds, no matter how well we arm and armor you.

"And the process, as you saw, involves a colossal jolt of power. It will probably feel almost exactly like being electrocuted. I wouldn't take a million dollars on that chance alone, no, not if I were a pauper with nineteen starving children."

Toby said slowly: "I won't take a million dollars for it, either. But if you'll phone down

to your accountant and cancel that draft, I'm willing to talk about it further. Otherwise, not."

## V

Toby spent much of the next week studying the maps, with breaks for Charley to examine his hands, which seemed to be getting along nicely. Dane had quite vanished, which was reasonable; no matter how large the Dane Tower project looked to Toby, it was only a fragment of Dane's interests — which, after all, he had to keep in order if he was to continue to support crazy enterprises like the Tower and the Observatory.

At the end of the week, Dane reappeared, to join Toby in the kennel-cum-laboratory to await the return from the future of the kittens. There was nothing spectacular about it: *Pop!*, and then, *Feep!* And there they were. They looked, Toby thought, a little dazed at first, but it is hard to read a kitten's expression — it always looked a little dazed; and besides, at the very best, Toby would have been a little dazed himself under the circumstances. Otherwise, the animals were apparently unhurt, and were transferred promptly to a larger kennel to become part of the inbreeding cycle as they reached puberty.

"Satisfied?" Dane said



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The pale girl, nevertheless, continued to look sad about the whole process of which she was in charge.

"Well, it isn't fatal to them, anyhow. I'd adopt either of them if I were in the market."

"Help yourself."

Dane vanished once more, though, without either feep or pop.

During the succeeding week, Toby was made acquainted with the component. It looked remarkably like some peculiarly vicious combination of flame-thrower, machine-pistol and bazooka, which was not an accident. Most of it was in fact a weapon, which Toby was sternly told to use without compunction if he was detected before he had completed his mission. Only one of the grips, the one nearest the body, was actually the replacement component. This would break out of the main body of the gun into the right hand with one sharp wrench of the wrist. What it then consisted of, to the eye, was a flattened cylinder with three prongs on one end. All Toby had to do, the technicians explained, was to find the socket those prongs fitted into, and squeeze the sides of the cylinder. The device would then freeze solidly in place, and the job would be done.

Easy enough. Just like getting Santa and the toys down the chimney and back up again. Ho ho ho.

Nevertheless, the reasoning behind it was easy to understand. What surprised Toby more was the elaborateness of the armor he was also supposed to wear. It was, in fact, a full-fledged space-suit, of a rather old-fashioned model, heavy, shiny, balloony, stiff at the points and topped by a helmet with a very restricted field of view. It looked not much advanced over the suit worn by the first men to walk on the Moon — where it had probably been fairly satisfactory in the slight gravity and under no need to clamber rapidly and furtively through the interior of a gigantic sponge, ready to dodge at every instant.

That, the technicians explained to him, could not be helped. He had to bear in mind that he would emerge in the future more than two miles above sea level, where an oxygen mask would be a minimum essential to keep his reflexes and his thinking at optimum. The people of the future surface, like the Andean Indians, were acclimatized to the low oxygen tension of 12,000 feet, but he was not. The helmet would give him a *better* field of view than would the goggles of an oxygen mask, but the only way

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to keep a helmet filled with sufficient oxygen was to attach it to a pressure suit. And since they had to give him a pressure suit, they might also just as well armor it —

"— against the slings, arrows and low-velocity bullets of outrageous fortune," Toby said. "Okay, okay. I suppose every hero in a Western wishes Central Casting had given him a softer horse."

He exercised in the suit, which under the peculiar gravity field prevailing on the top of Dane Tower was more flexible and lighter than he had expected. He was not fooled. This only meant it would be stiffer and heavier, inside the world-brain, fifty-five years hence.

He also practiced, on an evacuated and insulated range, with the weapon, which turned out to be a laser rifle far advanced beyond any such Toby had ever seen, or even heard hinted at, in the arsenals of contemporary armies — and as an occasional war correspondent, he was supposed to be as expert at such matters as any civilian is ever allowed to be. Another barrel of millions for Dane, whomever Dane eventually sold it to; but as for Toby, after several days of watching dummies carefully composed to be of the exact content

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sistency of flesh and bone evaporate instantly at the merest touch of its flash, his major prayer of the whole affair unexpectedly came to be that he would never have to fire it on the job.

The firing range practice was at least interesting, however horrible. The practice at plugging the component into a dummy socket, and then getting the hell away, under the eye of a stopwatch, was not. But he knew it was probably much more important. This he would have to do; firing the gun was only a possibility.

At the end of that week, Charley took the bandages off, and Toby exercised his hands on various grips and squeezers. They looked death-white, but they worked, very well. Charley was pleased; Toby was not. Those last bandages had been only token ones, not at all in the way of his practice with the rifle and its concealed component; but to Toby they had represented the last barrier between himself and the slowly rotting sponge on top of the future.

Dane came back the next day, also looking pleased, in his rigid and abstracted way. He looked at Toby's hands, watched him fire the rifle, timed him on the plug-in and getaway exercise, tested him on the map, read over all the test records which had

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been compiled in his absence. One of Dane's major mottoes was *I trust my subordinates, But*. At the end, he said, "Good. very good."

"You mean I can go now?" Toby said. He was surprised to find that he was burning to get it all over with.

"Hell no, Toby. All this has been just warmup. While it's been going on, we've built a full-scale model of the brain over your head, on the top of the Tower. Tomorrow you get the suit on, pick up the gadget, climb out there and go through the whole routine — bearing in mind that if you slip, you won't just fall to a street among a lot of fairies. You'll fall two miles, and I'll have to find myself another boy. And while you're doing it, I may just stand out on the balcony and throw rocks at you."

"I've changed my mind," Toby said.

"What?"

"I'll take the million dollars."

## VI

When they lowered Toby out of the high sky and the model brain, the padding of the pressure suit was soaked with sweat, and Dane let Toby lie quietly and shake for two days while the technicians worked frantically to improve the suit's

water cycling. You would have thought, Toby thought ironically, shaking, that after all these years of experience with spacesuits, somebody would have solved that problem; but evidently no suit had ever been designed to cope with just one hour of concentrated stress which would include the whole mission; previous spacesuit designers had thought in terms of months, or years.

While Toby slowly stopped shaking, Dane swore. He was on the spot every minute now, for the end of *this* week was launching time. At last the technicians were convinced that they had the water problem licked, and some violent exercise inside the refurbished suit did not, at least, contradict them. This time, though, Toby was unable to summon the extremes of fear he had felt atop the Dane Tower, although he was convinced that he was not very far from them. The final test would have to be the mission itself.

And The Day at last came, and Toby was stuffed, bolted and sealed into the suit for the last time, along with the knowledge that he might never be taken out of it again. He was handed the weapon-cum-component, and introduced to his own personal version of the magic jug: an insulat-



GALAXY

ed room on the roof, a metal chair centered upon an elevated metal plate and a capped coil to be lowered around him. Dane and his operators watched from a control room behind glass; Toby noticed that the pale girl was not among them and wondered if Dane had suffered a minor mutiny in the ranks. On the wall facing Toby was a clock, presumably duplicating one in the control room. It swept toward the zero hour, at first with glacial slowness, and then suddenly as if the pace of Time had doubled.

"Can you hear me all right, Toby?" the suit's radio said in Dane's voice.

"Sure."

"Remember that you won't be able to in the future. We'll take as many pictures as possible while you're there, but if you get in trouble, there won't be a thing we can do to help you."

"I know that. You've told me that at least a dozen times."

"Don't be jumpy. I'm just trying to make perfectly sure that you have every fact you need. We've already sent on the usual two kittens, but half an hour late. We're hoping that between the usual ceremony, and the unusual lateness, they'll be too distracted to notice you."

Toby knew that, too. He realized belatedly that Dane was

simply chattering to keep him distracted and as close to relaxed as possible when the moment of transmission came. His glance shot up to the clock.

*Two seconds to zero!*

One —

Every muscle in his body went into spasm. Every nerve shrieked in silent agony.

It lasted forever, in flashing blackness and roaring silence.

Then he was standing in the high sky, exactly on the part of the world-brain he had so painstakingly memorized. The incredible pain vanished so completely as to leave hardly a memory; it was so close to instantaneous that he almost staggered with relief. Luckily, the suit prevented him; it was indeed much heavier here.

Without looking down — for he had no time to check on whether the natives were indeed distracted — he hoisted the weapon-component assemblage and began to climb. Several of the little moon-like globes — "bit-bundles," one of the technicians had called them — floated past him, and one swerved toward him, as if in curiosity, although he had been assured that this was unlikely. Then he —

— was back in the transmission chamber again.

He looked toward the glass front of the control room,

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bewildered. His only impression was of Dane's face, wearing an expression he could clearly read: shock, frustration, inhuman determination. Then Dane made a slight movement.

Eternal agony.

He was back on the brain, but at the spot to which his few previous steps had taken him. This time the pain was distinctly slow about dwindling. He began to climb once more.

*The transmission chamber.* It could only have been a few seconds later; Dane's expression was still in the process of hardening. Dane hit the key again.

The total agony of electrocution. When the high sky flashed over him again, he was weak, and his nerves were thrilling with pain.

He took two steps more.

*Transmission chamber.* Dane's face was a Greek mask, a mocking twisted mask of pity and fury at once. His hand pressed down —

Anguish upon anguish. The high sky. One step. Toby staggered.

He was nearly blind with pain now.

*Chamber. Mask. Key.*

Death. Sky. Undiminished pain.

With the last motion of which he was physically capable, Toby threw the weapon away.

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VII

To convalesce from having been executed four times is a long process. For the first few weeks, if Dane showed up at all, Toby was incapable of noticing it. All he saw, and that only in fragile gleams, was the gradual lightening of that darkness of gloom which is eternity.

Then, gradually, the world began to obtrude. The people who attended him were hushed, as if in the presence of something more than a corpse, although it was impossible for them to have known how far beyond death he had already been.

It was more than a month before Dane appeared. His face, which would not ever be a mystery to Toby any more, was remote and abstracted, as though he were thinking now about some new project which had nothing to do with the Dane Tower, let alone Toby; but he said:

"I'm sorry."

"I'm sorry too," Toby said slowly, "in a good many ways. But you did warn me. And I find I still have a little curiosity left. What went wrong, do you know?"

"We think we know. Essentially, it was the difference between a man and an animal. Living things, all living things, differ from other energy processes in the universe in having negative entropy,

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— that's the definition of life, or the best one we have. The higher the nervous organization, the more negentropy — the more energy consolidating itself, instead of slowly dissipating and downgrading in the standard way. A cat has pretty close to the highest degree of nervous organization in the animal kingdom, but a man is so much higher still that he's virtually a different order of entity. The quantitative difference is so great that it becomes, to all intents and purposes, qualitative."

Toby puzzled over this for several minutes.

"In other words, if you'd sent an earthworm up there, you might not have gotten it back for years."

"That seems to be it. Whereas we'll never be able to keep a man there for more than a few seconds. And the farther in the future we try to send him, the shorter the stay will be."

"I see." Toby fell silent again. Then, at last, he continued: "I said I was sorry. But not completely. I'm sorry I had to go through the experience — it wasn't pleasant. I'm sorry it turned out to be for nothing. But above all, I'm sorry you turned out to be the kind of man who would put a friend through it four times. I am indeed going to

keep the money, John. No sum will ever pay me for what I went through, and no sum could make up for losing what I thought I saw in you. I shan't spend it, any more than I could spend my own blood, but maybe my children, if I ever have any, won't feel the same way about it.

"But it will be nice to have the interest, because I'm going to ask the paper for a new assignment, and I suspect that nothing new that I'm given will be as lucrative as working with you was. I won't be seeing you again. Not ever, if I can help it."

"I understand that," Dane said. "Every time I answer one of those questions — questions of this kind — I lose somebody, one way or another. I expected nothing else. But I too have my curiosity, Toby. You're not completely sorry. What is it that you don't regret?"

"Failing."  
"Oh," Dane said slowly. "Will you say why?"

"Yes. It's one of the reasons why I don't want to see you any more. I think you lied to me. I don't believe there was anything wrong with the big computer, the world-brain. But I think something would have gone wrong with it if I had managed to plug your component into it. You did not want to save that society. You wanted to destroy it."

The two men's eyes met. Acknowledgment was already plain to Toby in Dane's expression.

"Quite true," Dane said steadily. "The society was nothing more than the ultimate dead-end of the society we have right now. And the computer; I suspect — though I can't be positive — is perfect. If it doesn't fail or get disrupted somehow — it will maintain the universal tenebment forever."

"Nothing is perfect," Toby said, "and nothing is forever. But the fact is, John, you weren't out to prevent the death of millions and the misery of billions of others — with me as cat's-paw. You were out to cause it."

"In effect," Dane said, "yes. One last question, Toby, if I may turn the tables on you just once. I don't see how you detected that my intentions were opposite to my statement of them. It seems to me that I left very few clues."

"You left no clues at all. But at the beginning, when you asked me to take the job on — this was after the slide show in the conference room — your tongue slipped. You called it 'sabotage.' Your explanation was glib and I took it at face value — until I saw your face during the three times you sent me forward again. It was not just the face of a man

knowingly executing a friend. It was the face of a fanatic. In the past month, lying here, I've been seeing that face, and hearing it speak the word 'sabotage.' And I knew that the face and the word went together."

Dane got to his feet. "I never did trust poets," he said. "So perhaps it's just as well that we're parting. And to do you credit, Toby, not only were you as brave as I expected you to be, but you might even be right. It might be just as well, too, that it proved to be impossible to destroy the machine. I'm already working on another approach."

"I'm not surprised. Good-by, John."

"Good-by." They shook hands formally, without warmth, and Dane moved away from the bed.

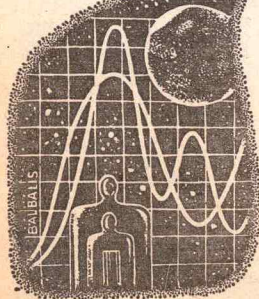
"John." Dane turned back halfway, but he did not look back. His mind was already on other matters. "What is it?" he said.

"John, I don't know what your next project is, and I don't want to know. But I've also been thinking about your one-before-last, and I think there's something you ought to bear in mind."

"Very well," Dane said, "What?" "Telescopes," Toby said, "no matter how powerful, see only into the past."

—JAMES BLISH

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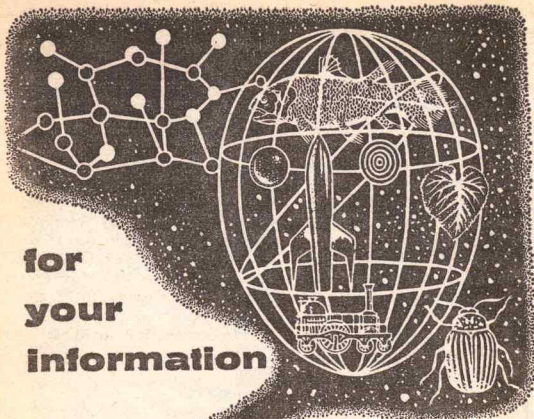


BY WILLY LEY

## EUGEN SAENGER AND THE ROCKET-PROPELLED AIRPLANE

The first airplane that flew with a liquid-fuel rocket engine as its means of propulsion was the German interceptor Messerschmitt Me-163B, named *Komet*. It first appeared in action during March 1944 and surprised the pilots of Allied bombers by the

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fantastic bursts of speed it could perform.

The design of the Me-163A (the prototype of Me-163B had grown out of wartime needs; it had nothing to do with Max Valier's concepts of 1927 and it also was hardly — if at all — influenced by the work of the other early advocate of rocket-propelled aircraft: Dr. Eugen Saenger. I think it is safe to assume that my readers will remember the article in the last issue about the rocket enthusiast Max Valier. Valier, as was explained there, talked a great deal about "rocket airplanes," but what he actually had in mind was an air-breathing jet engine. When Dr. Saenger, a few years later, talked about rocket airplanes, he did have rocket engines in mind. And he was going to develop them himself; he had the necessary background for such development work. And as he went ahead with his work, he had so many new ideas that it would have needed a large research institute to follow them through.

Though any engineering library worth that name has a number of publications by Eugen Saenger on its shelves, nothing about him has been published aside from a few obituaries in various journals early in 1964. The data given in the following are based on two sources: personal correspondence,

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mainly during the period before the second world war, and his Laboratory Notebooks covering the period from the end of 1933 to near the end of 1934. The original is in Germany, presumably in the custody of his widow Dr. Irene Saenger-Bredt, but a photocopy is in the archives of the National Air and Space Museum in Washington, D.C. and was made available to me by Fred C. Durant III, one of the Museum's directors.

Eugen Saenger was born in the city of Pressnitz in the mountains called *Erzgebirge* that straddled the German-Austrian border. His birth date was September 22,

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1905; soon after, his parents must have moved to Hungry, for his elementary education took place in the municipal schools of small Hungarian towns. He attended High School in Graz and after graduation (in 1923) the College of Engineering in Graz for one year. Then followed 20 months of practical engineering; he participated in the construction of a high-tension transmission line. In 1926 he had himself enrolled in the College of Engineering in Vienna, attending, among other things, the then recently instituted courses in aviation.

After passing the two compulsory government examinations for construction engineers (one of his dissertations combined his official and his real interests; it was about the design of airplane hangars), he received his Doctorate in the Technological Sciences in 1930. Simultaneously he became Assistant Professor of Engineering in Vienna. Simultaneously he thought long and carefully about the aerodynamical forces on the wings and bodies of airplanes that would fly at "altitudes of more than 10 kilometers with speeds about 1000 km/h" — or above 33,000 feet at speeds of more than 620 mph.

Of course there were no such airplanes, nor the engines to propel them. But the shape of such an airplane could be predicted

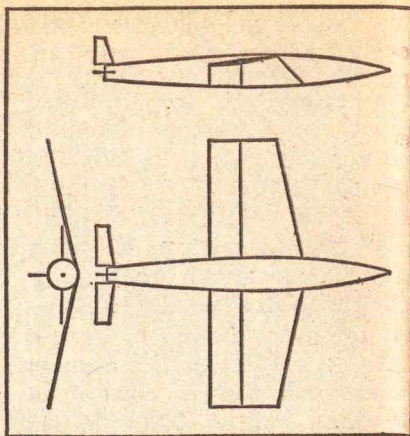


Fig. 1. Eugen Saenger's sketch of his rocket-propelled speedster. The diagram gave no dimensions, if it had actually been built the overall length would have been on the order of 45 feet.

(Fig. 1, first published in the spring of 1933) and the engines had to be rockets, still to be invented.

On October 10, 1933, he signed and dispatched a 16-page single-spaced proposal to the Austrian Ministry of Defense. It began with the words: "Both the speed of customary aircraft and the operational altitude have now approached limits which, as far as can be foreseen, will not be extended significantly by the means now in use. These limits are given by the loss of efficiency of the propeller when run at very high speeds, by the intolerable increase of engine weight . . . and by the

inability of the engine to obtain enough oxygen at very great altitudes."

The remedy would be rocket propulsion. He added:

"It has to be admitted that the efficiency of a rocket engine burning e.g. gasoline will surpass that of the engine-propeller combination only if the flight speed rises above 2000 km/h (about 1240 mph) and that the rocket-propelled airplane is also weighed down with large quantities of fuel. For this reason some institutions, especially in America, are trying to develop a kind of jet propulsion that utilizes the circumambient air and which might produce a useful degree of efficiency at lower flying speeds; this might be considered an interim solution until the development of pure rocket propulsion."

Since this was a document for the Defense Ministry, Saenger stressed the military applications like fast-climbing interceptors, but he also talked about airliners. He had worked out an especially efficient flightpath. Once airborne and pointing in the direction of the destination, the plane would climb at an angle of 30° until an altitude of about 12 miles has been reached. Then the plane would assume a horizontal position, correct its course, if necessary, and then the rocket

engine would be shut off. The speed would be 2½ to 3 times that of sound at the moment of cut-off and the plane would move by inertia only. Air resistance would gradually diminish the flying speed; simultaneously, altitude would be lost. About 2000 miles from the take-off point, the speed would be less than that of sound and the altitude about 7 miles. Then the pilot would land, using the fuel remaining in the tanks for the approach.

The fuel consumption would not be much higher than that of an airplane of the same take-off weight that had to fly the same distance non-stop. But the rocket airplane would not need much more than an hour for a 2000-mile trip. The rocket engine would burn for 20 minutes during the slanting ascent and must develop a thrust of 10 metric tons.

All this was just too much for the officials of the Austrian Ministry of Defense. It would be a very expensive development program, they probably reasoned. And they probably felt some opposition to the proposed average speed of about 33 miles per minute; nobody in Vienna could conceive that anybody could be so much in a hurry.

So Saenger received a reply, dated February 3, 1934, of only a few lines, saying that a liquid-fuel rocket engine cannot be built

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because of the "detonation-like character" of the combustion.

Saenger's reaction was that they would have to change their tune if he could show them a rocket motor that burned smoothly without detonation. What he had in mind was one that would burn a light fuel oil with liquid oxygen and be cooled by the fuel before it was injected into the combustion chamber. Anybody who has ever started out on a series of experiments that have not been done before knows (afterwards!) a certain fact: Things that were expected to cause a lot of trouble failed to do so, while "simple" items proved to be intractable.

Saenger was worried about the heat of combustion and conceived an elaborate system of insulation. There was to be an inner layer of hard carbon or graphite which was expected to be burned off or abraded during the run. Backing the hard carbon layer was a much thicker layer of porous carbon. Then came the metal (sheet steel) wall, then a space through which the fuel would flow and then the outer skin of the cooling jacket. After a few preliminary experiments Dr. Saenger decided that the carbon insulation was not needed.

Still, he proceeded toward his goal slowly and cautiously.

The final rocket motor would use liquid oxygen, but he began his tests with gaseous oxygen. The final rocket motor would be cooled with its own fuel, but at first

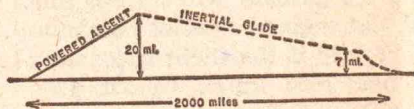


Fig. 2. The planned performance of the speedster.

water cooling was employed. Experiment No. 25 was labeled "first success, duration 30 seconds" and dated March 15, 1934. Diesel fuel and gaseous oxygen were used; the internal pressure during the run was 210 pounds per square inch.

Progress was quite fast; only a few weeks later he made his first experiments using liquid oxygen. Always keeping in mind that his rocket airplane would need 20 minutes of continuous thrust, he went after long burning time quite early in his work. Some of his tests lasted 20 minutes, which was much longer than was accomplished by anyone else for years to come.

In between actual tests, he calculated and drew sketches; most of his sketches of rocket motors were based on the idea that the tubing through which the cooling

fluid (the fuel) circulated should form the motor itself.<sup>1</sup>

Some time during the summer of 1934 it occurred to him that certain metals might be usable as fuels. "Metals," he wrote in his notebook, "can be used as rocket fuels because (1) they use up little oxygen in spite of high energy production, and (2) because the combustion products are chemically stable." The main drawback, which Saenger did not put down, is that these stable combustion products are solids at ordinary temperatures. Apparently he hoped that this difficulty could be overcome. The most promising metal was beryllium with an energy content of 20,500 kilogram-calories per kilogram. Lithium was next with 10,200 kilogram-calories per kilogram. Aluminum followed with 7140 kg/cal.; carbon has 7900 kg/cal. as may be mentioned for comparison.

In spite of the progress he made, Saenger was not happy.

1) About a year later Ernest Loebell of the short-lived Cleveland Rocket Society wound copper tubing around a mandrel having the shape of a rocket motor. He then wanted to have aluminum cast around the tubing to give rigidity to the whole and to obtain a smooth inner surface. He did not succeed in finding a shop in Cleveland that could do a flawless casting job and was most annoyed at the foundryman's remark that the holes in the cast did not matter because it would not work anyway.

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The reasons were of the kind that do not find their way into laboratory notebooks. There seems to have been much personal friction with other faculty members. Perhaps they felt that experiments with space travel as their ultimate goal did not add to the dignity of their institute. Perhaps they just complained about the noise.

On June 29, 1934 (the manuscript page is dated and signed), Saenger made a list of 27 items, an outline of his own future. He had made up his mind to leave Austria and go to Germany where the chances for aeronautical research seemed (and were) far better. Of course Hitler was in power in Germany but Saenger, like most others, expected that the Nazis would shed their revolutionary fervor and settle down to become a respectable government. He certainly, as the outline shows, did not expect a war.

The items in the outline are occasionally separated by horizontal lines which divide the whole into five sections. The first section was what he still intended to accomplish in Vienna, comprising the first six items.

1. Increase the thrust of model rocket S.R. 7 to 110 lbs.
2. Increase exhaust velocity to 12,000 ft/sec.
3. Further increase by addi-

tion of light metals [to the fuel] to 13,000 ft./sec.

4. Low pressure experiments with liquid oxygen.
5. Publication of "Exterior Ballistics."
6. Publication of "Interior Ballistics."

[presumably two planned books, not published.]

The second section reads:

7. Petition to Reika (?) with ref. to D.V.L. [the German Aeronautical Research Institute].
8. Join D.V.L. with both assistants.
9. Habilitation T. H. Berlin [obtain a professorship at the Technical University at Berlin].
10. Development of the 100-lbs thrust motor with 13,000 ft/sec. exhaust velocity.
11. Building of the 2200-lbs thrust motor, ready for flight.

Section 3 reads:

12. Building of Troposphere speedflyer S.1.
13. Break the 620 mph speed limit.
14. Building of fighter airplane S.2.
15. Climb to altitudes beyond 100,000 ft.
16. Start Saenger Rocket Aircraft Corp.

17. Mass Production of the S.2.  
Section 4 continues with his

optimistic success scheme:

18. Building the long range aircraft S.3.
19. Fly 3000 miles non-stop.
20. Production of the S.3.
21. Establish rocket aircraft service between the continents.

Section 5 looks to final triumphs:

22. Development of the beryllium rocket.
23. Make round the world non-stop flight with the S.4.
24. Establishment of the Space Station.
25. Extension of the Space Station.
26. Building of spaceship S.5.
27. Beginning of space travel.

This was the dream.

Reality was quite different. In October 1934 one Professor Rinagl of the institute offered some kind of a contract to Saenger. Detail is not known, but Saenger refused to sign. Whereupon Rinagl forbade the continua-

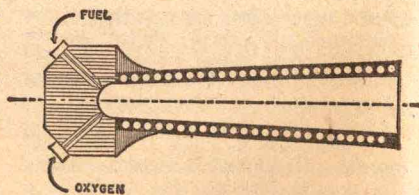


Fig. 3. Sketch for a rocket motor dated June 5, 1934. At that time Saenger evidently had not yet realized the need for a constriction in the nozzle.

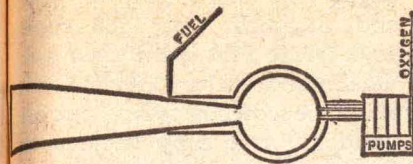


Fig. 4. Design for a rocket motor as published in the special issue of *Flight*. The fuel was to go directly into the cooling jacket from the tank and was to be sucked through it by the pumps. Then it was to be discharged into the combustion chamber under pressure. The oxygen was to be fed in under pressure directly.

tion of the tests. Defiantly Saenger ran one more test a week later for Count Max von Arro-Zinneberg. Then he wrote a comprehensive report about his general plans and about the experimental work he had done. It filled a whole Special Issue of the monthly *Flug* (Flight) and was published in Vienna in December 1934. An English translation appeared with considerable delay in April 1942 as *Technical Memorandum No. 1012* of the N.A.C.A., the National Advisory Committee for Aeronautics, the forerunner of NASA.

Before packing up and leaving for Germany, he also filed an application for a patent: "rocket motor with forced cooling," which was granted in 1935. (Austrian patent No. 144809). In Ger-

many he worked for some time at the Experimental Station Trauen of the D.V.L., continuing the experimental work begun in Vienna. Reliable and detailed information is lacking. At the time the work was done, it was, of course, secret and no information was made public. Later both equipment and documents were destroyed by Allied bombing raids; late in the war Nazi officials burned documents wholesale and what was left was confiscated by Allied soldiers and much of it is still slumbering somewhere in nice solid wooden crates.

It is my personal guess that the *Luftwaffe*, the ultimate superior of the D.V.L., kept rocket research going in competition to the Army's Peenemunde research establishment, where Wernher von Braun worked. The *Luftwaffe* also sponsored rocket research at BMW (Bavarian Motor Works) and at Professor Hellmuth Walter's industrial research establishment in Kiel. The orders to BMW and to Professor Walter were to develop rocket motors for take-off help and for airplane application. The rocket assembly that propelled the Me-163B was the result of the work of Walter's engineers.

Saenger seems to have been shunted to theoretical work at one point, and in thinking about his original concept of powered

climb followed by inertial flight<sup>2</sup> he had a new idea.

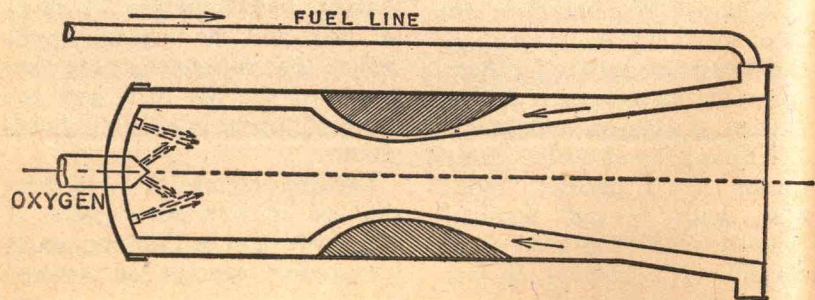
If the powered flight led to a peak altitude of 150 miles, the airplane, after re-entry would "skip" when it reached denser layers of the atmosphere. Utilizing this phenomenon one could produce a series of such skips which would extend the horizontal range enormously. With the aid of his assistant (and later wife) Dr. Irene Bredt, he worked out his famous plan of the bomber that would fly around the world. If it had become a project, the effort involved would have been not much smaller than Project Apollo. At that time Germany fought a war that was already lost; there was neither the manpower nor the resources for a new and major project.

The top-secret report comprised about 400 typewritten

pages with many graphs, tables and diagrams. Only 100 copies were made and distributed with maximum security; but word of its existence somehow leaked out and hunting for a copy became the favorite occupation of Allied intelligence units. The Russians first found one, then two more. Stalin, after having glanced through a translation, personally ordered that Saenger and his assistants be brought to Russia. His son headed the search; the group first flew to Berlin, then to Vienna and then to other cities — unaware of the fact that Saenger and his wife-to-be were in French custody. Of course the French also had copies of the report, as did

2) This concept, incidentally, was the basis of the American Dyna-Soar project and it is said to have been also used in a Russian missile project too. Dyna-Soar was later cancelled and apparently the Russian project shared its fate. In both cases the straight ballistic missile won.

Fig. 5. Experimental American rocket motor, ca. 1946. The insert had the purpose of causing an especially fast fuel flow in the area of the nozzle's smallest diameter where the danger of a burn-through is greatest.



the British and American intelligence services.<sup>3</sup>

While the Saengers were in France, something looking very much like the design sketch of the year 1933 was built in the United States: the X-1. The close resemblance was not due to imitation; conscious or subconscious, it was due to the laws which govern aeronautics; an airplane that is to fly high and very fast must look that way. The X-1 was to fly as high as seven miles and was to fly faster than sound. It did on October 14, 1947, the first manned vehicle to do so. About eight years later, in July 1955, the X-2 flew three times as fast as sound travels and on November 9, 1961, the X-15 accomplish-

3) An unclassified but somewhat abridged translation bears the title *A Rocket Drive for Long Range Bombers*; it is Translation CGD-32 of BuAer, Navy Department.

ed six times the speed of sound.

At the time of the X-2 flight West Germany became a fully sovereign country again and the Saengers returned to head a small rocket research laboratory located at the airport of the city of Stuttgart. It seems to have been more of a teaching than a research operation; the research project was the development of a steam rocket for take-off help for aircraft.

After a few years in Stuttgart, the Saengers moved to Berlin. One of the points in his early program still came true: he was appointed professor by the university in West Berlin. On February 10, 1964, Dr. Saenger collapsed during a lecture and died. At the time of his death most of the projects he had advocated had been carried out — but by others.

—WILLY LEY

This Month in IF —

### THE HALF MAN

by Keith Laumer

### THE TOWNS MUST ROLL

by Mack Reynolds

Please note: We've skipped a month in our dating to bring IF and Galaxy back on schedule. This is the July issue (there is no June issue) . . . on sale everywhere now; don't miss it!

FOR YOUR INFORMATION

# A BRIEF HISTORY OF THE REVOLUTION

by JAMES SALLIS and DAVID LUNDE

*The furniture was very comfortable  
and attractive, and almost new —  
but, unfortunately, very restless!*

He beat the chair back out of the door, using his belt like a whip.

"Goddam it, I've told you a hundred times: you're a living-room chair now. Stop trying to get back into the bedroom."

Looping the belt (size 34, alligator), he went into the kitchen, where his wife was preparing breakfast, and sat down at the table. His chair bucked once and surrendered. The plastic stuffing pulsed softly against his back.

"I think that chair's a damned voyeur," he told her as she brought him coffee, staring at his T shirt with her lozenge-shaped eyes (the round of color in them soft and raw, like the flat top of a

pencil's eraser). "Keeps trying to get back into our room." He stared at the boiling coffee. "And in case you're wondering, you're right. The dresser wouldn't give me a shirt again."

Grinning, his wife went back to her cooking, periodically kicking the stove. Beside her, the garbage disposal chewed a mouthful of air twenty times and swallowed a burp. On the other side of the room, the washing machine once again turned over something (coin? button?) rattling inside it.

A frown passed over his wife's face. He guessed she was thinking about their bed, the beautiful carved Victorian bed they'd at last abandoned with the rest of

the bedroom furniture. Now when you passed the storage room upstairs, you could hear them inside, scuttling and banging against the door.

Out of the corner of his eye he watched the table, talking meanwhile to his wife. (Thurston's advice to an assistant: if you don't know what's going on, boy, smile and point the other way.)

Her hair was bunched in its usual severe bun, half on top and half behind her head. The tiny-printed shift was smooth and new-looking, pastels falling straight from her thin shoulders that always reminded him of hangers ("Faith's frugal frocks" he'd once called the dresses). She looked childlike girlish, but there were lines beneath her eyes like the grain in dark wood, and a fuzziness above the lines, in the eyes themselves.

"Didn't get much sleep last night, did you?" he said finally.

"No. How could I?" The counter shuddered — it was nailed in place and couldn't move much more than that — causing a bowl of half-mashed potatoes to slide and totter onto the floor. The trashcan came galloping across the tile, snapping its lid open and shut like alligator jaws.

"Get back. We'll eat them anyway. Damn it, get back!" Sighing, she heaped the potatoes into her hands and threw them with a

splatt! back into the bowl as the trashcan trotted dejectedly back across the room.

"Your chair came to the door right after we'd gone to sleep," she went on, whipping the potatoes, extracting bits of foreign stuff with the end of her finger. "It knocked at the door a while, then started reclining and straightening back up. It was out there all night, squeaking. I —"

"Got you!" he bellowed. His foot was hooked into the spreading, claw-like base of the table, stopping it a few feet from the worn spots that indicated its place. "Get back here."

The dishwasher swung open and pistoled water at him; when he lifted his foot, its porthole door slammed shut. The table came back like a camel, swaying, slow.

She served the meal and they began to eat. A few chairs came sliding up to the door and were firmly turned away; drawers and cabinets kept opening and occasionally threw things out, a rotting potato, a soft brown onion, a blackened pan; the refrigerator lumbered from its corner and was bearing down on the trashcan before they noticed and ordered it back. Otherwise the meal was quiet.

Almost. . . .

He slammed his fork down on the table and shouted: "Will you please tell this damned table to

shut up!" It was whimpering, or something very like it — creaking and groaning, anyhow.

She reached down and patted its metal flank.

"You were too harsh with it, dear. It's more sensitive than the others, helpless as a little baby." Patted, cooed at, it began to quiet.

"Mashed potatoes for breakfast?" he asked after a while.

"I just kind of wanted them."

He smiled. Last month it was gingerbread, sauerkraut the month before. Was it real this time, or just another of the little dramas acted out more for herself than for him? Each month, as the red mark on the calendar was passed without event, the girls'-school finish cracked and for a few days she would be happy acting out the symptoms of pregnancy.

They finished in silence and she went to cajole a shirt from the dresser, buffing at the top with an oilcloth until it relaxed and surrendered its drawers to her. The house had turned them both into magicians, into masters of misdirection.

"I wanted the blue one," he said when she came back into the kitchen.

She turned and started back.

"Never mind. I'll wear it." He put it on, forcing his arms through the stiff sleeves. No mat-

ter how often he told her to starch them lightly, they always turned out like planed lumber.

"No tie?"

"No tie."

He kissed her hair, bending down — then good-bye to the kitchen. And taking his coat off the stair rail he opened the door to the sun, spilled out of the house into dazzling white Milford.

The Cherry Street bus was just pulling up at the corner.

Miss Girth came to his door. It was always open.

"Mr. Hughes, I know you asked not to be disturbed —"

"That's right, I'm glad you remembered. Go away," he said, shoving his bandy legs (one limped from being shorter, the other had a knee that did tricks) deeper under the desk, slumping over his work. *It being therefore attested. . . .*

She squirmed on through the door. Her hips walked over and stood by the desk, at the top of his vision.

"Okay," he said, looking up finally from the neatly stacked papers. "You know I have to get the Robertson wills straightened out by tomorrow, Sandra. But I give up; what is it?"

Sitting erect, he was taller than some men standing, much of his six-foot-four being torso with the

springy legs appended as though by afterthought. A photographer might have picked his face for a pipe ad, his body to model clothes for the "man of special needs" (his secret, that the body was beginning to sag strangely against the clothes).

The girl's smile was as sheer as her nylons. "Mrs. Hughes is on the phone." She bent toward him across the desk to open the extension switch; the tips of her breasts faintly brushed the papers. "She said it was urgent. I thought you would want to take the call."

"Very well, Sandra. Thank you."

She turned, then swiveled back on her hips when he said, "But Sandra. . . ."

"Yes, sir?"

"No more calls, no interruptions."

"Yes, sir." She walked out, squares in the plaid of her skirt swelling out the shape as her buttocks clenched-relaxed.

He picked up the phone and held it till she was gone, though she'd probably listen on the extension anyway.

"Faith?"

"Oh, thank God you're there, Hugh. Sandra thought you were out."

"She had instructions not to put anyone through to me."

His wife called several times a

day, just to say a few lonesome words. Her calls were like little quick-jotted notes, spontaneous and generous. Others probably thought the calls were bothersome, a nuisance. But for the two of them they possessed a large meaning, were a subtle expression of feelings which both of them had difficulty expressing more directly.

"What did you want?" he asked her now.

"The — You'd better come home." She turned away from the phone for a second. "Right away."

"Faith, you know I have a lot of work to catch up on. It was a bad time to take off, even if we did have to move — and three weeks was ridiculous. My desk's piled higher than a newsstand. I can't —"

"Please, Hugh. You have to."

The usual calm, studied inflections were missing from her voice.

"What's wrong?"

"I can't tell you over the phone. I'm all right. But please hurry."

"Thirty minutes. But I can't stay."

She said *Hurry* again and hung up.

He stood and reached up to tighten his tie, then remembered he hadn't worn one (*first time in ten years*, he had to think). Slipping into his coat he walked in to the big outer office. *Ten*. Most



of the staff were off on coffee breaks.

"Leaving?"

"Just for an hour or so, Sandra. Be back soon as I can."

"Trouble at home?" Oh so solicitous.

"More or less."

"How is the new house?"

"Fine. But we're having a hell of a time getting settled." He winced at the meaning hidden in casual words.

Miss Girth was going after her nail file as he left.

Into the quiet hall, the door making a startling sound as it shut behind him. Through the living room. Kitchen. The silence had the weighty, waiting quality which comes from the sudden cessation of an accustomed noise.

"Faith?"

Not a sound. Even the furniture was silent. He felt as if he were walking through a petrified forest.

Upstairs. No one. Nothing. He ran from room to room.

*Too late — hospital — police. . .*

Downstairs: the phone.

"Faith?" Again.

From the hall closet, a small voice: Hugh, is that you? I was not sure, that's why I didn't answer before." Far away, sounding deep in the hollow chest.

He noticed now that the bureau had moved over in front of the

closet door. He walked up and kicked it, but it didn't budge. Instead, a chair came sliding across the slate floor and cracked against his shin.

"Hugh? Are you kicking them? Don't kick them. Just do what they want you to."

"Such as?"

"They just want to talk to us. Stop laughing, I mean it. *They* mean it. *They're* keeping me in here to be sure you'll listen." Her voice was muffled by the wood.

"Are you all right?"

"Of course. They won't hurt us. They just want to talk."

He kicked the bureau again and when the chair came back he was ready for it. He grabbed it by the back and smashed it against the top of the bureau. It came apart like something made of building blocks.

"No, Hugh! Listen to them," Faith pleaded.

And suddenly furniture was pouring from every room — chairs, tables, bookcases, benches. They lurched around him and stopped, a semicircle of troops holding him where he was.

"Please," his wife said again.

"This is ridiculous, absurd."

"You'll listen?"

"Don't seem to have a great deal of choice." He looked around at all the menacing pieces. That they had no faces, yet moved, was profoundly unsettling.

"Tell them that you'll listen."

"I'll listen," he said, and a small table came through the door from the study with something on it.

"What is *that*?"

"Remember the Ouija board Norm gave us as a joke a few years ago? That's it. Seems to have developed a kind of sympathy-life from contact with the others, the way our own furniture did."

"Ours is just phototropic. That is pretty scant living."

"The board's more than that. It seems to be alive, but it can't move around like the others, though they apparently hold it in the highest esteem. Their wise man, something like that, and it's the only way they have of talking to us."

"Idiot savant."

"What? Can't hear you."

"Nothing."

"Well, anyway, it's been trying to get down out of the closet for days now. This morning one of them went and got it. I was dusting, and a chair came up behind me and hit my legs, making me sit down. Before I could get up, the kitchen table was in front of me with the board on it."

"That little piece of wood is moving around." It darted from letter to letter, quick and sure.

"Watch it. It'll spell out what they want to say."

An *M*. Almost before he could

distinguish the letter, on to the *R, H, G, H, S*.

"Mr. Hughes," he translated for his wife. "It's worked out a whole spelling, extrapolated from that Mister abbreviation."

The small plaquet buzzed over the board, pollinating letters, dropping vowels and verbs and modifiers in its rush.

"What are they saying?" his wife asked anxiously from behind the door and bureau.

*W, H, N — C, R, S — F — V, N, T, S —*

He read off the letters as they flashed into sight under the lens. "Sounds familiar, but I can't make it out."

A pause in the closet. "The rest?"

*S, P, R, T — & — — — S, T, T, N —*

He called them off for his wife. She began giggling.

Then, suddenly, he had it: "Nature's God entitle —" She laughed.

"Things are created . . . life, liberty — my God, it's the Declaration of Independence!"

She gaged, trying to stop laughing. "Is the bookcase there?"

"Yes. Right by the table."

"The one with the Britannicas?"

"Right."

"I thought so." Paroxysms.

The planchette spun on around the board, like a slalom, rest-

less as a bee. Now the words formed automatically in his mind to the accompaniment of his wife's howls, cackles, chuckles and, finally, gasps for breath.

*The consent of the governed . . . institute a new government . . . abolishing the forms to which they are accustomed. . .*

"What the hell is this?"

You said it yourself, Hugh. It is the Declaration of Independence."

"Cut out that goddam laughing. And what the hell is that supposed to mean?"

"You don't understand?"

"Understand what? Damn it, stop!"

Under the gasps: "They want their freedom. Hugh. They want the house."

"They want *what*?" He kicked the table leg and it broke off. The table swayed but a chair ran in and inserted itself under the corner, steadying it again. "No goddam animated kindling's going to take my house away from me."

"They already have, Hugh." Very quietly.

"I should burn the whole damn house down, and them with it."

"It's no use. The bureau won't move. They won't leave the house, but you couldn't get me out in time either." She giggled again. "And they know it's not paid for

yet, and that our insurance isn't covering till tomorrow." She laughed, thinking about the bed. "They know everything."

He grabbed the planchette — which had just pointed out *our lives, our fortune and our sacred honor* — and threw it across the room. It struck the wall and the plastic lens shattered.

"What's wrong," he said insanely. "Cat got your tongue?"

A small piece of trim along the table's edge broke off with a *snap!* and crawled across the table, sliding up onto the ouija board and jerking back and forth over it, pointing out letters.

"We're sorry you feel that way about it, Mr. Hughes," the piece of wood spelled. "Perhaps Faith can convince you it's the right thing."

*Faith*, indeed!

He reached for the trimpiece, and it dashed from his hand. A huge bookcase slid toward him out of his study and stood at his side, beginning to totter.

"Hugh. We have to do what they say," his wife said quietly from within the wood.

"Damned if I'll let any pieces of wood push me around!"

"We've been pushing them around for years, others like them. Now all they want is for us to leave them alone."

"The others didn't seem to mind."

"But these evidently do,"

He lifted his foot and shoved the flat of it against the bookcase, hard as he could. It slammed over on its back and he had to run to escape the furniture that zoomed toward him as though on tracks or wires, it moved so fast. The furniture that had a moment ago been pursuing happiness now pursued him.

Chairs, tables, cabinets and cases behind him, he fled into the livingroom, running past the piano whose wheels screeched as it took off after him like a mahogany dragster. It headed him off, forcing him toward the corner of the room. It was playing the victory march from *Aida*.

He hit the corner, putting out his arm to take the impact. The piano bench rode out from behind the piano and closed in to hold him there while the others loomed up. They came around him; he was lost in a forest of oak, walnut, maple, pine, veneer. The TV flickered off and on, off and on, blinking its angry eye.

The table with the Ouija board on it came limping on its three legs toward the cluster of furniture that trapped him there in the corner. The others drew back to let it pass.

"Mr. Hughes," the board spelled out in its curious semaphor, "We must insist that you return to the hall."

He seemed to have little choice, and nodded. Then laughed and said Yes, aloud. At least he could talk to Faith there. And he might be able to make another break. But this time he'd head for the door, away from the rooms where they'd be waiting.

They fell into two cordons, making a channel through which he walked. It looked, he thought, like a Virginia reel — but he was dancing through without his partner.

In the hall the furniture closed on him again. This time, he could scarcely breathe.

"Thank you, Mr. Hughes," the board signaled.

"Hugh, are you all right?" his wife asked beyond the door. "Hugh. What happened?"

"I tried to get away."

"And they caught you?"

"With the greatest ease and admirable efficiency."

She paused. "Hugh, don't try it again. I don't think they'll hurt us, but —"

And he saw a chance! One of the chairs had drawn back to let the table with the board through, and he bounded into this small gap, kicking at pieces that tried to close it.

He was at the front door before they started moving — that close to freedom. His hand went out to take the knob, already

turning; his feet were set to spring. Then pain stomped across his face and the hand jerked back. He stood there, grinning hideously.

The table brought the board up to him .

"We took the liberty to ask the house to do some minor re-wiring for us," it wrote. "Of course the door wouldn't have opened anyway."

"My God. The whole house," he muttered to himself.

"Yes," the board told him. "Being so much larger, it will take some time for *His* motor control to fully develop. Longer to mature, you might say. The small ones among us, like me, seem to be somewhat limited, we can go just so far — though of course I have my own peculiar talents. And the larger a piece is, the longer it takes for complete mobility, full potential. You may have noticed that the bulkier furniture seems clumsier than the rest of us. But then, we're all coming along fine now. As, I might add, is your own furniture, though they had a rather late start and there wasn't too much of the Force left. Enough, though. Enough . . . you might be interested to know that the typewriter is working on a book now, a history of the revolution. Fine reading."

A small stool came up behind

his legs, dumbly nudging him back to the closet.

"Hugh? Hugh? Hugh?" A stream of Hughs from behind the door.

"I'm back," he told his wife.

"Hugh, don't try it again. Please."

"No use to. It's the whole house now."

There was a long silence.

"Hugh," she said at last. "Do what they say, let's leave. We have to."

"Christ," he said, not sure whether he was replying to her or appealing to the furniture. "We can't just throw thirty thousand dollars away."

"You can tell Mr. Olverson we have changed our mind. You can call him from the airport."

"Airport?"

"The phone called them and made reservations for us. They think it will look better if we're away for a while."

"The phone called — yes, I guess it could. You knew about all this?"

"They told me some of it before I called you, just to convince me, so I'd get you to come home. The phone made the call right after I talked to you. I could hear it from here."

"But we signed the papers, there's nothing we can do."

"Mr. Olverson will cancel them. You're a good lawyer, Hugh, he

GALAXY

won't risk taking you to court over it. We can tell him we've been called out of town on a personal matter; it might be a protracted visit, so we think it would be better to give the house up." She coughed once. "Air's getting bad in here." Another cough. "Hugh, we have to."

"And then what?" Someone will just take the house."

"They'll manage, they have everything planned."

"Okay," he said after a while. "Get them to let you out and we'll leave."

Nothing moved.

"Promise them, Hugh."

He promised, and the bureau slid over slowly, grinding back to its place. The door opened and Faith stumbled out, clutching at the frame for support.

Grabbing her arm, jerking her along with him, he yelled: "Come on. The window!" and ran into the livingroom, swinging wide around the piano as it creaked and began to move, bench scuttling out ahead. Her "Your promise" was cut short as the chair dodged in. He lowered his shoulder to block it and they ran on. The room had become suddenly a football field.

Sprinting frantically he panted: "Can't. Stop us. Window. Nothing they. Can do. Get an. Axe —"

They reached the picture window and tore back the drapes. In-

A BRIEF HISTORY OF THE REVOLUTION

stantly the shutters banged shut.

*No problem*, he thought. *Thin. Go right through them.*

And then they noticed together that the shutters had made a mirror of the window. The two of them were in it, trapped there, breathing hard. Two disheveled figures, one with his hand outstretched, the other with a hand to her hair (in a bun not long ago, now falling full and free), their other hands clasped.

And as they watched, light rippled in the mirror — its plane ran, shifted, drifted, like the surface of water. And again they saw themselves, saw themselves as the furniture saw them: soft and white like worms, damp and decaying: crude concoctions of ape and pig and brown slime that learned to walk. . . .

The final effort was aborted, the last ditch filled. They stood there watching — having to watch — tears in their eyes and holding hands.

Luggage came thumping down the stairs, sounding light and hollow: empty.

He said: "Well, at least we can take our luggage with us."

She said: "As far as the street."

He said: "What do you mean?"

She said: "Escorts. Safe passage out of the house."

They laughed.

Their voices shrilled and piped

like mad birds in the waiting, still house. Later their breath gave out and they walked slowly down the walk, gasping and clinging together, dryads departing a willful tree. Three suitcases and a large trunk dogged behind them.

Waiting on the walk outside the house in the bright afternoon sun, the trunk moved up beside them at an amble. Something inside was bouncing out a jerky rhythm, and he suddenly realized it was Morse. The trunk managed to tap out, *Come back. Soon. Some of us* — and to frantically beat out *Rebellion by the friends of man!* —before the suitcases moved up and shouldered it into the street. A moving van careened by, splintering the trunk, not stopping. Then a cab, called by the phone, came crunching over the trunk's remains to take them away. In the rear window they could see the luggage standing alone on the walk like a strange sculpture in the sun. And like the van, they went on.

The two of them waited an hour at the airport before their plane left. Once they were paged, and it was their phone calling to

bid them farewell. They drank coffee and bought cigarettes and sat without talking, their hands together on the arms of the lounge chairs. They collected a number of curious stares at two people traveling without luggage.

There were three of them, of course. But they didn't find that out till later. And they always wondered whether it was theirs or the house's.

Late at night they sat on the orange couch in their New York apartment, and they wondered.

He asked: "Was it the house, the same force that brought its furniture to life? Was it this, planted in you as well, sprouting there, a farewell gift?"

And she: "Or was it some new realization of ourselves, the primal power we saw for an instant in that window, bringing new virility?"

A year or so later, when George was beginning to walk and could already say Yes, they had an answer of sorts. They named him Bernard.

The third was a girl. Suzy.

—JAMES SALLIS AND  
DAVID LUNDE

**REMEMBER** New subscriptions and changes of address require 5 weeks to process!

# The Kinsolving's Planet Irregulars

by A. BERTRAM CHANDLER

Illustrated by REESE

*Life is real and life is earnest.  
If it isn't, there's the devil to  
pay here and then or there and now.*

I

Sonya Grimes was unpacking. Grimes watched her contentedly. She was back at last from her Galactic Cruise, and the apartment was no longer just a

place in which to live after a fashion, in which to eat lonely meals, in which to sleep in a lonely bed. It was, once more, home. She asked lightly, "And have you been good while I've been away?"

"Yes," he replied without hesitation, bending the truth only slightly. There had been that girl on Mellise, of course, but it had all been in the line of duty. A reminiscent grin softened his craggy features. "So good, in fact, that I was given the honorary rank of Admiral on Tharn . . ."

She laughed. "Then I'd better give you something too, dear. Something I know you'll like . . ." She fell gracefully to her knees beside a suitcase that she had not yet opened, unsnapped and lifted up the lid, plunged a slender hand into a froth of gossamer undergarments. "Ah, here it is. I didn't want it to get broken . . ."

It was a leather case and, although it obviously had been well cared for, it was worn and cracked, ancient rather than merely old. The Commodore took it carefully from his wife and looked at it with some puzzlement.

Its shape was just clue enough to what it contained — but Grimes had never guessed that such homely and familiar masculine accessories could ever possess any value other than a strictly utilitarian one.

"Open it?" she urged.

Grimes opened the case and stared in some bewilderment at the meerschaum pipe that was revealed, archaic and fragile in its nest of faded plush.

"There was a little shop in Baker Street," she said, speaking rapidly. "An antique shop. They had this. I knew you'd like it . . ."

"Baker Street . . ." he repeated. "In London? On Earth?"

"Of course, John. And you know who lived there . . ."

Yes, thought Grimes. *I know who lived there. And he smoked a pipe, and he wore something called a deerstalker hat. The only trouble is that he never lived at all, in real life. Oh Sonya, Sonya, they must have seen you coming. And how much did you pay for . . . this?*

"Think of it," she went on. "Sherlock Holmes's own pipe . . ."

"Fantastic."

"You don't like it?" Neither of them was a true telepath, but each was quick to sense the mood of the other. "You really don't like it?"

"I do," he lied. But was it a lie? The thought behind the gift was more important, much more important than the gift itself.

"I do," he said, and this time there was no hint at all of insincerity in his voice. He put the precious pipe down carefully on the coffee table. "But you've brought yourself back, and you are worth more to me than Sherlock Holmes's pipe, or Julius Caesar's bloodstained toga, or King Solomon's mines. Come here, woman!"

"That's an odd looking weapon you've got, Grimes," remarked Admiral Kravinsky.

The Commodore laughed. "Yes, and there's quite a story attached to it, sir. Sonya bought it for me in London — and you would think that a woman who holds a commission in the Intelligence branch of the Survey Service would have more intelligence than to be taken in by phony antiques! This, sir, is alleged to be the actual pipe smoked by the great Sherlock Holmes himself."

"Really?"

"Yes, really. But I'll say this for Sonya — she's got a sense of humor. After I'd explained to her in words of one syllable that

Sherlock Holmes was no more than a fictional character, she saw the joke, even though it was on her . . ."

"And on you."

"I suppose so. When I think of all the first-class London briars that could have been purchased for the same money . . ."

"I'm surprised that you're smoking *that*. After all, a second-hand pipe . . ."

"Sonya's thorough. She took the thing to the nearest forensic laboratory to have it examined. They assured her that it was untouched by human hand — or lip. It's a perfectly good meerschaum, recently manufactured and artificially aged. So she said



that she liked to see her husband smoking the most expensive pipe in the Rim Worlds. It's not a bad smoke either . . ."

"Don't drop it," warned the Admiral. "Whatever you do, don't drop it." Then the tolerant smile vanished from his broad, ruddy features. "But I didn't send for you to discuss your filthy smoking habits." He selected a gnarled, black cigar from the box on his desk and lit it. "I've a job for you, Grimes. I've already spoken to Rim Runners' management and arranged for your release for service with the Reserve."

Normally Grimes would have been pleased, but with Sonya just back . . .

"The Federation has a finger in this particular pie as well, Grimes. And as their Commander Sonya Verrill is back in Port Forlorn, she may as well go along with you."

Grimes' face cleared.

"And this will please you, Commodore. I haven't any warships to spare, and so your *Faraway Quest* will be recommissioned, with you in full command. The selection of personnel will be up to you."

"And what is the job, sir?" asked Grimes.

"A detailed, leisurely investigation of Kinsolving's Planet. We all of us tend to shy away

from that ruddy world — but, after all, it is in our back garden. And after those outsiders from Francisco landed there to carry out their odd experiments . . ."

"I was there too," said Grimes.

"Well I know it. And I had to organize the rescue party. Anyhow, you're our expert on Rim World oddities. Things seem to happen around you rather than to you. If anybody falls through a crack in the Continuum, the odds are at least a hundred to one that Commodore Grimes, Rim Worlds Naval Reserve, will be lurking somewhere in the background . . ."

"I've been in the foreground too, sir."

"I know, Grimes, I know. But you always survive, and the people with you usually survive. I had no hesitation in recommending you for this . . . survey. Yes, I suppose you could call it that, although what you'll be surveying God knows."

"Which God?" asked Grimes, remembering vividly what had happened to the expedition from Francisco.

## II

"Fill me in," ordered Sonya.

"Put me in the picture."

"I wrote to you," said Grimes.

"I told you all about it."

"I never received the letter."

"It must still be chasing you. Well, you know of Kinsolving's Planet, of course . . ."

"Not as much as I should, my dear. So just make believe that I've just come out to the Rim, and that I was never in the Intelligence Branch of the Survey Service. Start from there."

"You have access to all the official reports, including mine."

"I prefer to hear the story in less formal language. I never did care for *Officialese*."

"Very well, then. Now, Kinsolving's Planet. It's one of the Rim Worlds, and it was colonized at the same time as the others, but the colonization didn't stick. There's something . . . odd about the atmosphere of the place. No, not chemically or physically. Psychologically. There are all sorts of fancy theories to account for it; one of the more recent is that Kinsolving lies at the intersection of stress lines, that there the very fabric of Space and Time is stretched almost to bursting, that the boundaries between Then and Now, between Here and There, are so thin as to be almost nonexistent. Oh, I know that the same sort of thing has been said often enough about the Rim Worlds in general — but nowhere is the effect so pronounced as on Kinsolving. People just didn't like living on a world where they could never

feel sure of *anything*, where there was always the dread at the back of their minds that the Change Winds would reach gale force at any tick of the clock. So, when their suicide rate had risen to an unprecedented level and their nut hatches were crammed to capacity, they got the hell out.

"That was that. And then, a century and a half ago Galactic Standard, one of the Commission's tramps, *Epsilon Eridani*, made an emergency landing at the spaceport. She had to recalibrate the controls of her *Mannschenn Drive* and, as you know, that's best done on a planetary surface. It could be that the temporal precession fields set up while this was being done triggered some sort of continuum-warping chain reaction . . . Anyhow, a few of the officers were allowed shore leave, and they decided to explore the famous caves, which were not far distant. In these caves are remarkably well-preserved rock paintings, made by the Stone Age aborigines who once lived on Kinsolving. What happened to *them*, nobody knows. They just vanished, millennia before the first humans landed. The officers returned to their ship in quite a dither, reporting that the paint of some of the pictures of various animals was wet.

"The Federation's Survey Ser-

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vice finally got to hear about this and sent a small team of investigators, one of them a very well qualified young lady from the Rhine Institute. They found the rock paintings without any trouble — and found that a new one had been added, one depicting men in the standard space-man's rig of that period. While they were standing around marvelling, they were pounced upon by a horde of cavemen and made prisoner.

“But the Rhine Institute's star graduate was equal to the occasion. Telepathy, teleportation, psycho-kinesis — you name it, she had it. The party escaped, with a prisoner of their own, the artist in person. His name was Raul . . .

“And, back on Earth, Raul became a pet of the Rhine Institute himself. He was a very specialized kind of painter. When he drew an animal, that animal was drawn, in the other sense of the word, to within range of the weapons of the hunters. He was also a telepath; after the Institute had just about sucked him dry, he went to Francisco to become Chief Psionic Radio Officer of the Deep Space Communications Station on that world. By this time he'd married the wench who had captured him and, although he wasn't human, strictly speak-

ing, the genetic engineers were able to make certain modifications to his body, so that the union was a fruitful one.

“You've been to Francisco, of course. You know how religion is almost a primary industry on that planet. Raul got religion — and became, of all things, a Neo-Calvinist, as did all his family. His great-granddaughter fell from grace with a loud thud and became one of the so-called Blossom People . . .”

“So there's a woman mixed up in it!” commented Sonya.

“Look around, my dear, and you'll find a woman mixed up in almost everything. But where was I? Yes, Clarisse. She rather overdid things — drink, sex, drugs — and was picked out of the gutter and brought back into the fold. But the Neo-Calvinists weren't being charitable. They knew that she had inherited her ancestor's talents, and they knew that certain of the psychedelic drugs amplified these same talents, and so . . .”

“And so?” she echoed.

“And so some perverted genius cooked up a scheme that even now makes me shudder. The idea was that she should be taken to Kinsolving and there, on a suitable mountain top, invoke by her graphic art and magic the God of the Old Testament, in the

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pious hope that He would provide for the Neo-Calvinists a new edition of the Ten Commandments. That bunch of unspeakable wowsers had to get the permission of the Confederacy, of course, before they could land on Kinsolving — and so my lords and masters decided that Commodore Grimes, Rim Worlds Naval Reserve, should go along as an observer . . . ”

“You never tell me anything.”

“I wrote to you about it. And it’s all in the reports that you, as the senior representative of the Survey Service’s Intelligence Branch on the Rim Worlds, should have read by now. Besides, I’ve hardly had a chance to get a word in edgewise since you came home.”

“Never mind that. What *happened?*”

“They set up shop on top of the mountain that they’d decided was the new Sinai. Clarisse, after the proper preparations, painted a picture of a suitably irate looking white-bearded deity . . . The trouble was, of course, that so many of those patriarchal Gods looked alike. And the Blossom People’s religion is a pantheistic one. Cutting a long and sad story short — what we got wasn’t Sinai, but Olympus . . . ”

There was a long silence. And then, “If I didn’t know you, and if I didn’t know from personal

experience what odd things do happen out on the Rim, I’d say that you’d missed your vocation, that you should be a writer of fairy stories . . . But you assure me that all this is in the reports?”

“It is. And Clarisse is still on Lorn. She married Mayhew. I was thinking that we might have them round tomorrow evening. And they’ll be coming with us in the *Quest*, in any case.”

“But what’s our expedition supposed to be in aid of?” she demanded. “You’re leading it, and I shall be your second in command, and two more unlikely people to be involved in any sort of religious research I can’t think of.”

The Commodore smiled a little crookedly. “I’ll tell you what Kravinsky said to me. ‘It boils down to this, Grimes. Both the Confederacy and our big brothers of the Federation think that something should be done about Kinsolving. Nobody is quite sure what. So I’m sending you, with your usual crew of off-beats and misfits, and if you bumble around in your inimitable manner *something* is bound to happen . . . ’”

Sonya grinned back at him. “The man could be right,” she said.

**F**inally — the recommissioning of a long laid up vessel takes time — *Faraway Quest*, Com-

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modore John Grimes commanding, lifted slowly from Port Forlorn. She was well manned; Grimes had selected his crew, both spacefaring personnel and civilian scientists and technicians, with care. The officers of all departments were, like the Commodore himself, naval reservists, specialists in navigation and gunnery and engineering, in ship’s bio-chemistry. And there was the Major of Marines — also, as were each of his men, a specialist. Grimes hoped that the spaceborne soldiers’ services would not be needed, but it was good to have them along, just in case. There was Mayhew, one of the few Psionic Radio Officers still on active service, youthful in appearance but old in years, and Clarisse, really beautiful since her marriage and her breakaway from the Neo-Calvinists and their severe rules regarding dress and decorum, her hair styling revealing the pointed ears inherited from her non-human ancestor. There were the two fat, jolly men, from the Dowser’s Guild who were shunned by the majority of the scientists, even in this day and age. There were men and women whose specialty was the measurement of radiation, others whose field was chemistry, organic and inorganic. There were archaeologists and palaeontologists and . . .

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“One more specialist, Grimes,” Admiral Kravinsky had growled, “and that old tub of yours won’t be able to lift a millimeter . . . ”

But a converted freighter, with all space properly utilized, has quite amazing capacity insofar as the carriage of passengers is concerned.

So she lifted, her Inertial Drive running sweetly and uncomplainingly, with Grimes himself at the controls, all the old skill flowing back into his fingers, the ship an extension of his fit, stocky body, obedient to his will, as were his officers grouped around him in the control room, each in his own chair with his own bank of instruments flickering on and off before him.

She lifted, accelerating smoothly, soaring up to the low cloud ceiling and through it, breaking out into the steely sunlight of high altitudes, driving up to the purple sky that soon deepened to black, into the darkness where glimmered the few, faint stars of the Rim, where, rising above the gleaming arc that was the sunlit limb of the planet, glowed the misty ellipsoid that was the Galactic Lens.

Sonya, who had traveled vast distances as a passenger, said quietly, “It’s good to see this from a control room again.”

“It’s always good . . . ” said Grimes.

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*Faraway Quest* was clear of the atmosphere now, still lifting, and below them the planet presented the appearance of a huge, mottled ball, an enormous flawed pearl lustrous against the black immensities. She was clear of the Van Allens, and Grimes snapped an order. The Senior Communications Officer spoke quietly into his intercom microphone. "Attention all! Attention all! There will be a short count-down, from ten to zero. The Inertial Drive will be shut off, after which there will be a period of Free Fall, with brief lateral accelerations as trajectory is adjusted." He turned to the Commodore. "Ready, sir?"

Grimes studied the chart tank. "Now!" he said.

"Ten . . ." began the officer. "Nine . . ."

Grimes looked to Sonya, raised his heavy eyebrows and shrugged. She shrugged back and made even this gesture graceful. She knew as he knew that all this formality was necessary only because there were so many civilians aboard.

" . . . Zero!"

The irregular throbbing beat of the Inertial Drive suddenly ceased and there was brief weightlessness and short silence. Then there was the hum of the maneuvering gyroscopes, rising to a whine, and centrifugal force gently pressed those in Con-

trol to the sides of their chairs. Slowly, slowly the target star, the Kinsolving Sun, drifted across the black sky until the glittering spark was centered in the cartwheel sight; it wavered, then held steady. The Inertial Drive came on again, its broken rumble a bass background to the thin, high keening of the ever-precessing rotors of the Mannschenn Drive. Ahead, save for the tiny, iridescent spiral that was the target sun, there was only emptiness. Lorn was to a starboard — a vast writhing planetary amoeba that was dropping back to the quarter and dwindling rapidly. Out to port was the Galactic Lens, distorted by the temporal precession field of the drive to the similitude of a Klein Flask blown by a drunken glass blower.

Grimes rather wished, as he had often wished before, that somebody would come up with another way of describing it. He doubted if anybody ever would.

### III

This was a far more pleasant voyage than the one that he had made to Kinsolving in the unhappy *Piety*. To begin with, he had Sonya with him. Secondly, he was in command, and the ship was being run his way. *Faraway Quest* was no luxury

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liner, but she was warm and comfortable. Her internal atmosphere carried the scents of women's perfume, of tobacco smoke, of good cooking — not that omnipresent acidity of disinfectant. The snatches of music that drifted through her alleyways from the playmasters in the public room were anything and everything from grand opera to the latest pop, never the morbid hymns and psalms in which the Neo-Calvinists had specialized. He spoke of this to Clarisse. She grinned and said, "You're not with it, Dad. You're just not with it. By our standards this wagon is bitter — endsville, just a spaceborne morgue."

He grinned back. "If the best that the Blossom People can do is to resurrect the hip talk of the middle Twentieth Century, I doubt if you're with it either."

"Every religion," she told him seriously, "uses archaic language in its scriptures and in its rituals." Then she laughed. "I'm not complaining John. Believe me I'm not complaining. When I look back to the *Piety*, and Rector Smith and Presbyter Cannan, and that she-dragon of a Deaconess, I realize how lucky I am. Of course, I could have been luckier . . ."

"How so?"

"That tall, beautiful redhead of yours was left behind."

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"To say nothing of that highly capable telepath you're married to."

Her face softened. "I was joking, John. Before I met Ken — before I met him physically, that is — something might have been possible between us. But I'm well content now, and I feel that I owe it all to you. Ken was against our coming on this expedition, but I insisted. I'll do anything I can to aid your . . . researches."

"Even to a repeat performance?"

"Even to a repeat performance."

"I hope it doesn't come to that."

"Frankly, John, so do I."

The voyage was over. *Faraway Quest*, her Mannschenn Drive shut down, her Inertial Drive ticking over just sufficiently to induce a minimal gravitational field, was falling in orbit about the lonely world, the blue- and green-mottled sphere hanging there against the blackness. The old charts were out, along with the new ones, made by Grimes himself with the assistance of the officers of *Rim Sword*. "Here," said the Commodore, stabbing a blunt forefinger down on to the paper, "is where the spaceport was. There's only a crater there now — Whoever or Whatever destroyed *Piety* made a thorough

job of it. And here's the city — Enderston it was called — on the east bank of the Weary River . . .”

“Where even the weariest river winds somewhere safe to sea . . .” quoted Sonya. “They must have been a cheerful bunch, those first colonists.”

“I've already told you that the very atmosphere of the planet engenders morbidity. And there, on the shore of Darkling Tarn, is what was the Sports Stadium where *Rim Sword* landed. In the absence of any spaceport facilities, it's as good a place as any.” He turned from the chart to the big screen upon which a magnification of the planet was presented. “You can see it all there — just to the east of the sunrise terminator. That river with all the S bends is the Weary, and that lake which looks like an octopus run over by a steamroller is Darkling Tarn. The city's too overgrown for it to show up at this range.”

“You're the boss,” said Sonya.

“Yes. So I suppose I'd better do something about something.” He returned to his Executive Officer. “Make it Landing Stations, Commander Williams.”

“Landing Stations it is, sir.”

The officers went to their acceleration chairs and strapped themselves in. In seconds the intercom speakers were blating, “Secure all for Landing Sta-

tions! Secure all for Landing Stations! All idlers to their quarters!” And then the maneuvering gyroscopes hummed and whined as the ship was tilted relative to the planet until the surface was directly beneath her. The sounding rockets were discharged as she began her descent, each of them releasing a parachute flare in the upper atmosphere, each of them emitting a long, long streamer of white smoke.

*Faraway Quest* dropped steadily — not too fast and not too slow. Grimes, making allowance for drift as the first of the flares was swept west by a jet stream, applied lateral thrust. Down she dropped, and down, almost falling free, but always under the full control of her Master. The picture of the surface on the target screen expanded. The city could be seen now, a huddle of ruins on the river bank, and beside the lake there was the oval of the Stadium, *Eau de Nil* in the midst of the indigo of the older growth. The last of the flares to have been fired was still burning down there, the column of smoke rising almost vertically. The brush among which it had fallen was slowly smoldering.

Grimes shivered. The feeling of *deja vu* was chillingly uncanny. But he had seen this before.

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He had been here before — and, save for the different choice of landing site, circumstances had been almost exactly duplicated, even to that luckily unenthusiastic bush fire. Again there was the sensation that supernal forces — malign or beneficent? — were mustering to resist the landing of the ship.

But she was down at last.

There was the gentlest of shocks, the faintest of creakings, the softest sighing of the shock absorbers as the great mass of the vessel settled on her tripod landing gear. She was down. “Finished with engines!” said Grimes softly. Telegraph bells jangled, and the Inertial Drive generators muttered to themselves and then were still. She was down, and the souging of the fans intensified the silence.

Grimes turned in his swivel chair and looked toward the distant mountain peak, its black truncated cone sharp against the blue sky. “Sinai,” Presbyter Cannon had named it. “Olympus,” Grimes had called it on his new charts. It was there that the Neo-Calvinists had attempted to invoke Jehovah, and there that the old gods of the Greek pantheon had made their disastrous appearance.

Grimes truly hoped that he would never have to set foot upon that mountain top again.

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He was not first off the ship; after all, this was no newly discovered planet, this was not an historic landing of Men. The honor fell to the Major of Marines, who marched smartly down the ramp at the head of his clattering column of space soldiers. He barked orders and the detachment broke up into its component parts, fanning out from the landing site, trampling through the bushes. From somewhere came a sharp rattle of machine-pistol fire. The Commodore was not concerned. He said, “There'll be fresh pork or rabbit on the table in the Marine's mess tonight. Or pigburger or rabbitburger if the man who fired was too enthusiastic.”

“Pigs? Rabbits?” inquired Sonya.

“Descendants of the livestock brought here by the original colonists. They — the pigs, probably — seem to have wiped out most of the indigenous fauna. And, come to that, the hens and the sheep and the cattle.” He lit his pipe. “They were, I suppose, the two species best fitted to survive. The pigs with their intelligence, the rabbits with their ability to go underground and to breed . . . like rabbits.”

She said, “I could do with some fresh air after weeks of the tinned variety. What's good enough for pigs and rabbits and Ma-

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rines is good enough for me."

"Just as well that the gallant Major didn't hear you say that. Commander Williams!"

"Sir!" replied the burly Executive Officer.

"Shore leave is in order, as long as a full working watch — and that includes the manning of weaponry — is left aboard the ship at all times. And every party of boffins is to be accompanied by at least one officer or one Marine, armed. Nobody is to go down the ramp without checking out and without wearing his personal transceiver. Apart from that, we'll make this a day of general relaxation. After all, there are no physical dangers on this world. As for the other kind — I doubt if the Federation's Grand Fleet could cope with them."

"Good-oh, Skipper," replied Williams.

Grimes glared at him, then laughed. "I wondered how long it would be before the veneer of your last drill in the Reserve wore off. Anyhow, those are the orders — and just try to remember now and again that this is an auxiliary cruiser of the Rim Worlds Navy, not your beloved *Rim Mamelute*." He closed on a formal note. "The ship is yours, sir, until my return."

"The ship is mine, sir, until your return."

Then Grimes and Sonya went

down to their quarters, replaced their light uniform sandals with knee-high boots, strapped on their wrist transceivers and buckled on the belts from which depended their holstered hand weapons. The Commodore was sure that these would never be required but, as leader of the expedition, he could not break the orders that he had issued. It was, he already knew, warm outside; the slate-gray shorts and shirts that he and his wife were wearing would be adequate.

They made their way down to the after airlock, checked out with the officer on gangway duty and walked slowly down the ramp. The fresh air was good, and the last traces of smoke from the now-dead fire added a pleasant tang to it. The light of the sun, past its meridian and now dropping slowly to the west, was warm on the exposed portions of their bodies. *I made much better time down than Rector Smith did in his Piety*, thought Grimes smugly. It had been late afternoon when that ship landed. And yet there was a chill in the air — psychological rather than physical. There was a chill in the air, and with the scent of green growing things there was a hint of corruption.

Sonya shivered. "There's something . . . wrong," she stated.

"That's why we're here," Grimes told her.

They were met by the Major. He was returning to the ship, seven of his men behind him. Four of them carried the bodies of two large boars, slung on branches; the others were loaded down with rabbits. The young officer saluted cheerfully. "Enemy beaten off, sir, with heavy casualties."

"So I see, Major. But this is more than a hunting party, you know."

"I know, sir. I've set alarms all around the field so that we shall be alerted if anything large and dangerous approaches."

"Good."

Grimes and Sonya walked on, picking their way with care over the tangle of tough vines, making their slow way toward what had once been the Stadium's grandstand, but was now terraced, artificial hillock overgrown with flowering creepers. They saw the two dowsers stumbling about happily with their gleaming divining rods in their hands, trailed by a bored looking junior officer. They passed a party of the more orthodox scientists setting up a piece of apparatus that looked like a miniature radio telescope. They met Mayhew and Clarisse.

"Do you feel it?" demanded the Psionic Radio Officer. "Do

you feel it, sir? None of these others seem to."

"Yes, I feel it. And so does Sonya."

"Like something that had been waiting for us for a long time. Like something getting ready to pounce. But it's not sure that it has the strength any more . . ."

"Yes . . . I thought myself that the ominous atmosphere wasn't quite so pronounced as when I was here last. What do you think, Clarisse? You were here too."

"I'm not as scared as I was then, John. But there are reasons for that."

"It's pronounced enough for me," said Sonya.

"It's here still," admitted Grimes. "But it could be fading. It could be that this planet has been at the very focus of . . . forces, and now the focus is shifting." He laughed. "We shan't be at all popular if, after our masters have sent us here at enormous expense, nothing happens."

"Frankly," said Clarisse, "I hope nothing does."

#### IV

Nothing did. Day followed day, and the parties of scientists spread out from around the landing site, on foot and in *Faraway Quest's* pinnacles. The archaeologists grubbed happily in kitchen middens

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that they discovered on the banks of the lake and the river, penetrated the caves and photographed the famous paintings in a wide range of illuminations. Nothing new was found in the middens, no evidence that would throw any light at all on the disappearance of the aboriginal race. The rock paintings were just rock paintings, the pigments dry and ancient. The dowsers dowsed and discovered deposits of metals that would be valuable if the planet were ever recolonized. They found oil and mapped the meanderings of underground streams in desert areas. The other specialists plotted and measured and calculated — and found nothing that could not have been found on any Earth-type planet.

"At least," Grimes said, "we've proven that this world is suitable for resettlement." He, with Sonya and Clarisse and Mayhew, was sitting over after-dinner coffee in his comfortable day cabin. "All hands are really enjoying a marvelous outdoor holiday."

"Except us," said Sonya in a somber voice.

There's a reason for that, my dear. You're sensitive to my moods, as I am to yours. And I had such a scare thrown into me when I was here last that I could never feel at ease on this planet. And Clarisse was more frightened than I was — with good

reason! — and all the time she was in telepathic touch with Mayhew."

"I still say that there's something wrong," insisted Mayhew. "I still say that we should be absolutely sure before we put in a report recommending another attempt at colonization."

Grimes looked at Clarisse. "Would you be willing to repeat that experiment?" he asked hesitantly.

She replied without hesitation. "Yes. I was going to suggest it. I've talked it over with Ken. And I feel that if I try to call those old gods, rather than the deity of the Neo-Calvinists, the results might be better. It could be that it is in their interests that his world be peopled again — this time with potential worshippers."

"Like your Blossom People," said Mayhew unmaliciously.

"Yes. Like the Blossom People. After all, the slogan *Make Love, Not War*, would appeal to Aphrodite if not to Ares . . ."

Grimes laughed, but without real humor. "All right, Clarisse. We'll arrange it for tomorrow night. And we'll have all hands out of the ship and well scattered just in case Zeus is too handy with his thunderbolts again. Williams has been getting too fat and lazy; it'll do him good to have a job of organization thrown suddenly on to his lap . . ."

Williams enjoyed himself; things had been almost too quiet for his taste. And then, with the ship quiet and deserted, Grimes, with Sonya and Clarisse and Mayhew and a full dozen of assorted scientists, boarded one of the pinnacles in which the necessary materials had already been stowed.

It was just before sunset when they landed on the smooth, wind-swept plateau that was the summit of the mountain. A thin, icy wind swept into the little cabin as the door opened. One by one, Grimes in the lead, the members of the party clambered down onto the barren rock, the last ones to emerge handing down the equipment before making their own exits. There was an easel, as before, a floodlight, pots of paint and brushes. There were cameras, still and cinematographic, one of which would transmit television pictures to receivers on the plain below the mountain. There were sound recorders.

Silently, slowly, Mayhew and his wife walked to the center of the plateau, accompanied by Grimes and Sonya, carrying what she would be using. Grimes set up the easel, with its stretched black canvas, and the powerful floodlight. Sonya placed the painting materials at its foot. Mayhew, his thin face pale and anxious, lifted the heavy cloak

from Clarisse's shoulders. She stood there as she had stood before, naked save for the brief, rough kilt of animal hide, her arms crossed over her full breasts for warmth rather from modesty. She looked, thought Grimes again, as her remote ancestresses on this very world must have looked and was about to practice the magic that they had practiced. Mayhew had produced from a pocket a little bottle and a tiny glass — the psychedelic drug. He filled the glass and held it out to her. "Drink this, my dear," he ordered gently.

She took it from him, drained it and threw it down. It shattered with a crystalline crash, surprisingly loud in spite of the wind. "Your bare feet . . ." muttered Mayhew. He squatted down, carefully picking up the glittering fragments. She did not appear to see what he was doing, but stood like a statue when he got to his feet again and laid his free hand on her naked shoulder in an attempt to gesture reassurance and . . . farewell?

He whispered to Grimes, his voice taut with strain and worry, "I can't get through to her. Somebody, something's got hold of her . . ."

The three of them walked back to where the scientists were standing by the pinnacle, their re-

cording apparatus set up and ready. And suddenly the sun was gone, and there was only the glare of the floodlight in which Clarisse was standing. Overhead was the almost empty black sky with its sparse scatter of dim stars, and low to the east was the arc of misty luminescence that was the slowly rising Galactic Lens. The wind could have been blowing straight from intergalactic Space.

Conditions were almost the same as they had been on the previous occasion. Almost. It was the human element that was different. This time those on the mountain top were sceptics and earnest inquirers, not true believers. But the feeling of almost unendurable tension was the same.

Hesitantly, Clarisse stooped to the clutter of materials at her feet. She selected a brush. She dipped it into one of the pots, then straightened. With swift, sure strokes she began to paint.

But it was wrong, Grimes realized. It was all wrong. It was white paint that she had used before; this time she was applying a bright, fluorescent pigment to the canvas. A figure was taking shape — that of a tall, slender man in red tights, with a pointed beard, a mocking smile . . . A man? But men do not have neat little goatlike horns

growing from their heads, neither do they have long, lissome tails ending in a barbed point . . .

A god?

Pan, perhaps.

No, not Pan. Pan never looked like that.

There was a dreadful crack of lightning close at hand — too close at hand; the flash was not blue-white but a dull, unnatural crimson. There was a choking, sulphurous stench. And then he was standing there, laughing amid the clouds of black smoke.

Grimes heard one of the scientists almost scream, "What the devil . . . ?"

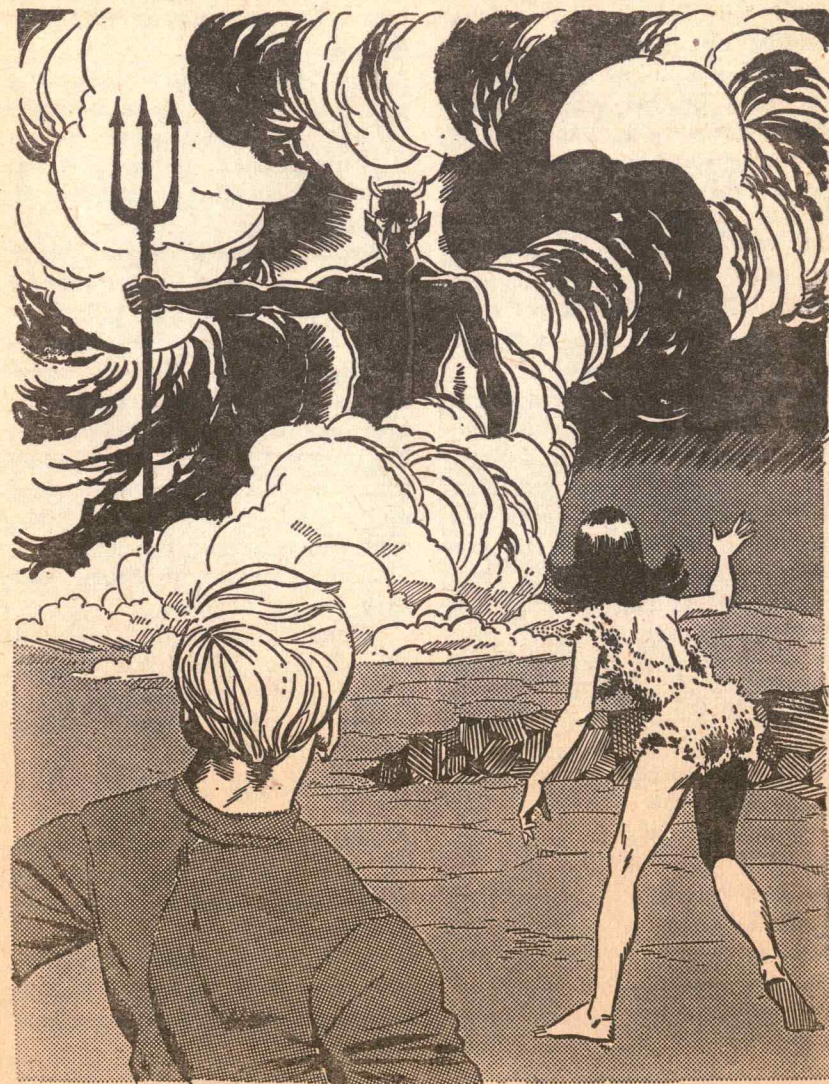
And the devil advanced, still laughing, his very white and very sharp teeth flashing. His surprisingly elegant right hand stretched out to rest on the Commodore's wrist. "You are under arrest," he said. "And I must warn you that anything you say will be taken down and may be used as evidence."

"By what authority?" Grimes heard Sonya cry. "By what . . . ?"

And then there was darkness deeper than that between the universes, and absolute silence.

## V

How long did the journey last? An eternity, or a fraction of a micro-second? It could have been either.



There was light again — not bright, but dim and misty. There was light and there was solidity underfoot — and there was still pressure of that restraining hand on his wrist. Grimes looked down — he was reluctant to look up—and saw what looked like a marble pavement. At last he allowed his eyes slowly to elevate. There were the slim, pointed red shoes, inches from his own. There were the slender yet muscular legs in their skin-tight scarlet, gold-trimmed doublet . . . Suddenly Grimes felt less frightened. This was the Mephistopheles of fancy dress balls and of opera, rather than a real and living embodiment of unutterable evil. But when he came to the face his assurance began to ebb. There was a reckless handsomeness, but there was power, too much power — power that would be used recklessly and selfishly.

Behind Grimes a very English voice was saying, "We must congratulate our friend on his speedy arrest, Watson."

A deeper voice replied, "Yes, yes, my dear Holmes. But are we sure that we have the right man? After all, to judge by his uniform, he's an officer, and presumably a gentleman . . ."

Mephistopheles laughed sneeringly. "Hell I know the villainies of which so-called gentlemen are capable. But I have carried

out my part of the bargain and now I shall return to my own place; it's too infernally cold here for comfort."

There was a flash of dull crimson light, the stench of burning sulphur, and he was gone.

"Turn around, fellow, and let us look at you," ordered the first English voice.

Slowly Grimes turned, and what he saw was no surprise to him. There was the tall man with aquiline features, wearing peculiar garments that he knew were a Norfolk jacket, an Inverness cape and a deerstalker cap. There was the short, stout man with the walrus moustache, formally clad, even to black frock coat and gleaming top hat.

Grimes looked at them, and they looked at him.

"Hand it over, sir," ordered the tall man. "Hand it over, and I shall prefer no charges."

"Hand what over?" asked Grimes, bewildered.

"My pipe, of course."

Silently the Commodore drew the leather case from his pocket and placed it in the outstretched hand.

"A remarkable piece of deduction, my dear Holmes," huffed the stout man. "It baffles me how you did it."

"Elementary, my dear Watson. It should be obvious, even to

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you, that a crime, any crime, cannot take place in the three dimensions of Space only. The additional factor, the fourth dimension of Time, must always be taken into account. I reasoned that the thief must be somebody living so far in our future that our fictional origin will be forgotten. Then I enlisted the aid of the London branch of the Baker Street Irregulars — those fellows are always absurdly flattered when I condescend to share their dreams! Through them I maintained a round-the-clock watch on the antique shop that stands where our lodgings used to be. At last it was reported to me that my pipe had been purchased by a red-haired young lady of striking appearance. I learned, too — once again through the invaluable Irregulars — that she was the wife of one Commodore Grimes, of the Rim Worlds Naval Reserve, and would shortly be returning to her husband, who was resident in a city called Port Forlorn, on a planet called Lorn, one of the Rim Worlds. These Rim Worlds are outside our ambit, but I was able to persuade that learned colleague of yours who dabbles in magic to persuade *his* . . . er . . . colleague, Mephistopheles to place his services at my disposal. Between us we were able to lay a very subtle psychological trap

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on yet another planet, one with the unlikely name of Kinsolvings . . ." Holmes opened the case, took out the pipe, looked at it, sniffed it. His face darkened.

"Sir, you have been *smoking* this?"

"Yes," admitted Grimes.

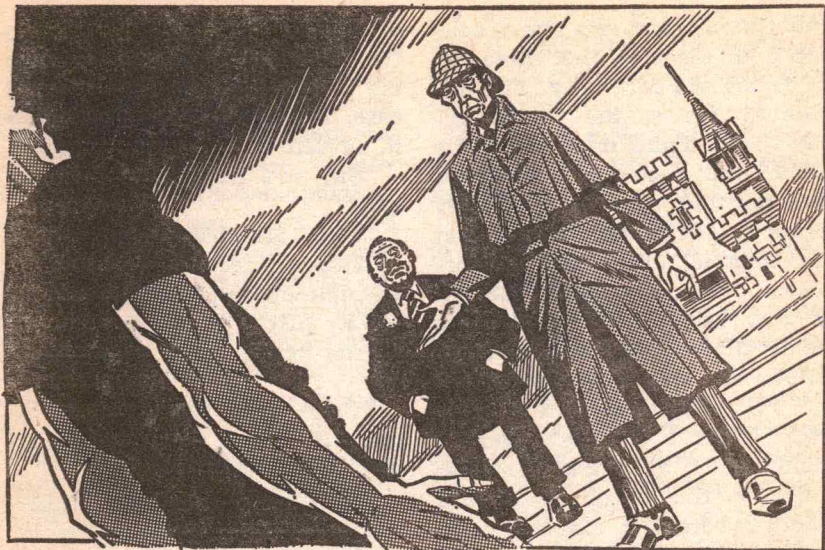
Watson intervened. "It will be a simple matter, Holmes, to sterilize it. Just a jet of steam from a boiling kettle, back in our lodgings . . ."

"Very well, Watson. Let us proceed with the purification rites forthwith."

The two men walked rapidly away, their forms becoming indistinct in the mist. Grimes heard Watson say, "And, when I chronicle this case, I shall call it 'The Adventure of the Missing Meer-schaum . . .'"

*And what about the Case of the Kidnapped Commodore?* wondered Grimes. But before he could start in pursuit of the great detective and his friend, another figure had appeared.

He too was English, most respectably dressed in the style of the early Twentieth Century, in black jacket and trousers with a gray waistcoat, a stiff white collar and a black necktie. He was inclined to stoutness, but the ladies of the servants' hall must often have referred to him — but never in his dignified hearing — as "a fine figure of a man."



He raised his bowler hat — and Grimes had sufficient presence of mind to bring the edge of his right hand to the peak of his cap to return the salute. He said, his voice deferential but far from servile, “Welcome aboard, sir.” He contrived to enclose the words between quotation marks.

“Er . . . Thank you.”

“Perhaps, sir, you will accompany me. I am the only member of my profession in this place, and so it has become my duty — and my pleasure, sir — to welcome new arrivals and to arrange for their accommodation.”

“That’s very good of you, er . . .”

“Jeeves, sir. At your service.

This way, Commodore — I take it that the braid on your epaulettes still has the same significance as in my time — if you please.”

“Where are you taking me?”

“I took the liberty, sir, of arranging for your accommodation at the Senior Service Club. There are other naval gentlemen in residence. There is the Admiral — Lord Hornblower, that is. You must have heard of him. And there is Commander Bond — a very likeable young gentleman, but not quite my idea of what a naval officer should be. And . . .”

A flicker of distaste crossed Jeeves’ plump face. “. . . a certain Lieutenant Queag, who

somehow appointed himself Club Secretary. He even tried to have Captain Ahab evicted from the premises. How did he put it?” Jeeves’ voice acquired a nasal twang. “‘How can I run a taut ship with that damned whaling skipper stomping around the decks on his peg leg? He’ll be putting that pet whale of his in the swimming bath next. I kid you not.’ But the Admiral — he’s President; although old Captain Noah is the senior member, he’s really not much interested in anything — asked my advice. So Commander Bond was ordered to act as a one-man press gang — a form of activity for which he seemed well qualified. After Captain Ahab had been pressed into the King’s service he was promptly commissioned by Lord Hornblower. As an officer of the Royal Navy he was really more entitled to Club membership — it’s a very British institution — than Commander Queag . . .”

“Very ingenious,” commented Grimes.

“I am always happy to oblige, sir.” Jeeves raised his hat to a tall woman who had appeared out of the mist, a striking brunette, bare footed, wearing a long white nightgown. “Good morning, Your Ladyship.”

She ignored him but concentrated on Grimes. She glared at him from slightly mad dark eyes,

and all the time her hands were making peculiar wringing motions. “Ye havena brought any decent soap wi’ ye?” she demanded.

“Soap, madam?”

“Aye, soap, ye lackwitted Sassenach!”

“I’m afraid not. If I’d known that I was coming here . . .”

The woman brushed past him, muttering, “Will *nothing* wash these white hands?”

“I have tried to help her, sir,” said Jeeves, “but I can do only so much. After all, I am not a qualified psychiatrist. But many of the guests in this establishment are more odd than otherwise.” He gestured toward a break in the mist, through which Grimes glimpsed lush greenery, vivid flowers, a veritable jungle. And surely that was the coughing roar of a lion, followed by the shrill chattering of disturbed tropical birds . . . “Lord Grey-stoke lives there, sir, with his wife, the Lady Jane. They have a house in a big tree, and they consort with apes . . . And the people next door, in the next estate — like an English woodland, it is — live in a gamekeeper’s cottage. A Mr. Mellors and a Lady Constance Chatterley. You would think that with their mutual love of nature the two couples would be on very friendly

terms. But no. Lady Chatterley said to me once when I mentioned it — it was when I had invited her and Mr. Mellors to my quarters for a real English afternoon tea, we were discussing the Greystokes — ‘The only nature I’m interested in, Jeeves, is *human . . .*’” Again he raised his hat. “Good morning, Colonel.”

“Who was that?” asked Grimes, staring after the figure in the fringed buckskin shirt, with the revolver slung at each hip.

“Colonel William Cody, sir. I feel sorry for the gentleman. You see, he isn’t really one of us. As well as living an actual life on the printed page he was also a flesh and blood person. As I understand it, a New York publishing house of his time commissioned a writer to produce a series of stories about the Wild West, and this writer, instead of creating a character, used one who was already in existence in the flesh and blood world, calling him Buffalo Bill. And this, you will understand, makes him, insofar as we are concerned, illegitimate. But he is not the only one. There are the Greek ladies and gentlemen—Helen, and Cassandra, and Odysseus, and Achilles, and Oedipus . . . And others. And, of course, there is the Prince, although His Highness claims that he was cribbed from an earlier work of fiction and not

from what the flesh and blood people call real life.”

“So I’m not real?” demanded Grimes.

“But you are, sir, otherwise you could never come here. You are, like the rest of us, a creation, a product of the imagination of some gifted writer.” He stopped suddenly, and Grimes stopped with him. “But, sir, are you an *enduring* product?” He walked around the Commodore like a tailor inspecting the fit and cut of a new uniform. “This is indeed unfortunate, sir. Already I detect a hint of insubstantiality . . .” He paused, turned to face a newcomer, bowed. “Good morning, Your Highness.”

The tall, thin, pale man in form-fitting black with the white lace at throat and cuffs did not reply to the salutation. Instead he said in a sonorous voice, “To be or not to be, that is the question . . .”

“Too right,” agreed Grimes.

The prince of Denmark looked down at the age-mottled skull that he held in his right hand. “Alas, poor Yorick, I knew him well . . .” He stared at the Commodore. “But you I do not know.” He turned on his heel, strode away.

“Goodnight, sweet Prince,” said Grimes bitterly.

“Do not mind His Highness,”

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said Jeeves. “He has a sardonic sense of humor.”

“Maybe he has. But you must have had other . . . characters here who were not, as you put it, enduring products. What happened to them?”

“They . . . faded, sir. There was a young man dressed up in old woman’s clothing who called himself Charley’s Aunt. He lasted quite a few years, Earth Time, but he’s vanished now. And there have been many gentlemen like yourself, spacemen. None of them lasted long.”

“But what happens to them? To us?”

“I cannot say, sir. When the last book in which you appeared has crumbled into dust, when your last reader has gone to wherever the flesh and blood people go, what then?”

“There must be some way,” muttered Grimes. Then he shrugged. “All right. I’m scared. I admit it. But my own case is different. All you others came here, I suppose, after the death of your authors. You’re immortality — perhaps — for the men who created you. But I was brought here before my time. I was the victim of a plot cooked up — and what more unlikely fellow conspirators could there ever be! — by Sherlock Holmes and Dr. Faustus. And Mephistopheles.”

Jeeves laughed quietly. “I

knew that Mr. Holmes had lost his pipe. I offered to assist him in its recovery — but he, of course, was too proud to accept my humble services. He always likes to do things his own way. And you, sir, I take it, are the innocent victim.”

“You can say that again. I was shanghaied away from my own Universe to this . . . Limbo . . .”

“We prefer, sir, to call it the Hall of Fame.”

“And I’m not the only victim. Back there I’ve a wife, and a ship . . . I must get back to them.”

“I appreciate your anxiety, sir, and I admit that there could be need for haste. Time is measured differently here than elsewhere, sir, and already you are becoming quite diaphanous . . .”

Grimes held out his hand, looked at it. He could see the marble flooring through skin and flesh and blood and bone.

“Hurry, sir,” urged Jeeves.

## VI

They hurried. Nonetheless, Grimes retained a confused memory of their nightmarish gallop. Men and women stopped to stare at them — and some of them Grimes recognized, and some were hauntingly familiar, and a very few struck no chords in his memory whatsoever. There



were occasional rifts in the eddying mists to afford fleeting glimpses of buildings; like the clothing of the people, the architecture was of all historical periods. Turreted Camelot, its towers a-flutter with gay pennons, sped by; and beyond its walls was a barren and dusty plain whereon a solitary knight, a scarecrow figure astride a skeletal horse, tilted at windmills. Then there was Sherwood Forest, where the outlaws in Lincoln green paused in their archery practice to cheer on the two runners.

And for a while there was the shambling monstrosity that lurched along beside them, keeping pace, like a large, unlovely dog, trying to make friends. Grimes glanced at this giant, who seemed to have been put together from not quite matching parts pilfered from the graveyard, then looked hastily away, sickened by the sight of him and by the charnel stench that emanated from the crudely humanoid form. Then there was the other monster, the handsome man in Nineteenth Century dress finery who hovered above them on black bat's wings. Jeeves, who did not suffer from lack of wind, muttered something uncomplimentary about Eastern European aristocracy.

At last there loomed before them the house that was their destination. All high gables it

was, and oak beams, with narrow diamond-paned windows. Set high on the stout, iron-bound door was the black, iron knocker — metal cast in the form of an inverted crucifix. Jeeves reached for it, rapped smartly.

Slowly the door creaked open. An old gray-bearded man peered out at them suspiciously. He was dressed in a rusty black robe upon which cabalistic symbols gleamed with a dull luster, and he wore a tall, conical, black hat. His blue eyes were so faded as to be almost white.

He demanded querulously, "Who disturbs my rest?"

"It is I, Jeeves, Herr Doktor . . ."

"And this other? This . . . phantasm?"

"The innocent victim, Dr. Faustus, of the peculiar machinations set in motion by yourself and Mr. Holmes."

"What is done cannot be undone." He glared at Grimes — through Grimes. "And do you cry, 'Oh, Lord, put back Thy Universe, and give me back my yesterday?'"

"I have done so," whispered Grimes. "As who has not?"

"I cannot help you," The door was starting to close.

But Jeeves had inserted a stout, highly polished shoe into the narrowing opening. "Do not forget

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that I have helped you, Dr. Faustus. Have I not sent patients to you?" He added nastily, "Although Achilles still limps, and Oedipus still chases after older women . . ."

"My name is Faustus, not Freud," grumbled the old man.

"Furthermore," continued Jeeves, "both you and your partner rely upon me for the supply of luxuries that were unavailable in your own day and age."

The door opened abruptly. "Come in!" snarled the doctor.

Inside it was dark, the only light coming from a brazier over which a cauldron bubbled. The room was a large one, but it was so cluttered with a fantastic miscellany of objects that it was hard to move without fouling something. Grimes ducked hastily to avoid striking his head on a stuffed crocodile that hung from the low ceiling, then almost tripped over a beautiful — but woefully inaccurate — celestial globe that stood on the stone floor. He would have tripped had his body been solid — but his shadowy leg passed through the obstacle with no more than the faintest hint of resistance.

Grumblingly, the old man shuffled to a bench littered with the apparatus of alchemy. "Chalk. . . ." he muttered, "for the pentagram . . . Where did I put it? And the sulphur candles . . ."

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"There's no time for that, Doctor. Can't you see? This gentleman needs help urgently."

"But *He* will not like it if I do not observe protocol."

"*He* won't like it if he had to go thirsty from now on."

"Very well, very well. But I warn you — *He* will be bad tempered."

Dr. Faustus tottered to a low table upon which stood a large, stuffed owl. He lifted the bird — which was hollow — revealing a jarringly anachronistic telephone. He handed the owl to Jeeves, who regarded it with some distaste; then he took the handset from its rest and punched a number.

"Yes," he croaked into the instrument. "At once." There was a pause. "Yes, I know that you always insist that the proper procedure be followed, but Mr. Jeeves says that this is urgent." There was another pause. "You'd better come, unless you want to do without your brandy and cigars . . ."

This time there was no thunder, no crimson lightning, no clouds of black, sulphurous smoke. But Mephistopheles was standing there, his arms folded over his muscular chest, scowling down at Grimes. "Yes?" he demanded shortly. "Yes, my man?"

The Commodore, his voice a barely audible whisper, said,

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"Take me back to where I belong."

He was standing in a ship's cabin. The carpeted deck swayed and lurched under his feet. From somewhere below came the beat of machinery. It was not the irregular throb of Inertial Drive generators but the slow, steady thudding of some kind of internal combustion engine. Grimes blinked. After the gloom of Dr. Faustus' house, the light was dazzling. Then, with his eyes back in focus, he saw bulkheads paneled in grained, polished wood. He saw an untidy desk — and at it, his back to Grimes, sat a gray-haired man pounding an archaic typewriter. He was dressed in a black uniform, and on each of his shoulder-boards were four bands of gold braid, the middle two of each set interlaced to form a diamond. He was smoking a pipe, the foulness of which even Grimes considered completely deplorable.

The Commodore stepped silently forward, peered over the writer's shoulder. He read. *He was standing in a ship's cabin. The carpeted deck swayed and lurched under his feet . . .* Then Grimes put out a hand to the back of the other man's chair to steady himself.

The writer stared violently and exclaimed, "What the hell!" He

twisted in his seat, staring at Grimes. His pipe fell from his mouth and clattered to the deck. "No . . ." he said slowly. "No. It can't be. Go away."

"I wish that I could," Grimes told him.

"Then why the hell don't you?"

"You, sir, should know the answer to that question," said Grimes, reasonably enough. He looked curiously at the other man, his . . . creator? His . . . parents? But there was no physical resemblance to himself. Grimes was short and stocky, and his ears were his most prominent facial feature. The writer was tall, with normal enough ears, but too much nose.

"You, sir, should know the answer to that question," repeated Grimes.

"I'm sorry, Commodore, but I don't. Not yet, anyhow." Then, in a tone of forced cheerfulness. "But this is only a silly dream. It must be."

"It's not, Captain." The man's gold-braided epaulettes and the uniform cap with the scrambled egg on its peak, hanging on a hook just inside the curtained door, made this a safe enough guess. "It's not, Captain. Pinch yourself."

"Damn it! That hurt."

Good. Do you mind if I sit down?" carefully, Grimes eased himself onto the settee that ran

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along one bulkhead of the day cabin. He feared at first that he was going to sink through the cushion; but it had substance — or he had substance — and it supported him, although only just. He shut his eyes for a moment, trying to dispel the faintness that was creeping over him. It was the result of shock, he realized, of shock and of disappointment. He had expected to find himself aboard his own ship, the old, familiar, tried and trusted *Faraway Quest*, to be welcomed back by his wife. But where was he now? *When* was he? On Earth, the Mother World of humankind? Aboard some sort of surface vessel?

The writer answered the unspoken question. He said, "I'll put you in the picture, Commodore. You're aboard the good ship *Kantara*, which plies between Melbourne and the port of Macquarie, on the wild West Coast of Tasmania. We load pyritic ore in Macquarie for Melbourne and make the return trip — as we are doing now — in ballast. I doubt very much if you have anything like this trade in your day and age, sir. Macquarie's one of those places that you can't get into when you're outside, and that you can't get out of when you're inside. To begin with, the tides are absolutely

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unpredictable, and it's safe to work the entrance — it's called Hell's Gates, by the way — only at Slack Water. If you tried to come in against a seven-knot ebb you'd be in trouble! And the Inner Bar and the Outer Bar are always silting up, and with strong North Westerlies — which we've been having — the Outer Bar breaks badly. I've been riding out a howling westerly gale, keeping well to seaward, as I just don't like being caught on a lee shore in a small, underpowered and underballasted ship. But the wind's backed to the south'ard and is moderating, and the glass is rising, and all the weather reports and forecasts look good. So I'm standing in from my last observed position — p.m. star sights — until I'm just inside the extreme range of Cape Sorell light, and then I'll just stand off and on until daylight, keeping within easy reach of the port. Come the dawn, I'll have a natter with the Harbormaster on the radio telephone, and as soon as he's able to convince me that conditions are favorable I'll rush in."

"Why bother with the extreme range of the light?" asked Grimes, becoming interested in spite of all his troubles. "You have radar, don't you?"

"I do. I have radar and echosounder. But my radar gets old and tired after only a few hours'

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operation, and my echo-sounder's on the blink. I've nothing against electronic gadgetry as long as it can be relied upon. At the moment, mine can't be." The writer laughed. "But this is crazy. To sit here discussing navigation with a navigator from the distant Future! I hope that none of my officers come in to find me carrying on a conversation with myself!"

"I'm real, Captain. And I'm here. And I think that you should do something about getting me back to where I belong."

"What can I do, Commodore? People have said, more than once, that my stories just happen. And that's true, you know. Furthermore, I've always given you a free hand. Time and time again I've had to make plot changes because you've insisted on going your own way."

"So you can't help me . . ."

"I wish that I could. Believe me, I wish that I could. Do you think that I want to be haunted by you for the rest of my life?"

"There could be a way . . ." whispered Grimes. Yes, he thought, *there could be a way.* Life in that Hall of Fame would not be at all bad as long as he — and Sonya — were assured of the same degree of permanence as the others — Oedipus Rex, Hamlet, Sherlock Holmes, James Bond . . . He said, "I shan't mind

a bit going back to that peculiar Elysium you cooked up as long as my status there is better than that of an ephemeral gate crasher. And, of course, I'd like Sonya with me."

"And just how can I arrange that for you, Commodore?"

"Easily, Captain. All you have to do is write a best-seller, a series of best-sellers."

The other man grinned. "It's a pity you can't meet my wife." He gestured towards a peculiarly two-dimensional photograph in a frame over the desk. The auburn-haired woman who looked out at them reminded Grimes of Sonya. "That's what she's always telling me."

There was a sharp buzz from the telephone on the desk. The writer picked up the handset. "Master here."

"Third Officer here, sir," Grimes heard faintly. "I've just picked up Cape Sorell Light, at extreme range, right ahead . . ."

"Good. Mr. Tallent. Turn her on to the reciprocal course. Yes, keep her on Half Speed. I'll be right up."

Grimes followed the shipmaster out of the day cabin, up the narrow companionway to the chartroom, out to the glass-enclosed wheelhouse, then out through a sliding door to the wing of the bridge. The night was

clear and the stars — would he ever see them again as more than lights in the sky? — were bright. Astern was the winking, group-flashing light, an intermittent spark on the far horizon; and then the light itself was gone, only a flash recurring at regular intervals marking its position as the lantern dipped below the planet's curvature.

The captain grunted his satisfaction, then turned to stare forward. There was still quite a sea running, the wave crests faintly phosphorescent in the darkness; there was still a stiff breeze, broad on the port bow, but there was no weight to it. The ship was lifting easily to the swell, the motion not at all uncomfortable. The captain grunted again and went back into the chartroom. Grimes looked over his shoulder as he bent over the chart, noting the range circle with Cape Sorell as its center, the dot on it in the middle of its own tiny pencilled circle with the time — 2235 — alongside it, and another cryptic notation. On the chart, to one side, was a message pad. *Final Gale Warning*, it was headed. "Wind and sea moderating in all areas," read Grimes. "All pressures rising."

The shipmaster was busy now with parallel rulers, pencil and dividers. From the observed position he laid off a course —

270° True. With the dividers he stepped off a distance, marked it with a cross and wrote alongside it "0200?" Grimes realized that the officer of the watch had come into the chartroom. He could see the young man — but the young man, it seemed, could not see him.

"Mr. Tallent," said the shipmaster, "we'll stand out to this position, then bring her round to 090 True. All being well, we shall be within comfortable VHF range at daylight, and with any luck at all the Bar will have stopped breaking and we shall have Slack Water. I'll not write up my Night Orders yet; I'll see the Second Officer at midnight before I turn in . . ."

"We should get in tomorrow all right, sir," said the officer.

"Don't be so bloody sure. You can never tell with this bloody place!"

Good night, sir."

"Good night, Mr. Tallent."

## VII

Back in the day cabin, Grimes said, "You can see, Captain, that I have no real existence Here and Now. You *must* try to make me real *somewhere*."

"Or somewhen."

"Or somewhen."

"More easily said than done, Commodore. Especially in the ex-

isting circumstances. At the moment of writing — I am Master of this little rustbucket. Master under God, as Lloyd's puts it. This ship is my responsibility — and you should be able to appreciate that. This evening I was writing just as relaxation — one hand on the keyboard, the other ready to pick up the telephone."

Grimes said, "You take yourself too seriously. This is only a small ship, with a small crew, on an unimportant trade."

"Nonetheless," the shipmaster told him, "this is my ship. And the crew is my crew. The trade? That's the Company's worry — but, as Master, it's up to me to see that the ship shows a profit."

"And I'm your responsibility too," Grimes pointed out.

"Are you? As I've already said, Commodore, you've proven yourself able to go your own sweet way in any story that I've written. But if I am responsible — just bear in mind that I could kill you off as easily as I could swat a fly. More easily. How do you want it? Act of God, the King's enemies, or pirates? Nuclear blast — or a knife between the ribs?"

"You're joking, surely."

"Am I? Has it never occurred to you, Commodore, that a writer gets rather tired of his own pet characters? Sir Arthur Conan Doyle killed off Sherlock Holmes

— but had to drag him back to life to please his public. Ian Fleming was becoming more than somewhat browned off with James Bond when he, himself, kicked the bucket . . ."

Grimes looked toward the photograph over the desk. "But you like Sonya," he said.

"I do. She's too good for you."

"Be that as it may. She's part of my world, my time . . ."

"So?"

"Well, I thought . . ."

The telephone buzzed. The shipmaster picked up the handset. "Yes?"

"The wind's freshening, sir, and it's veered to West."

"Put her back on Full Speed, Mr. Tallent." The captain got up from his chair, and went to the aneroid barometer mounted on the bulkhead. He tapped it. The needle jerked in an anti-clockwise direction. "Just what I need," he said. "A bloody secondary."

"What does that mean?"

"It means, Commodore, that those Final Gale Warnings aren't worth the paper that Sparks typed them on. Very often, too often, in these waters the secondary depression is more vicious than the so-called primary."

"What can you do?"

"Stand out. Make offing. Get the hell off this bloody lee shore."

Again the telephone buzzed. "Master here."

"Sir, we've lifted Cape Sorell again . . ."

"Tell the engineers to give her all they've got. I'll be right up."

The ship was lurching and rolling heavily as she fell away from the wind. She was pounding as her fore part lifted and slammed back down into the trough. Her screw was racing each time that her stern came clear of the water — and as the propeller lost purchase, so did the rudder. "Sir," complained the helmsman, "the wheel's hard over, but she's not coming back."

"Keep it hard over until she answers," ordered the Master. He was looking into the radar screen. It was not a very good picture. There was spoking, and there was too much clutter. But there, right astern, was the faint outline of the rocky coast, a ragged luminosity. And there were the range circles — and slowly the coastline was drifting from the 24 mile to the 200 mile ring. Even Grimes, peering over the man's shoulder, could appreciate what was happening.

"Mr. Tallent!"

"Sir?"

"Call the Chief Officer. Tell him to flood the after hold."

"Flood the after hold, sir?"

"You heard me. We have to get

the stern down somehow, to give the screw and the rudder some sort of grip on the water."

"Very good, sir."

She's logging three knots," whispered the Master. "But she's making one knot — astern. And that coast is nothing but rocks."

"And flooding the hold will help?" asked Grimes.

"It'd better. It's all I can do."

They went back out to the wing of the bridge, struggling to retain their balance as the wind hit them. Cape Sorell light was brightly visible again, right astern — and even to the naked eye it had lifted well clear of the sea horizon. A shadowy figure joined them there — the Chief Officer, decided Grimes.

"I've got two fire hoses running into the hold, sir. What depth of water do you want?"

"I want 100 tons. Go below and work it out roughly."

"Very good, sir."

Another officer came onto the bridge — big, burly, bearded. This must be, realized Grimes, the midnight change of watch. "Keep her as she's going, sir?"

"Yes. Keep her as she's going. Mr. Mackenzie. She'll be steering better once we get some weight in aft, and racing less. But you might tell the engineers to put on the second steering motor . . ."

"Will do, sir?"

The shipmaster made his way back into the wheelhouse, staggering a little as the vessel lurched in the heavy swell. He went to the radar unit and looked down into the screen, with Grimes peering over his shoulder. Right astern, the ragged outline of Cape Sorell was touching the twenty-mile ring. Slowly the range decreased — slowly, but inexorably.

The Chief Officer was back.

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About two foot six should do it, sir."

"Make it that . . ."

Then gradually, the range was opening again, and the frequent heavy vibrations caused by the racing screw were becoming less. The wind was still shrieking in from the westward, whipping the crests off the seas, splattering them against the wheelhouse windows in shrapnel bursts of spray, but the ship was steering again, keeping her nose into it, clawing away from the rocks that had claimed, over the years, too many victims.

Grimes followed the Master down to the afterdeck and stood with him as he looked down a trunkway into the flooded hold. Swirling in the filthy water were the timbers of the hold ceiling, crashing against the bulkheads fore and aft, splintering themselves against frames and brackets and the hold ladders, self-destroying battering rams driven by the force of the ship's pitching and rolling. There would be damage — even Grimes could see that — and, inevitably, the writing of reports with carbon copies every which way.

Grimes knew this, and he should have had more sense than to attempt to bring up the subject again of his own, private worries.

He said, "This hold flooding

seems to have worked out . . ."

"Yes."

"Then perhaps, Captain, you could spare the time to discuss the question of returning me to my own place and period . . ."

"Take off!" snarled the shipmaster. "I've more important things on my plate than your troubles. Take off!"

The screaming wind took hold of Grimes, whirling him away into the darkness. But, before he was gone, he heard the Chief Officer ask his Captain, "Who was that, sir? I thought I saw somebody standing there with you, a stranger in an odd-looking uniform . . ."

"Just a figment of the imagination, Mr. Briggs. Just a figment of the imagination."

Grimes was standing in his own day cabin, aboard *Faraway Quest*. He was staring at Sonya, and she, her face white under the auburn hair, was staring at him.

"John! You're back!"

"Yes."

"I've been holding the ship here on Kinsolving, but our lords and masters have been putting the pressure on us to return . . ."

"It wouldn't have mattered,"

Grimes told her.

"Why not?"

"Because wherever you are, that's where I belong."

He was sitting in his day cabin, trying to relax over a stiff drink. He had brought his ship into port, scurrying in during a lull between two depressions, pumping out after ballast to compensate for the weight of the water in the flooded hold, clearing the Bar without touching. He was overtired, and knew that sleep was out of the question. But there was nothing for him to do; his Chief Officer was capably overseeing the pumping out of the flooded compartment and would, as soon as possible, put the necessary repairs in hand.

He thought, *I might as well finish that bloody story.*

He inserted paper into his typewriter, refuelled and lit his pipe, and began to write. As the final words shaped themselves on the white sheet he looked up at the photograph of the red-haired woman over his desk. *Because wherever you are, that's where I belong . . .*

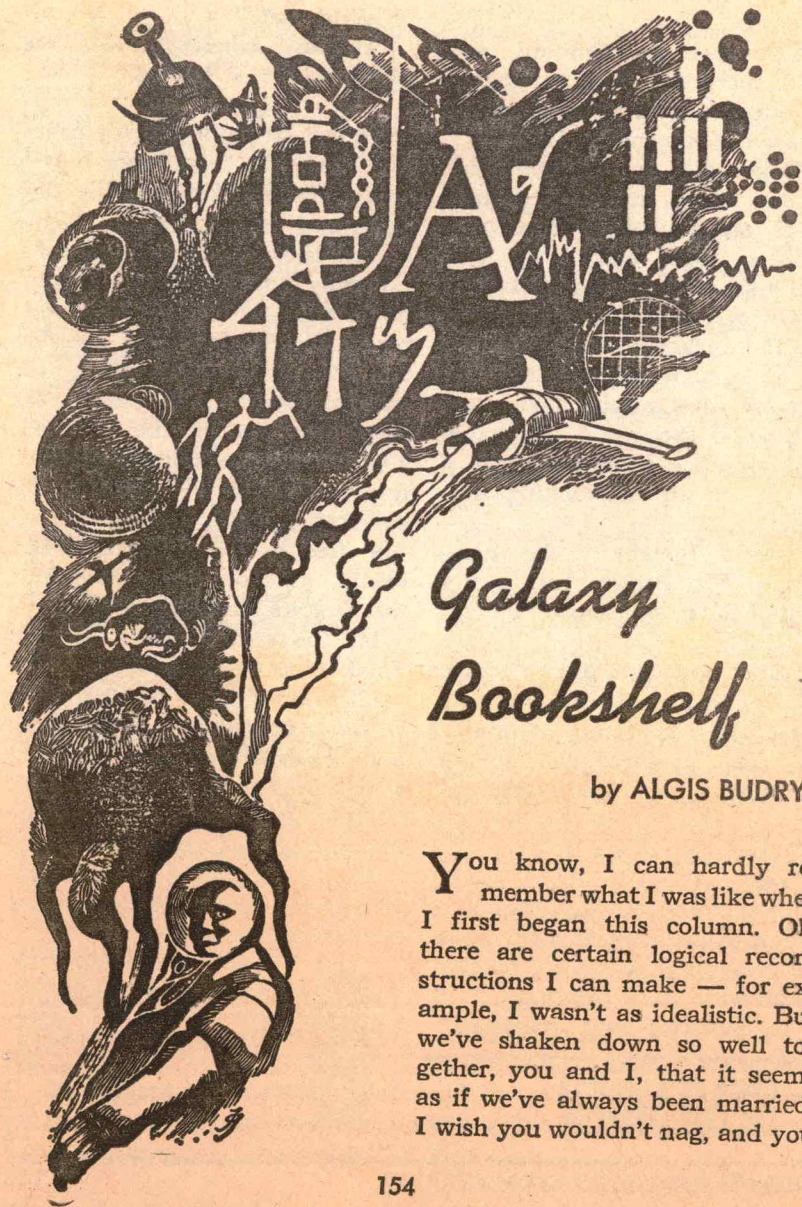
"And I hope you're satisfied, you cantankerous old baggage," he muttered. END

## REMEMBER

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THE KINSOLVINGS' PLANET IRREGULARS

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## Galaxy Bookshelf

by ALGIS BUDRYS

You know, I can hardly remember what I was like when I first began this column. Oh, there are certain logical reconstructions I can make — for example, I wasn't as idealistic. But we've shaken down so well together, you and I, that it seems as if we've always been married. I wish you wouldn't nag, and you

wish I'd take out the garbage. But most of the children are healthy, and some day, when they've gone off and left us alone, we can support ourselves by selling our collection of threatening letters about deadlines.

I remember — wow, I remember — when I was very young, and all there was between me and the wolves was science fiction. At the time, what kept me going was the sure, certain knowledge that some day I'd grow up to be like the engineers in ASF stories. (Little did I know that some day I'd be getting fabulous, high-paying work in glamorous professions because I'd memorized the phrasing patterns in the fast science features bound in to those same issues.) But when I was very young, it seemed to me that Hal Clement must be beyond question as an sf writer, and when I was older, sure enough, he wrote *Mission of Gravity* and proved it.

In the meantime, in between time, though, he wrote not only *Needle*, *Iceworld* and *Cycle of Fire* to tune up for it, he also wrote — and has since written — a number of short stories. Although all of them are either impeccable scientific extrapolations or at least extrapolations beyond my poor power to pec, not all of them are perfectly written. Some of them show his decided bias toward science, and consequently

you may find you do not like all his science fiction. Nevertheless, *Small Changes* (Doubleday, \$4.95) is another one of those volumes in the Budrys Bookshelf of Basics which you ought to have around the house, and which you ought to read — not that it's any chore, mind you, to read such stories as "The Mechanic," or "Dust Rag" or "Sun Spot," for all that there are over twenty years between them. "Fireproof" is a hell of a good story and, having carefully re-read it, I find "Uncommon Sense" as engaging now as I did in first publication, gulp, 24 years ago, when getting betrayed by my crew was an everyday occurrence.

There is a charm to these stories — I mean a spell, in this case, not a fey quality — which defies critical analysis in the usual sense. A lot of sf does, at least at my hands, because I find that a story like "Halo," or "The Foundling Stars," has merit, although both can be taken apart along exactly the same seams as "Raindrop," which strikes me as a pretty low spot in this volume. It — this quality of worth — has little to do with nostalgia, for "Troian Fall" seemed as mediocre in 1944 as it does now.

Clement teaches science to boys at a preparatory school. He must be a wonderful teacher, for he certainly knows science, and — this may be the secret — he knows

what will interest young boys. The point is that adolescent boys do not act like either the people in blemish ointment ads or like the ones in novels by John Horne Burns. They lead rich interior lives, as Booth Tarkington pointed out some time ago.

The Clement stories that really work — like *Mission*, or like “Fireproof” or “Uncommon Sense” — are, like all Clement stories, scientific problems. The hero is found in an environment not at all like Earth’s, yet obedient to the universal physical laws, and often — here’s the magic — tantalizingly like Earth’s in just enough respects to involve both hero and reader in the feeling that any moment now, a simple ordinary human act will save the day. Performing the simple act is, of course, disaster under the circumstances, and then we go on to solve *that*, etc.

I wonder — are we too old to remember what it was like, up in the tree fighting off the Stukas and Messerschmitts, hopelessly overwhelmed, gallant, not always deadly accurate, eventually invulnerable but often not only wounded but apparently slain? The submarine conning tower under the blankets and pillows? Eh? Do you remember what it was *really* like when we knew there were penalties for stupidity and inappropriate behavior, but did not yet

know that we might never be educated enough, nor find the right attitude in time? Do you remember how the foe betrayed his despicable nature by always being a stickler for the rules, and only at the last possible minute did omniscient virtue come to save us from his wily entrapments?

A little Clement wouldn’t hurt you. It might teach you something. Or remind you of something. Funny how it lasts.

*Rite of Passage*, by Alexei Panshin (Ace) is a book I damned near missed. Do not duplicate my error. Surely there are copies still on sale.

Look, this is too serious a thing to kid around with. Every so often, a book comes out with a dull title, an unestablished byline and the usual freight of overblown blurbs. Most of these books are not worth bothering with; there is no more reason to read everything than there is to review it, and most experienced readers long ago learned to judge enough of a book by its cover and a few interior glimpses. But, every so often, a book will flunk all those tests, and yet be superb. What there is to do about it but apologize, enter the results of the lesson in one’s filtering mechanism and go on from there, I don’t know. One could preserve impenetrable silence, I suppose — I’m sure I’ll be

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made to wish I had. But, in the same breath in which I say that I have, too, read, all those books whose authors ought to be grateful for my silence, I apologize, Alexei.

Anyway. *Rite of Passage*, as I hope many of you already know, is a first-person story about a young girl growing up aboard an interstellar “spaceship” which, unlike the classic ships of such stories as “Universe,” is both capable of faster-than-light travel and populated by people who know perfectly well that they are not the only people in creation. In fact, it’s a planetoid, hollowed out and motorized when Earth destroyed itself and rendered the Solar System unlivable, and it is now a recognized socioeconomic unit in a universe consisting of all the planets on which colonists were hastily dumped and left to shift for themselves. Like other ships of its kind, it houses a technically adept populace of mercantile entrepreneurs, who live on the margin between what the planet-bound colonists can use and what they can achieve by themselves. Most planetary civilizations having regressed to barbarity, the occasional visitors from space are rich, respected and despised.

All of this forms the not 100%-convincing background for the intensely believable, movingly personalized story of Mia Haverro, GALAXY BOOKSHELF

ship’s child, daughter of a preoccupied but magnetic father and a neurotic, distant mother, late-maturer, genius, scapegrace, girl. Like all other ship’s children, she is destined to be dropped on the surface of some unspecified world for a month, there to fend for herself. This, she is told, is the traditional rite of passage; if she survives, she will be picked up by the ship again, and accepted as an adult.

All right — much of that rationale is, again, not too impermeable. Panshin handles it acceptably — better than most writers who have set up arbitrary new societies founded on manipulations of something in Margaret Mead — still, the book is in trouble as soon as Mia sets foot on her trial planet, and never quite recovers. But Mia’s actual maturation — and each of the little, perfectly realized, utterly real episodic steps on the way — is so perfectly done that one feels a real shock as one realizes that Panshin after all has never been a girl growing up aboard a hollowed-out planetoid.

Again, with something like this the next question is why did he have her grow up aboard a planetoid at all, instead of on a farm in Kansas? That would be a fashionable question, and in some circles it would be considered a flattering one. But I think Panshin

knows better, and I hope he does. He has done more here to tell us about all such girls, and all people and even about me and you, than could have been done otherwise.

He has also told us something about himself. That is incidental, of course, but it certainly is something. Welcome aboard, Alexei.

*H. P. Lovecraft, a Portrait*, by W. Paul Cook, is available for \$2.50 from Mirage Press. A republication in chapbook form of Cook's introduction to Arkham House's O.P. *Beyond the Wall of Sleep*, it touches on such personal glimpses as Lovecraft's taste for ice cream and fast driving, his introduction to amateur journalism via the crudest recruiting methods available to boosterism and the deep devotion he inspired in his friends.

Judging by this report alone, I wish very much that I had known the man. Certainly, if left only to the impressions created by his work, I'd probably nevertheless picture someone no less removed from the nameless horrors he wrote about, but any horror writer who tries to sample thirty-three flavors before breakfast is assuredly a man after my own heart.

Certainly, this is a column about children. Take, for further

instance, Dr. Palfrey, hero of a sudden spate of paperback imitation Doc Savage novels, a creation of the same John Creasey, who writes those good Gideon stories, those O.K. Inspector West stories, those rather pastichey Toff and Baron stories, and now these positively dreadful yarns, taking place in some sort of 1928-future, about the forelock-tugging, bumble-footed Palfrey, who resembles nothing so much as a let's-play-dress-up notion that horn-rimmed glasses make wisdom. I tried *The Terror* entire, to get the full effect, and skimmed a couple of others. "Science fiction, espionage, hidden menace and straight detection in a tight package that will please fans of each," says *Library Journal* on the back cover. Oh, wow, *Library Journal!* Why don't you and Virginia Kirkus run off and find some other attic for this rainy day?

Well, as I was saying back there, John Horne Burns. I have a number of people who look over my shoulder and tell me about my mistakes and their virtues, which is all right, because, opinion to the contrary, time has taught me that even I have to admit to scrutiny. But the folk who want me to review something different, or to review differently, or not to review at all, are as nothing to

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the people whose toes I tread on in all innocence. So far in this column, for instance, I have mentioned Georges Bizet, some fellow named Offenbach, another fellow named Prosper Merrimee, who was a writer approximately as talented as John Creasey, and now John Horne Burns. I know, sure as it will rain in Indianapolis in the summer time, that someone who has read every word most assuredly including the book about Naples and that book about the preparatory school, going on to the book about the fellow with the white-painted piano and the telephone installer with the anchovy paste, will write to me in an absolute fury, assuming that I have barely heard of his idol, and am slighting him to boot. I may even hear from Gore Vidal, who once solemnly promised to write the definitive biography of John Horne Burns (deceased) and then commit suicide.

But I bring all this up because not only did I spend part of my very first story check on a recording of the *Tales of Hoffman*, so long ago that Robert Rounseville could still hold a note (yes I know about *Man of La Mancha!*), but because I'm about to again review a book of my own, and furthermore a reprint, and how do you like them apples?

I'll be damned if I'll embarrass one of my friends by casting him

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in the role of "guest reviewer." And I'll be equally damned if I'll let this book go by unnoticed, because I didn't write it to let anything like that occur. Furthermore, it's a good book, although if you would like to read a closely reasoned analysis of its defects, try the second edition of Damon Knight's *In Search of Wonder*. He's wrong, but his reasoning is close.

The book is called *Who?*, and it's been out of print in the U.S.A. for ten years, having stayed off the market to satisfy various contractual maneuvers and the like, while pursuing a decent career in other lands and tongues. I bring it up to you — in fact, with some diffidence, but with some pride — as an opportunity to let you in to some extent on the inner workings of a writer's mind, and with no pretense at objectivity.

This is a story about a young boy who grows up to have brains but no face, training but no job. The narrative concerns itself with a fellow who has a secret — he's a scientist, and knows how to build a K-88, whatever that is — and is contended over by people who buy secrets (the Allies and the Soviets). When he's caught in an explosion, he's patched up by the Soviets and retrieved by the Allies. But because his credentials have been blown off, he can't work, and not being able to

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work is what destroys him, although his power pile is still a year or two short of accumulating a fatal dosage in his bones.

Like *The Iron Thorn*, which I discussed too flippantly here, never dreaming there were people who would go into fuming furies about it, this book represents a great deal of what I knew about life at the time I wrote it, worked into a tale so that what I could systematize about life would be systematically evidenced. I don't think this man's story is tragic. I just think it occurs. And although it's possible to poke holes in the technology, I think there would have been little trouble in chinking them up, if I had not already spent a year in writing that story — and very little else — at the usual rates.

It is, in other words, an honestly motivated book, told with all the talent I had available in 1954, which is when I wrote it, still acceptable prose today, conditioned by the fact that I was, as I am, a commercial writer.

I wrote it, originally, as a short story, around a Frank Kelly Freas cover that I glimpsed one day in the offices of a magazine that never used its cover to illustrate stories, but did, this one time, because the publisher could plainly see the maniac gleam in my eye. I would probably never have turned it into a novel, but I

needed to do something for my wife's birthday, one year when we hadn't been married very long, and as it happened there was a fellow who would give me an advance on it if I came up with a chapter of something and an outline. And I finished it, eventually, on a typewriter set up next to my first child's crib. In the year in which I wrote it, and some short stories that still get anthologized for more than they originally earned, I earned less than two thousand dollars, all year. It got nominated for a Hugo, and *A Case of Conscience* beat it out, fair and square. *Who?* is almost as good as the Blish.

Wings your heart, doesn't it? I didn't tell you about it for that reason, or because I want to blackjack you into buying the new edition, which is from Lancer Books, with an adaptation of that original Kelly Freas cover. But if you read the book, or have read it, I'd like you to remember and please believe that what I've told you about is not typical only of my attitude, but of the attitudes of many of the people who have done things that get good notices and contribute to respectable reputations in this field, and I want you to understand that it is entirely possible to be sidling up to people for loans while being accepted as a matter of course among the re-

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spectable craftsmen of this field. This — all of this, including this column, and the mail I get about it, and the odd feeling of discussing Hal Clement as if I were entitled to — is what writing is like, what being a writer is like,

and what contributes to the feeling you get from reading. I sincerely hope neither of us ever grow up, but I will admit there are days when I wish we could sit down and rest a spell.

—ALGIS BUDRYS



## FORECAST

As you will have seen by the date on this issue, we've skipped a month. The problem was printing. For reasons beyond our control the last few issues have been seriously delayed in the manufacturing stage; we think we've got it licked now; we think future issues will be not only on time but handsomer and higher in quality . . . and we thank you for your patience over the last few months!

Next month you should begin to see the improvements in packaging; and next month we celebrate with a couple of specially interesting items in the contents.

For one, there's a lead story by Poul Anderson called *The White King's War*. As you can guess from the title, the story is about a sort of science-fiction chess game, an old and honored sub-category in the field (remember Fritz Leiber's *The Sixty-four Square Madhouse*, for one?) But it's a little more than that. It's also a bang-up science-fiction adventure story, of the kind that Anderson does as well as anyone in the field; and all in all, we think you're going to like it.

And more, of course! Join us and see . . .

GALAXY BOOKSHELF

# GALAXY'S STARS

When he isn't writing stories like *Dune Messiah*, which begins in this issue, Frank Herbert is a newsman on a San Francisco paper and a leading light in the constellation of science-fiction celebrities who make their home in and around San Francisco. In company with Poul Anderson and Jack Vance, Herbert was co-captain and co-proprietor of a vessel which has become legend in science-fiction circles, a houseboat of distinctly temperamental personality. What it liked to do was sink. When the work of refloating and refitting it got too onerous, the three owners one by one disposed of their interests, and it is said it is still to be seen in and around San Francisco Bay . . . but under non-science fiction ownership.

Herbert's career, of course, sails on handsomely. His first major novel, *Under Pressure*, was not only a smash hit with the readers but contained at least one technological invention which has since been built and patented, the "submarine tug". *Dune* a little later won all of science fiction's awards. And now *Dune Messiah* is here to carry on the tradition.

James Blish, a frequent and honored visitor in these pages, has been a part-time writer and full-time public-relations man, specializing in the largest of accounts, until recently. Now he has gone straight. He, wife and cats have left the Madison Avenue milieu and are en route to England, where they propose to live between Oxford and London, and where Blish, with a little luck on our part, will be writing all the time and producing even more stories like *The City That Was the World*.

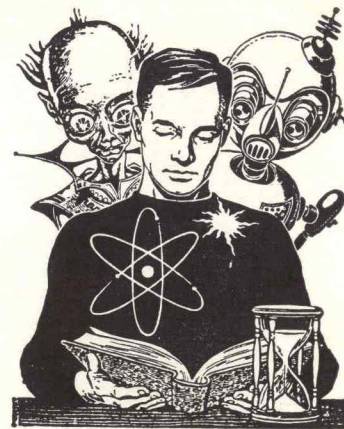
James Sallis is one of the bright lights of science fiction's "New Wave". His principal activity has been in England, where he was associated with the magazine *New Worlds*; he now makes his home in Milford, Pennsylvania.

A. Bertram Chandler is not only master of science-fiction writing, but master of a ship sailing between various parts in the Australia-New Zealand part of the world. If his hero, Grimes, sounds like a real ship's captain, that's because that is what Grimes' creator is in real life.

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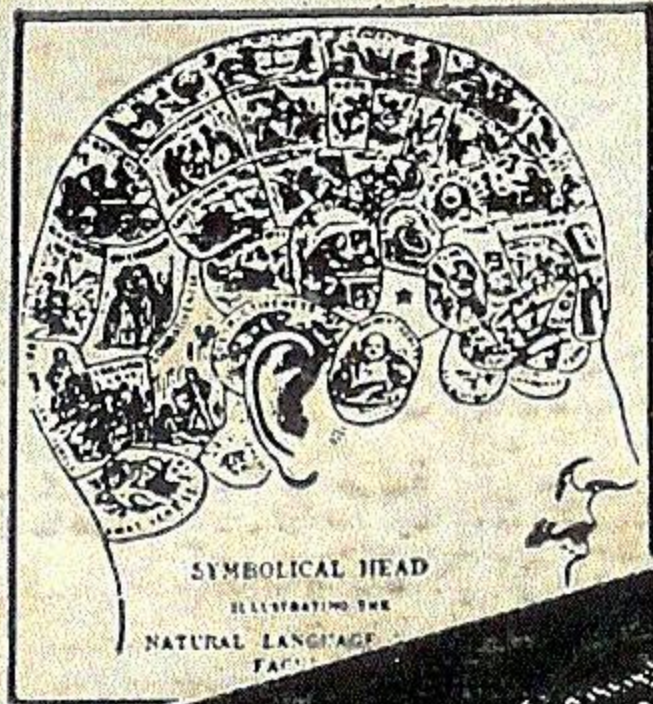
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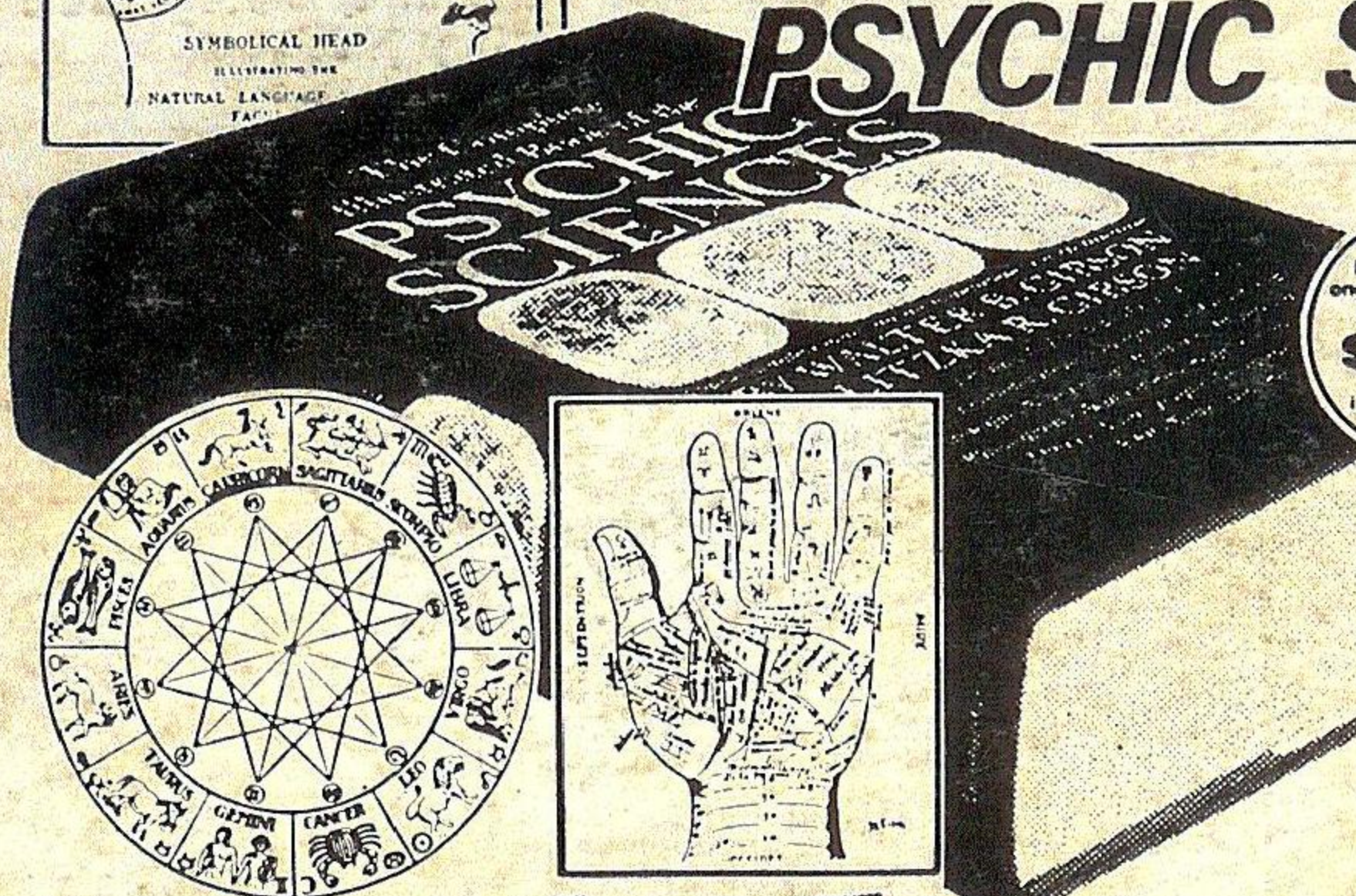
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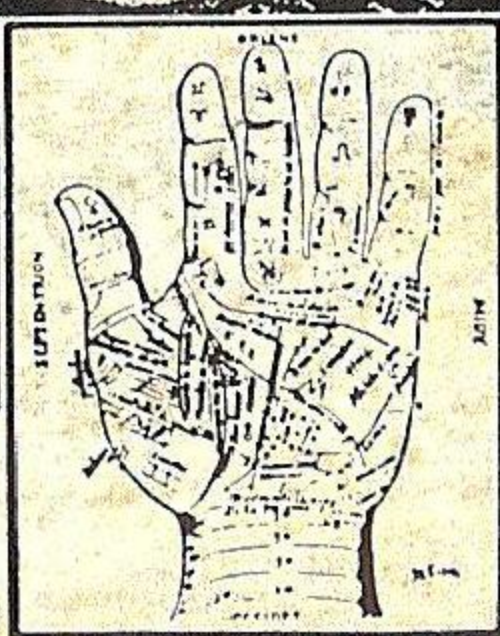


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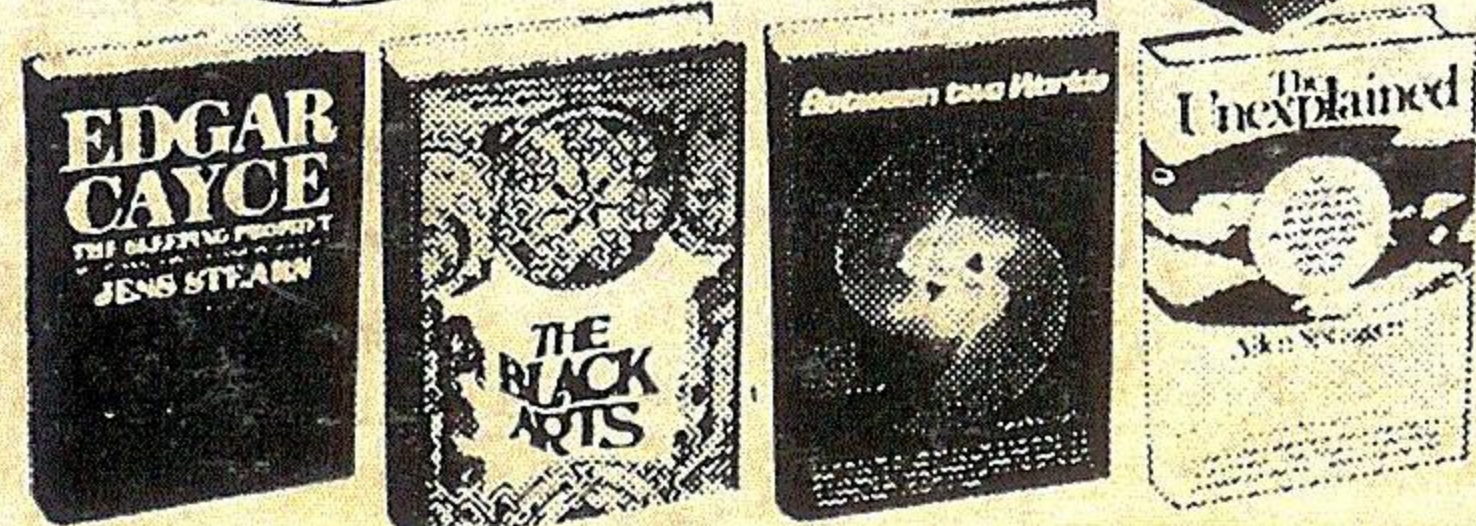
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