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SCIENCE FICTION MONTHLY

Kelly Freas

SPECIAL ISSUE:

10 Posters from America's top SF artist

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Frank Kelly Freas

As the cover tells you, this is a special issue of *SFM* featuring the artwork of Frank Kelly Freas. He is, perhaps, the best-known American sf illustrator and much of his work has appeared on the cover of *Astounding/Analog* over the years. His first *Astounding* cover was published in 1953 and since then Kelly has been awarded nine Hugo Awards as Best Professional Artist.

We've reproduced ten of his paintings in this issue, all of which, in fact, Kelly selected himself – so they're all favourites of his for one reason or another. To accompany the artwork, Sandra Miesel (our American correspondent) has contributed two articles about Kelly; one is based on an interview and the other provides Kelly with an opportunity to explain just where he gets his crazy ideas from.

King Midas in Reverse

That almost wraps up the art side of this issue, but we've still managed to fill up the rest of the pages with some pretty good material. There's a new story from Kenneth Harker with whom you may already be acquainted; he is the author of *The Symmetrians* and *The Flowers of February*. He's given up full-time writing now and returned to his work as a physicist but he's still found time to write *Sadim's Touch* (in the words of the old Hollies' song 'he's King Midas in reverse'). It stretches to five pages of text, so unfortunately we've only room for one more story and that comes from an Australian, Anthony Peacey, who has been working around the ever popular sf theme of mutations.

Galactic Empires

Talking of themes, Peter Weston has at last finished his mammoth investigation into the theme of space travel in sf. In part four he tackles the incredible idea of galactic empires and the sort of future envisaged by, among others, Isaac Asimov, Larry Niven and Poul Anderson.

Next Month

As *SFM* Vol 3 No 3 will be the last issue before ManCon 5, the Easter SF Convention in Manchester, it will carry a special feature on this year's guest of honour, Robert Silverberg. An article about the author's life and work has been prepared by fellow sf author Brian Stableford and there'll be a new short story from Mr Silverberg to accompany it. In the next issue we'll be reviewing the new art book from Roger Dean, which so many of you have written in about, and also publishing a number of illustrations from it.

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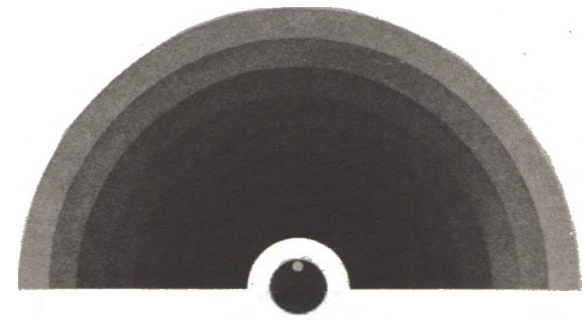
A compelling tour-de-force which must establish Patrick Tilley with Clarke, Asimov and Wyndham



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SADIM'S TOUCH

'"Some years ago," he explained, "I was doing psychosis work on withdrawal symptom behaviour patterns. To relate these to brain cell structure, I used a rare tracer isotope, which I first had to produce myself. This entailed the measurement of some microsecond half-lives. But things kept on going wrong. And you know why? Because I'd upset the half-lives by measuring them. And from this simple fact, I evolved a completely new approach to the measurement." His brown eyes gleamed over puffy blue half-moon lids. "Temporal matrices or, as you'd call them, time statistics"'

BY KENNETH HARKER

WHEN Kepler Bannerman switched on the television that evening, the last person he expected to see being interviewed was Sadim.

The interviewer was addressing him not as Sadim, but by his real name: Dr Lucas Moncreif. But Kepler remembered the long solemn face, the brushed-back hair greying at the temples, the thin-lipped mouth. It was Sadim right enough.

Three years ago, was it, when Kepler had talked with him? Even now, the subject, futuristic theories, was the same.

As a science correspondent, Kepler rarely found time to bother with television. But now, he sat down in his dingy armchair and watched.

'It's not conventional prediction,' Moncreif was arguing, with dry distaste. 'Not a question of spotting winners.'

'Then how about weather-forecasting?' the interviewer encouraged, with a smoothness that nauseated Kepler.

'Weather-forecasting is an ordinary science,' Moncreif countered, smiling barrenly. 'My ideas don't apply.'

The camera angle changed. Kepler craned his square face forward. His pale grey eyes studied the background behind the interviewer's head. Bits of glassware; corner of a bench. Yes, that could be Moncreif's own laboratory at Leckonford, not eight miles away.

The puckers deepened on Kepler's brow. Trust a tv interviewer to aim for public appeal: forecasts, investments – all by scientific prediction. But there was more to it than that, from what Moncreif had claimed three years ago. Bewilderingly more.

As Moncreif talked now, rubbing his fingers slowly together, Kepler felt bathed in the glow of the screen, curiously tangible – as if Moncreif, as if the touch of Sadim, was actually in the room.

Crushing the impression, he reached out a shirt-sleeved arm for his glass of iced beer and sipped hungrily, knuckles white around the glass.

A lot could happen in three years. How much development work might Moncreif have done? Kepler had heard nothing. For six years now, he'd been stuck with his weekly review-supplement, the *Remforth Chronicle* ironically dubbed the nondescript half-column – while his ambitions dwindled. Where was his old ambition, of getting anchored to some big project, instead of weekly thumbnail accounts of trends in science? Caution could stifle a man too long.

Until tonight?

His attention jerked back to the screen. Maybe by now Moncreif had put his techniques into some profitable invention. Restlessly Kepler swirled the last inch of drink in the glass, and his broad mouth smiled wryly.

Moncreif must have been crazy three years back, trying to tap him for funds. Did he think science correspondents were made of money? And yet, if Kepler had invested his few savings then, perhaps something would have paid off.

Was Moncreif still looking for financial support?

'Thank you for your views, Dr Moncreif,' the interviewer cut short Moncreif's disclaimers. 'And good luck with your work.'

The studio announcer took over. 'That interview with Dr Lucas Moncreif took place this afternoon. We had hoped he might predict the rest of tonight's programme, but', he badly masked a smirk, 'it seems he doesn't work that way.'

You're dead right, he doesn't, Kepler thought. He rose, and snapped the switch. The sudden silence gnawed into him. Recorded this afternoon . . . So the solitary, middle-aged Moncreif might be alone now, only eight miles away. Moodily, Kepler paced the threadbare carpet. There was still the weekly gap to fill. Science had hit another dead spot. Something from Moncreif might fatten things out. Or, was this the nudge of enterprise he'd always lacked? Kepler drained his drink, set the glass aside, and pulled on his jacket.

SUNSET was reddening as Kepler knocked his rackety car into top gear and set the nose for Leckonford. His memories trailed back to his only other talk with Moncreif – with Sadim. Then, too, science had lived a dull week. So he'd taken a chance, and visited Moncreif. And if he hadn't backed out, Kepler Bannerman might have been reclining in furnished luxury now, instead of a damp flat with a shared bathroom.

He lowered the window. The balmy breeze fanned his healthy complexion. Yet his mind felt caged, as he recalled how he'd sat in Moncreif's parlour. Moncreif, reserved, almost boorish, had stood over him.

'I don't understand how you got on to me.'

'Oh, whispers,' Kepler had answered conversationally. 'Weren't you a big researcher at the university?'

Moncreif grunted. 'Once, perhaps.'

'Time statistics, wasn't it? Till you went it alone.'

'True, true. I disagreed with faculty research policy.' Moncreif sighed tiredly. 'But it isn't easy, going it alone.'

'You research here? On prediction?'

'I converted a back room into a small laboratory. But you can forget the whispers. Prediction doesn't work.'

Now, as Kepler geared down for a left turn, he pondered cynically, would Moncreif have shown him the lab so readily, if he hadn't been after money? They'd stood on the threshold, Kepler's gaze assessing the sparse shelves on yellow-plastered walls; the meagre glassware and electronic equipment that covered the bruised wooden top of the workbench.

'For my project here,' Moncreif unfolded secretively, 'I like to think of myself not as Lucas Moncreif, but as Sadim.' His elegant face threw a smug little glance from under the academic brow.

'Sadim?' Kepler repeated, not comprehending.

Weedy-limbed, Moncreif began to stride slowly. 'How much d'you know about scientific principles?'

Kepler shrugged. 'They all condense down to one – a systematic approach,' he answered easily.

'In general terms, yes, but take the direct determination of physical quantities.' Smiling occasionally, his chin tilted into his chest, Moncreif drifted into explanations. 'You know we can never obtain absolute measurement? All things, ourselves included, are grains in the universal mill: each grain affected, perhaps crushed by the others.'

'You mean we always upset what we try to measure? That's fundamental stuff.' Kepler lounged up against the bench. 'You must draw energy from the measured, to make the measuring device respond.'

'Precisely.' Moncreif wagged his head. 'To measure, is to mar. Just as a beautiful painting, if touched in appreciation, can end up shoddy.'

'Or like temperature,' Kepler compared. 'You use up some heat, to make the thermometer read.'

Moncreif was glancing around. He took a cylindrical pocket torch from the cupboard under the bench, unscrewed the end-cap and tipped out the battery. 'And if I check the voltage of a dry cell, my voltmeter uses up a fraction of the stored electricity. There's always this sort of – touch – between the two. Now in many cases,' Moncreif smacked his lips, 'this difference between true and measured value may not matter. In large-scale engineering, the approximation's close enough. But in delicate work – the living cell, the atomic nucleus, aha! – the disturbing touch might be worth careful correction.'

'And, you can do this? Measure the impossible?'

'Effectively, yes. But the only way, is to measure without measuring.' Moncreif allowed himself a twitch of a grin, aware he was talking in riddles.

'Some years ago,' he explained, 'I was doing psychosis work on withdrawal symptom behaviour patterns. To relate these to brain cell structure, I used a rare tracer isotope, which I first had to produce myself. This entailed the measurement of some microsecond half-lives. But things kept on going wrong. And you know why? Because I'd upset the half-lives by measuring them. And from this simple fact, I evolved a completely new approach to the measurement.' His brown eyes gleamed over puffy blue half-moon lids. 'Temporal matrices or, as you'd call them, time statistics.'

Slowly, Kepler scratched one side of his nose. 'So?'

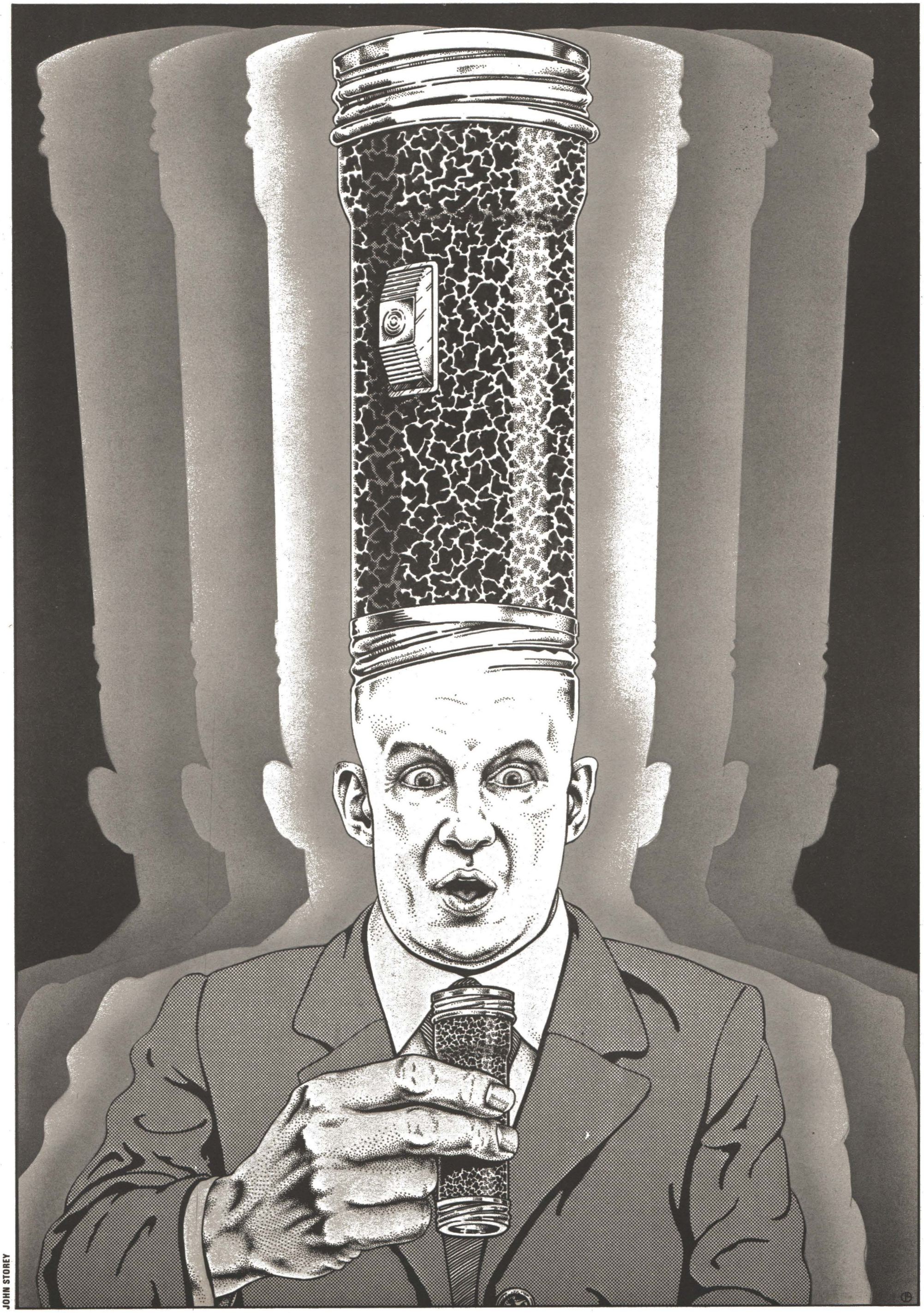
'So I dropped psychosis work to master this new technique. Now, if I'd the money to make the isotope in bulk, I could produce a fortune's worth.'

'Fortune for whom? The medical world, or you? Because if it's you, wouldn't you do better to commercialise something? Adapt your discovery? Develop some gadget with public appeal?'

Moncreif fondled the battery. 'True enough. But versatility needs thought and financial backing. I don't . . . er . . . suppose . . . ?'

'Don't look at me.' Kepler wanted to laugh, as Moncreif shrugged uncomfortably. 'You don't expect anyone to chip in their savings on the strength of what you've said?' And yet, he couldn't afford to miss out. 'Put me in the picture some more, about temporal matrices,' he invited.

Continued on page 4



JOHN STOREY

Continued from page 2

'At any moment, there's an infinite choice of time branches we can take. Naturally, we can only follow one; and apart from an impression of so-called free choice, we've little idea these other paths exist'

KEPLER's hands felt sticky on the steering-wheel. Maybe that had been the moment, he reckoned when his interest was really roused. Moncreif had set the battery down. He resumed pacing along the concrete floor to the cracked sink, trying to choose his words.

'Suppose we could see a little way into the future. Before doing a measurement, we might learn the value we're about to obtain, and so the measurement needn't be done.'

'Foresee something that never happens?' Kepler stared, baffled. 'That's crazy.'

'Not according to temporal matrices.' Moncreif leered, exposing yellow teeth. 'At any moment, there's an infinite choice of time branches we can take. Naturally, we can only follow one; and apart from an impression of so-called free choice, we've little idea these other paths exist.' He paused, while Kepler nodded dutifully. 'Now, my approach depends on seeing along all these time branches at once.'

'Indeed? That's whistling up an elaborate picture.'

'No, no.' Moncreif gestured with a long, shabby arm. 'This isn't far-sighted prediction. It's of microsecond duration. No more than a kind of defocusing of the *now* . . . Right? So let's suppose we're about to do some simple measurement. The infinite time branches ahead must contain all possibilities, ranging from the measurement being done to not being done. So, what we do is glimpse along one branch what the measured value will be; but steer clear of measuring it by following an alternative branch. That's putting it crudely, I admit, but it's the only way.' The brown eyes blinked apologetically.

'But won't the foreseen value still be in error due to measurement?'

'No.' Moncreif shook his head emphatically. 'It irons itself out. The influential factor is the time branch we enter.'

Kepler thrust his hands dubiously into his pockets. 'It still sounds like a bit of a vicious circle.'

'Time structure is full of vicious circles.'

'But if you don't measure, how d'you register the true value? By some flash of inspiration?'

'No. We still do a *form* of measurement,' Moncreif corrected with precision. Turning to the bench, he laid his hands on a black cube, of about one-foot side, which stood in the centre. 'We assume conditions where the measurement *could* be possible. And it must be of a type obtainable within a short duration, once the measuring apparatus is set up. As instantaneous as an on-off switch . . . '

Kepler waited, while Moncreif's fingers caressed the cube. 'Instead of talking, hadn't you better show me?' he said.

AT the top of the hill, Kepler cut the engine and gazed down the grassy slopes towards Leckonford. He lit a cigarette. Faint music drifted up from the market town. The annual fair, he realised. Lights were twinkling in the dusk. But his mind was on Moncreif – peering at the black cube, hesitating.

'The Midas touch affected everything. But I do the one thing Midas could not do. I do not affect what I touch or measure. I am opposite and superior to Midas'

'How much d'you intend to print?' Moncreif had asked.

'Nothing so far. I wouldn't commit myself.'

Moncreif nodded with faint relief. 'I'd be obliged if you'd hush up the principles. I don't want anyone stepping in ahead of me . . . Now, this sealed box is the heart,' his fingers fluttered around its edges, 'what I call the TDU, time displacement unit. Feeding the input cable is an assembly for doing standard checks, temperature, voltage, pressure and so on, converting them into electrical terms.' He pointed out a cluster of glassware and wires on the left, then indicated a second cable which emerged from the right of the cube to a digital read-out panel. 'Here, a normal calibrated register.' He switched the panel on.

'Now here, too, we have interaction – a touch, an overlap. But since the TDU lies between the measured quantity and the measuring device, the interaction isn't *spontaneous*. There's a microsecond separation into different moments of time. Would-be measurements enter the TDU. True values reach the read-out.'

Kepler stroked his chin. His gaze travelled from the glass and wire cluster, across the cube, to the panel with its banks of figures. 'It all looks here-and-nowish to me.'

'Of course it does,' Moncreif stressed. 'Spatially there's nothing peculiar . . . What can I demonstrate with?' Glancing about, Moncreif chose the torch battery. He set it down on the left and hooked a couple of test-clips to it. He turned a selector-switch on the panel to VOLTS. The digits rattled round. 'Three point one eight volts.' Moncreif read. 'That's the absolute value.'

'Look, I don't see what this proves,' Kepler butted in. 'You've measured a voltage. So what? How am I to know it's gone through some high-flown correcting process?'

Moncreif looked briefly nonplussed. 'Perhaps that was a bad example. Now what else . . . ?'

'But the same will apply,' Kepler complained, with some irritation. 'How in hell am I supposed to check a time displacement? One black box, and a bit of standard lab gear. I've only your word that it's not a load of hocus.'

Moncreif's eyes shone with pathetic appeal. 'I can only demonstrate. I cannot *prove*. But,' he forced a lopsided smile, 'I swear to you, the method does work.'

'All right. But if you're hoping to sell to the public,' Kepler threw a gesture of rebuke at the cube, 'that contraption's far too cumbersome. By public appeal, I mean pocket-size. Some useful gadget people can carry about.'

Moncreif took a deep breath. 'Very well. I'll think about it.'

'You'd be stupid not to,' Kepler relented. 'It's the most profitable approach.'

'The idea of personal gain though,' Moncreif sulked, 'is hardly in keeping with the name of Sadim.'

Kepler's thoughts swerved. 'You never finished explaining . . . '

'Sadim. Midas in reverse . . . Where's your mythology? King Midas, who turned everything he touched to gold.'

'So? . . . You reversed the name because you're not mercenary?'

'No, you miss the point. The Midas touch affected everything. But I do the one thing Midas could *not* do. I do *not* affect what I touch or measure. I am opposite and superior to Midas.'

'Sadim's touch, eh?' Kepler smiled tolerantly at Moncreif's childish quirk in inventing the name. 'A magic touch of your own, which isn't even there.' He sauntered around, then halted, staring at Moncreif. Was there some deeper analogy at work? Tiny glimmers of triumph lit in Moncreif's eyes, before glumness returned.

'You see my handicap?' Moncreif appealed. 'To develop and market anything of pocket-size I'd need help. Not just financial, but to organise contacts. Once we'd a foothold . . . '

'You're serious, aren't you? About using me?' Thoughtfully, Kepler fingered his ear. He was almost tempted. And yet . . . 'No thanks. It's too risky.'

'Risky!' Moncreif retorted with sudden spite. 'You're a fool not to see an idea that might pay off!'

'Look, I believe what I see,' Kepler's back hair prickled, 'which is nothing. When you can offer better proof, contact me again through the *Remforth Chronicle*.'

'And meanwhile, you'll rip it apart in your supplement.'

'I came here with an open mind.' Containing himself, Kepler faced Moncreif whose brow was a pink blotch of anger. 'We're sinking to insults. I guess it's time to break off.' On that heated but controlled note, Kepler stalked out.

Next day, he'd felt a restless regret; a sense of rebuff and failure. And the fascination of what it might be like to tangle with time. He tried to tell himself that Moncreif, Sadim, was just another crank; that in singling out measured quantities from the rest of the universe, Sadim was isolating himself in a world of fantasy. Psychosis work, on withdrawal symptoms . . . ? Such were the fears and temptations which had slumbered in Kepler for three years.

KEPLER drove on, aiming across town for Moncreif's house. Doubts invaded him. Surely this was a foolish venture? Surely if Moncreif had followed his advice, developed a pocket-size gadget, he would have got financial backing elsewhere?

The old pebble-dashed house was detached, at the end of the road. Kepler pulled up, gazing at its sober outline, dark against the dusk sky. Sadim's house. He sat for a moment. Odd. Now that he was here, he tended to think of the man as Sadim, as though the touch had reached into his mind from a three-year-old past.

He strode up the shrub-lined path through the stock-scented air. The place, the whole road, looked deserted. Had the lights of the fair lured everyone across the common? Then he spotted a solitary glow from the rear of the house. Sadim's laboratory. As he pressed the bell-push, a fleeting unease crossed Kepler, that this was some turning-point in his life. Then it had gone. He waited, amid the music and laughter which drifted across from the fair.

When Sadim opened the door, his long, lined face remained blank for only a moment. 'Well, well. The science man from the *Remforth Chronicle*. Let me think – Mr Kepler Bannerman. Correct?' He stood aside. Kepler crossed the threshold. Sadim closed the door, the hall light ashine on his silvery temples and elegant forehead. He hadn't changed much, Kepler reflected. Even the shabby suit was of the same nondescript brown.

'Kepler's mind gave a slight lurch, as though Sadim's remark was time-linked with his own thoughts of a second earlier. He watched Sadim pocket the Konfipak'

'I saw your interview,' Kepler began. 'I wondered how your work was coming along.'

'Interview!' Sadim said, on a scornful note. 'I did my best to wriggle out of it. You're the first to come and remark on it.'

'Yes, I'm intrigued. How did they seek you out? Same as I once did, from some whisper about prediction? Are you still playing with microseconds, or with a more distant future?

'Surely you heard me deny any prediction rubbish?'

'Granted. And you stick by that?'

Sadim hesitated, his brown eyes loaded with mistrust. 'I don't deny certain developments, but not so much in predicting the future, as improving one's confidence in it.'

'So?' Kepler murmured. 'Sadim's touch *is* making it's mark . . . Surely if you'd handled that interview right, flaunted a selling-angle, you might have won yourself some interested backers.'

'What of it? What sort of interest is yours?'

'My interest was whetted three years ago.'

Sadim's expression remained chilly. 'I gave you your chance then to come in with me. But you wouldn't listen.'

'Perhaps I'm reconsidering. There was some talk of developing a pocket version – with public appeal.'

Sadim paused, then gave a queer little tilt of his head. 'I've been wondering if we'd ever see each other again . . . Come along to the lab. I'll show you how I followed your suggestions.'

A TINGLE of excitement slithered over Kepler. He felt his strength of purpose returning; the promise of some great gamble ahead. As Sadim gestured him into the lab, he glanced round hungrily. The place looked unchanged, just as thinly cluttered. The black cube, Sadim's TDU, occupied the same central position on the bench. For a moment, Kepler thought nothing had been done. Then Sadim opened a cupboard underneath. Scattered on a shelf inside were a dozen or so – torch cases, were they? Yes, pencil-style, like the one from which Sadim had taken the battery for demonstration.

'These,' said Sadim, 'are the units I'm working on.'

'Those?' Kepler reached out, but Sadim restrained him.

'Don't bother. They're only empty cases. But I have completed a prototype.' He closed the cupboard, unlocked a drawer, and took out another case. It was painted crackle-black between silver-glinting end-caps. 'The torch body makes a handy container. Here.'

Kepler weighed it on his palm. 'What does it do?'

'It's a pocket version of the original.' Sadim gestured at the black cube. 'The inside's tiered with solid-state discs. Micro-modules. It's adapted to a special application.' He paused, raking up his thoughts. 'Remember how the TDU bridges that tiny time gap? Well, so does this, except that the mind of whoever's carrying it takes the place of the measuring device.'

'Can you do that?' Kepler asked suspiciously.

'Why not? Theoretically, Sadim's touch can be applied between any two objects. So why not choose for one the person carrying the unit? No cables. All done by a field embracing the carrier. Whatever he concentrates on, he gets impressions advanced by a few microseconds.'

'And just what does he concentrate on?'

Sadim made an aggravated gesture. 'Any object within range that he fancies. Remember, these impressions will be many and varied. But from them, he'll single out, unconsciously at microsecond speed, the most advantageous time branch to take.'

'A sort of continuous snap-decision process?'

'That's it. I doubt if he'd even be consciously aware of it . . . You see the outcome? Whatever he does when he uses this device will be to his best advantage. It will increase his self-confidence. Now isn't that clearly a selling line?'

'Personal morale booster?' Kepler toyed with the unit, letting the idea take root. 'You'd need a name for it.'

'How about Konfipak, with two Ks?' Sadim smirked. 'Of course, people should only use them when disheartened, or lacking in decision. Otherwise the mind might saturate with futuristic impressions. Go woolly. Gain nothing.' His eyes lit questioningly. 'How would you like to write up a set of instructions for using Konfipaks?'

Caution prevailed, through lingering respect. 'You think they'd catch on?' Kepler asked.

'Why not?' Sadim took the unit back and placed it on the bench. 'Consider impressions of other people. Aren't they generated by *interaction*, note that, of individuals on each other? *True* impressions, like absolute measurements, are unattainable by normal methods . . . Konfipaks could be used for judging the prisoner in the dock; the candidate for the job . . . *True* pictures, all adding to one's own confidence.'

'Kill your qualms with a pocket Konfipak,' Kepler mused, in sloganese.

'The expensive step is still to come,' Sadim went on. 'I'm no business man, I've still no backers. And I've been reluctant to demonstrate, till I know I can get Konfipaks mass-produced.'

'Another vicious circle.'

'Yet I'm certain, they'd soon pay off a thousandfold.'

A thousandfold. 'How much are you seeking?' Kepler probed.

'We–ell . . . At the moment, I can scarcely afford the contents for those dozen empty cases. So, if I'm to start up production here with, say, one assistant . . . ' Sadim's eyes swam with sincerity. 'Five hundred pounds should cover it.'

'Five hundred?' Kepler sat down, straddling a wooden chair. The mere mention of a sum was a progressive step. But even if he sold his few news syndicate shares, five hundred would clean him out.

'Of course, I'd need to have major control.' Sadim reclined against the yellow plastering.

Phantom tendrils seemed to touch Kepler, as they'd done outside – imbuing him with strange yearnings. 'I could explore your market contacts,' he offered. 'I've surveyed invention sales, and public reactions.' He stirred his stretched-out legs. 'I know who the best dealers might be . . . But why stick to microseconds? Can't you extend the time range? You'd get a better buy if prediction itself was practicable.'

'That would be unwise.' Sadim's eyes clouded.

'How do you know? Have you tried it?'

'Do I look as though I can control my own future?'

Kepler's confidence flagged a shade. 'But surely, one

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SCIENCE FICTION
NEW ENGLISH LIBRARY MONTHLY

Kelly Freas

THE WARRIORS OF DAWN
DAW BOOK NO 135

SCIENCE FICTION

NEW ENGLISH LIBRARY MONTHLY

Kelly Freas

TIME TECHS OF KRA
PLANET STORIES, FALL 1954

SCIENCE FICTION

NEW ENGLISH LIBRARY MONTHLY

Kelly Freas

THE CITY MACHINE
DAW BOOK NO 24

SCIENCE FICTION

NEW ENGLISH LIBRARY MONTHLY

Kelly Freas

AMBASSADORS OF FLESH
PLANET STORIES, SUMMER 1954

Continued from page 4

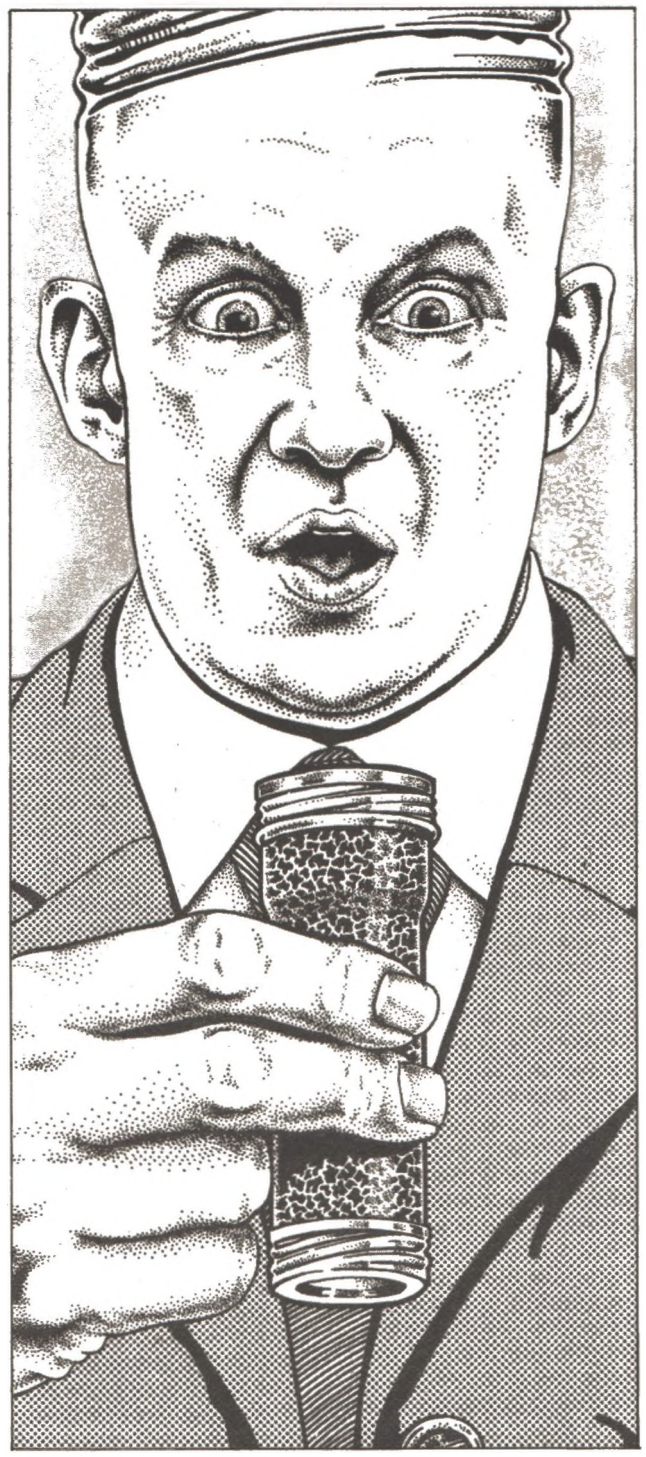
impression you'll get with a Konfipak is of yourself, micro-seconds later, but still using the Konfipak. So why not a chain of overlapping images, extending further into the future?'

'No!' Sadim's voice rang in warning. 'I once tried it and I don't recommend it. You could really be tied in a vicious circle.'

Kepler fell silent. Even so, wouldn't the sales potential be greater with prediction, rather than with morale-boosting? His doubts flickered irritably. He was rushing things. He still needed a demonstration before clinching the deal. Suddenly the lab felt stuffy, as though the whole of summer was compressing its scented warmth into that one evening. From outside, came inviting murmurs of the fair-ground.

'You'd like a demonstration? Sadim suggested, with a condescending pucker of his lips. 'Shall we take a look at the fair?'

SADIM'S TOUCH



KEPLER'S mind gave a slight lurch, as though Sadim's remark was time-linked with his own thoughts of a second earlier. He watched Sadim pocket the Konfipak. Yes, at least the fairground should be far enough from Sadim's lair of fantasy.

'Unrehearsed surroundings.' Sadim buttoned his jacket with a modest chuckle and waved Kepler out through a rear door. Through a gate; across the common. Sadim hunched forward, his lean legs strutting dynamically. The roundabouts glared brightly now. Volleys of laughter and song dilated outwards into the purple night-sky. They joined the fringe crowd, strolling past the pageantry of side-stalls, shooting-ranges, roller-coins, pin-tables.

'We need a foolproof example . . . Ah.' Sniffing speculatively, Sadim drew aside to where a fat, dark gipsy woman was tending a thinly patronised stall of puzzle games. Kepler followed. Sadim indicated a cluster of small glass vessels containing coloured beads. 'We'll guess the number of beads in the jar.'

Kepler drew in a speculative breath. 'How do I know you haven't been guessing them before?'

Sadim gestured tetchily. 'Can't you see how that device works? It's the computer-age version. The number's altered before each attempt. Randomly selected; electronically counted.'

Kepler nodded, demurringly. The woman, spotting Sadim's interest, lifted forward a jar of blue beads.

'Guess the lucky beads, sir?' she chanted. 'Get within ten and win a trinket; exact number, any prize on the stall.' The sweep of her bangled arm took in the array of dolls and hardware.

Sadim switched on the Konfipak in his pocket. He clutched the jar between his bony fingers, turning it so the loose mass of beads pattered around inside. Kepler's attention locked onto his face. He saw the eyes flick shut in concentration; he noted the surge of dreamy intent. Sadim stretched a hand towards the tabulator, and his eyes snapped open. 'Three hundred and forty-six,' he announced, setting up the figures.

The woman took back the jar, and locked its keyed base into the counting-unit. She pressed a button. A pink ticket jumped out onto a tray. She lifted it and read: 'And 346 it is.' She barely concealed her astonishment. 'Your lucky number. Now, pick your prize, sir.'

Affecting an air of boredom, Sadim deliberated between a chromed toaster and a set of kitchen carvers. Kepler reined in his thoughts, trying to analyse what had happened. He couldn't. Sadim chose the carvers, falling for their old-world appeal: solid metal glint in plush-lined case. 'I'd do a repeat,' Sadim turned from the stall, switching off the Konfipak, 'except it's hardly fair game . . . '

'Never mind a repeat.' On an impulse, Kepler plucked the Konfipak from Sadim's grasp. 'If you want to convince me, let me have a go myself.'

SADIM'S eyes widened a little. His lined complexion looked yellow in the fairground dazzlement. '*You* want a go? Would that be prudent?'

'Of course it's prudent,' Kepler upheld turbulently. 'For all I know, you could be in league with the stall-holder.'

Sadim's face darkened. 'You can't just rush into this . . . '

'But all you did was switch the damned thing on.' Kepler brandished the Konfipak under Sadim's nose. 'If you want to sell, let people try the goods.'

Sadim's brow suffused blotchily. 'I don't know why you bothered to come. If you still think it's trickery, I'll find some other backer.' He snatched the Konfipak from Kepler's grasp and began to stalk out of the fairground.

Waves of uncertainty drove through Kepler. His bleak future yawned around him. He thrust forward after Sadim. 'No . . . wait . . . ' He caught hold of Sadim's elbow. 'Let's talk sensibly.'

'Sensibly?' Sadim glared. 'Then suppose you try to appreciate what happened.' He flung an arm towards the side-stalls. 'The moment before I set those figures on the tabulator, I had a glimpse of what they would be. So, I set them correctly.'

'But can't you allow me one small test?' Kepler pleaded. He felt a flutter of relief as Sadim slowed to a stop. Through his fingertips, he was conscious of the touch of Sadim's elbow: the first bond of partnership.

'Very well.' Sadim grimaced, clutching the case of carvers. 'But don't expect perfection first go. The sensing of temporal extension is bound to differ between us.'

'I'll chance it, and I'll pick my own stall.' Leading Sadim back, Kepler retrieved the Konfipak. 'How about in here?' He entered a poorly patronised booth stocked with slot-machines, where a weedy attendant was yawning around. Kepler hesitated.

'Well?' Sadim rallied. 'Now, you're realising the micro-second handicap. You need an application involving a snap decision.'

'Will nothing here suit?' Kepler gazed about resignedly. The attendant began to empty a fruit-machine, scooping the coins into a satchel. He entered a rear part of the booth, tipped the money onto a table and began to count it. 'How about him?' Kepler switched on the Konfipak, pocketed it, and sauntered forward, his intentions vague. He tried to relax, to open his mind, but sensed nothing but blankness.

With his back to Kepler, the attendant raked the coins into a cash-box, and picked up a pencil to make an entry in a ledger. Then Kepler's mind was flooded with random imagery – as though his viewpoint had been partly projected to become at one with the attendant's. A twinge of alarm shot through him. With his own eyes he could see the pencil had not quite touched the paper. Yet with his attendant's-eye view of a second or so hence, he saw the pencil existing at each stage in the writing – so that pencil and hand were a blur through which the figures entered into the ledger could be seen.

'Everything about Sadim, his patience, his co-operation, even his temper, seemed part-proof that he was genuine. Kepler felt it was his duty, yet somehow a disquieting duty, to go along'

'Two pounds, ten pence,' Kepler muttered to himself, and moved in close behind the attendant. 'Change a pound?' he asked, as the fellow jerked round.

In his pocket, he snapped off the Konfipak. Reality jolted back to normal, leaving only a memory of the figures that had flashed into his head. Then as the attendant reached into the cash-box, Kepler saw past his arm. 'Two pounds, ten pence,' he read silently from the page. He changed his pound and backed out quickly.

'Any luck?' Sadim was smiling warily.

'The figure I imagined . . . ' Kepler said, in sobered awe. 'He wrote it a moment later. I saw him writing, *in advance*.'

'Something worked for you? I'm glad.' Sadim took the Konfipak and stowed it away with care as they left the booth. The walk back to the laboratory was silent; Kepler deep in study, Sadim placid. Indoors, Sadim placed the case of carvers down on top of the black cube. He rubbed his hands with dry anticipation. 'Well? Do we come to terms?'

Kepler sat down, reflecting hard. Everything about Sadim, his patience, his co-operation, even his temper, seemed part-proof that he was genuine. Kepler felt it was his duty, yet somehow a disquieting duty, to go along.

'I'm sure you've appreciated the main limitation,' Sadim continued. 'It's one of selection, of singling out the relevant imagery from all that comes crowding in. Practice is important here. Practice and development.'

'So I realise.' Kepler remained cautious. 'Could you go straight into production?'

'We'd develop and produce side by side.'

'Very well.' Kepler tugged his chair up to the lab table. 'Let's draw up an agreement.'

'Er . . . agreement?'

'I'm handling the business side, aren't I? If I'm to cough up nearly five hundred quid, I want conditions put on paper.'

'Ah, yes.' Benignly, Sadim rummaged for a pad of foolscap. 'You columnists; you like things in black and white.'

'We'll need to plough back profits into the best outlets. Cut out middlemen; keep down overheads.' Kepler sought his pen. 'And the best way I can keep an eye on you, is by coming here as part-time assistant.'

THAT first evening, three difficult hours passed before the agreement, headed 'Konfipaks Unlimited', was knocked into shape. Kepler drafted three copies: one each for safe keeping, and a spare for the lab, for easy reference. By the time he left, his head was throbbing. The following morning, he took his cheque for £450 to Sadim; as much as he dared afford. Sadim was absorbed in slicing module discs on a microtome and seemed almost aloof to it. Kepler felt vaguely offended.

The next two days brought in a few crank letters from viewers of Sadim's interview, but no callers. Kepler was glad of the poor response. All the less to divert Sadim. Even so, back in his Remforth flat each night, Kepler took his time falling into a cluttered sleep. What kind of perverted philanthropy had he latched onto, he wondered? He tried to reassure himself. Anyone who'd just ploughed in his savings would be anxious for quick returns. Human nature. He'd be all right, provided he kept Sadim straight.

'Yes, you've really brought out the thrift in me,' Sadim chuckled, with a pleased little smirk, as he started to convert his first dozen empty torch cases.

'It's only sense. Make Sadim's touch bring in the money.'

'The touch of greed.' Sadim fingered his lip with sadness. 'Rather out of keeping. More of a Midas touch, than Sadim's.'

'Depends how you look at it. We're aiming to give the public something they'll want.'

Yet, as Kepler's thoughts flitted over his invested savings, he had to admit Sadim's touch was nurturing a mercenary flavour.

Sadim worked unceasingly. Besides redesigning the prototype for improved operation, he launched into plans for mass production. At first, torch cases could only be bought in small batches. When a supply of thirty arrived, his expert fingers grew busy, fitting the intricate contents inside them. At first, he made only five Konfipaks a day. After a week, he doubled output. When another two hundred cases arrived, he tripled it. The bench became a production line, empty cases stacked at one end, Konfipaks shipped off the other for storage in the cupboard underneath.

Kepler soon gave up his weekly column. His first move, when exploring market contacts, was to secure his own Konfipak, on which he practised in spare moments. Another five hundred cases arrived. Within three weeks, over two hundred Konfipaks had been produced. Of Sadim's original bench equipment, only the black cube remained, ornamented by the case of carvers in honour of the night Kepler and Sadim had pledged agreement.

'You'll need a proper assembly shop before long.'

'That will come,' Sadim promised jauntily. 'How's the organising of buyers going?'

'Passably. A few contacts should buy on spec. But what we really need is – demonstration. I've got enough grounding now in the techniques. Believe me, if we're to win custom . . . '

'Not demonstration. It's risky. Konfipaks aren't patented.'

So although Kepler carried his Konfipak habitually, he continued to rely on his glib talk for securing buyers. 'Payment in advance, or no deal,' became his stock expression.

'Payment for what? What is this cheap gadget?'

'Konfipak. Pocket-size morale-booster. Gives you a snap judgement of humanity.'

'Says who . . . ? OK, book me for a dozen.'

Few buyers risked asking for more. Kepler worked with zeal to win enough orders to warrant a first distribution. He stayed reluctant to demonstrate his Konfipak, not just because of what Sadim said, but because he was trying to improve his own methods. With snap-guess beads-in-jar situations, he soon had no bother. His confidence mounted. But what of the refinements, the prediction angle Sadim

had warned him against? Kepler pondered. In refusing to examine this angle, surely Sadim wasn't using Konfipaks to their best advantage, So, before giving demonstrations, maybe he should investigate it more fully himself.

'He found his mood became more receptive to flashes of confused imagery. No, hardly flashes, more like extensions of himself smeared over several seconds, blurred by the infinity of paths ahead'

THE chain-reaction of self-imagery had nagged Kepler all along. Just because Sadim had once scared himself off didn't mean it wouldn't work. It seemed the obvious lead to prediction. Cautiously, Kepler experimented with his Konfipak, concentrating to produce slightly time-advanced impressions of himself using the Konfipak; and so on, into the future. The first few tries gave him a haunting feeling of lurching several ways at once. He switched off hurriedly. Yet this, he told himself, was surely a first real sign that an infinity of time branches could exist.

He purloined one of Sadim's midget screwdrivers and fiddled with the tiny pre-set under the end-cap. He found his mood became more receptive to flashes of confused imagery. No, hardly flashes, more like extensions of himself smeared over several seconds, blurred by the infinity of paths ahead. A frightening feeling. He decided to have a word with Sadim.

'No!' Sadim remonstrated. 'It will do you no good.'

'Why? What's wrong with pre-knowledge of oneself? It's as good as the snap-guess method for boosting confidence.'

'Never. The snap-guess entails a Sadim's touch with the external world. But *this* is a Sadim's touch with yourself. Self-centredness. Dangerous. *The* vicious circle.'

'But surely,' Kepler justified himself angrily, 'there's self-involvement, even in the snap-guess . . . ?'

'Of course there is,' Sadim reasoned, earnestly. 'There can be no clear dividing line. It's a question of degree . . . Can't you see? You're so self-concerned, you'll block everything with a clutter of self-imagery. It'll crush you from without, and split you from within.'

Kepler prowled around sullenly. 'You hardly make these damned Konfipaks sound safe to use.'

'There's always risk. I'd foolproof them, if I could.'

'Then why don't you?'

Kepler subsided, resentful and undecided; but not for long. He continued to enjoy a sense of doing something financially rewarding and morally worthwhile. Occasionally he would sit over the spare copy of the agreement and picture the workbench as an automated production line: Konfipaks flowing along it past the carvers on the black cube: money, those long-awaited first payments from buyers, flowing back to fatten his pockets.

But as his search for market contacts eased, his introvertly styled experiments continued, seeking more distant glimpses of his future. He began to feel stark and gullible. Sometimes he would look up, to find Sadim's gaze lingering on him in a knowing, secretive way. Even during that first try-out at the fair, he felt sure now, there'd been some projected imagery of himself which at the time he hadn't fully recognised. He began to cherish the impression morbidly, longing to channel his free will onto the rosiest course.

He developed a trick of remaining perfectly still, except for switching on his Konfipak, so that he seemed to live in a blurred enlargement of himself. For in all possible futures, he must be moving all ways from this stationary position. An overpowering sensation. From each viewpoint, his surroundings merged around and through him. He felt conjoined with them; enthralled by the webbed solidity, by this exotic perfecting of Sadim's touch. All else lost importance, as the web threatened to crush him with encircling viciousness. Straitjacketed by a myriad times, he would struggle to switch off the Konfipak and snap the stranglehold.

They fixed a date for the initial dispatch of Konfipaks. Two mornings earlier, Kepler arrived at the house before Sadim was about. On the mat lay a scattering of envelopes, addressed to Konfipaks Unlimited. He scooped them up, entered the lab, and ripped them open. Cheques! His dark frame of mind gave way to relief. Hearing a step, he turned to find Sadim entering from the house, still sipping his morning tea.

'We've done it!' Kepler rejoiced. 'Advances of over £500, and still over half the payments to come in.'

'Excellent.' Sadim brightened. 'That covers your outlay. Just leave the cheques on the table.' He shuffled forward, eyes still puffy with sleep, and set his cup aside. 'Sadim's touch . . . ' He exhaled the phrase with loving care. 'Perhaps one day we'll be rich enough to *give* our Konfipaks away.'

Kepler let him ramble on. Basking in affluence, he sat at the table for a more accurate count of the cheques.

'Leave them,' Sadim repeated. 'I'll pay them in.'

'I thought I was to deal with that?' Kepler glanced up. A hint of discord in Sadim's voice made him frown. His hand slid into his pocket. He switched on his Konfipak, seeking solace, concentrating on the blissful fancy of cashing cheques.

He switched off, trying to retain the joy, as his gaze jerked back to its instantaneous focus. Next to the cheques lay the copy of the agreement. Somehow it looked different. Kepler knew this much instinctively. The sheet had lain there so long, its layout had registered like a subliminal photograph. Slowly, he began to read, seeking the flaw which he knew must be there. He jolted and glared up, wide-eyed. The grey-glinting crown of Sadim's head was dipped over the assembly work. Kepler's fingers crunched at the sheet. He pushed to his feet and strode forward.

'What's been happening here?' he demanded.

'Happening?' Sadim blinked round. 'Why, nothing . . . '

'According to this, I get no cut in the profits.'

SADIM's brows rose slowly. 'That's correct . . . '

'Are you out of your mind? What sort of twisted stunt are you trying to pull?' Kepler shook the sheet in his fist.

'But, we agreed . . . ' Sadim shrugged, laughingly. 'You generously provided the outlay, to put our world-improving plan into operation. There was no question of financial gain . . . '

'Like hell there wasn't. This says you take the lot.'

'Naturally. If I'm to build an assembly shop, I'll need capital . . . '

'But I never agreed to that. I have my copy to prove it.'

'Now don't go losing your temper. All three copies were alike.' Mildly, Sadim reached past Kepler, and shovelled the cheques into the snap-lock table drawer. 'No doubt in other time branches, your equivalent selves have more frugal motives; but here . . . '

In other time branches . . . Kepler sagged weakly. He steadied himself against the wall.

' . . . here we depend on trust.' Sadim spread his hands placatingly. 'Konfipaks Unlimited was founded on our mutual trust.'

'Trust! You call that trust – locking those damned cheques away?' Kepler's mind spun. 'Have you forgotten our banking arrangements? Joint account; either signature valid.'

'No, no. Surely you recall, mine was the only specimen signature given to the bank.'

'What?' Kepler stared. 'But I gave mine too . . . Didn't I?' He whirled round, pitched the agreement aside and plunged outside. He saw only a nightmare of looming debt, his trust in Sadim remoter than ever. He drove across the common, which was barren now that the fair had departed, and reached the bank in three minutes; too short a time to assuage his peace of mind. Something was wrong; he must have overlooked some vital clause. Yet he was positive he hadn't.

The bank had just opened. He hurried inside, and banged out his request. A startled clerk checked a file, then shook his head.

'Sorry, Mr Bannerman. We've no record of your signature. The account of Konfipaks Unlimited is for Dr Moncreif only. If you could produce a letter from him, authorising you to . . . '

'If I could what!' Kepler swung away from the affronted clerk and stormed out.

When he braked to a halt outside Sadim's again, his hands were shaking, his palms sticky with sweat. That damned Konfipak. He'd not only jumped the tracks, into a branch where his signature meant nothing, his mind was so saturated with future he'd somehow become tangled with what had gone before. Had he cheated himself, in his self-application of Sadim's touch? Or had he *been* cheated; been allowed to indulge? By Sadim?

As Kepler started up the sunlit path, blood drummed in his temples. He saw the blurred red dance of financial ruin, and ahead, a darkness falling over Sadim's house. How much was imagined? His row with Sadim; his visit to the bank? He couldn't reason straight. He knew only the treacherous touch of Sadim against himself.

He stalked inside and kicked open the lab door. Sadim was stacking more Konfipaks into the cupboard. Their silver end-caps glinted against the crackle-black cases. Thousands of them, ready to dupe the world. He must cut off the past, before it was too late.

Sadim looked round, gloating friendliness in his eyes. 'Cleared up your little aberration?' he quipped. 'You surely don't imagine the bank would . . . hey!' His voice became a squawk of protest, as Kepler reached the cupboard. One swing of Kepler's arm swiped the tiered Konfipaks to the floor. An upward smack knocked out the loose shelving. Kepler leapt onto the tumbling pile. His feet pounded and slithered, to crush the rolling cylinders. He felt Sadim shaking his arm vigorously.

'Stop! Have you gone mad?'

'Confidence boosters! Tricksters, you mean.' Glaring breathlessly, Kepler stilled himself. 'Well? Deny it! Deny you tried the chain technique three years ago, maybe earlier, to see far enough ahead and win yourself a likely backer; to fix the whole lousy stunt.'

In Sadim's eyes lurked a dawning fear, and something clicked in Kepler's mind. Had there been something deeper in Sadim's foreboding; something unknown perhaps even to Sadim himself?

'I know why you warned me off.' Words spilled on from Kepler. 'Now that you'd got us together in a favourable time stretch, you didn't want me messing your plans up.'

'What d'you mean?' Sadim gulped and found his voice again. 'From the start, I've stressed – no personal gain.'

'All part of the Sadim touch.'

Kepler's wits pulsed. He must pitch Sadim into another time branch. Yet he couldn't, they were integrated; inseparable. He felt as though he was swimming back against the stream of time, snatching at the drifting flotsam of events.

Sadim's eyes had drawn, in shattered fascination, towards the trampled Konfipaks. Masking fear, he cracked his face into a tenuous smile.

'Very well. Why shouldn't I trick you? You convinced me I could touch the public for its money. It was only fitting you should be the first one to be touched.'

'But the aftermath . . . ' Reality dovetailed, fell round Kepler like a crashing wall. The rising dust was his wrath for Sadim.

As Sadim pressed back, with a look of growing horror, Kepler saw on the bench beyond him the case of carvers lying on the black cube. Visions of being plagued by Sadim for ever converged on Kepler from all time streams. He thrust past, and snatched the case, grappling to open the lid. Sadim made a grab to stop him. Kepler swept the black cube off the bench, smashing it into Sadim's knees. Wires snapped, sparks flew. The cube thudded, shattering at their feet.

Kepler got the carver case open. His mind bent to a myriad stresses. In some saner track, he knew, he baulked at killing. A part of him yearned to leap there, to escape this compulsion. The carver case fell to the floor. The knife felt weighty and solid in Kepler's hand. As Sadim scurried backwards whimpering alongside the bench, Kepler pounced forward and lunged.

The surprise in Sadim's eyes went glassy. As blood spurted, the gurgle died in his throat. The knife slid from Kepler's fingers. Sadim sagged, and sent glassware crashing before he hit the floor with a deadening thud.

Kepler reeled back. The frenzy in his mind collapsed. He plumped onto the chair. He stared at the motionless body, sprawled by the brute touch of death. He hauled his eyes away. On the table lay the agreement. He found himself reading. He read again. His hand crunched up through his hair, as his plane of existence tilted to an even crazier angle.

It was genuine. Half shares for Sadim and Kepler.

Bewildered, he unpocketed his Konfipak. It looked damaged, dented against the bench in his fury of trampling. Gingerly he unscrewed the end-cap. The torch battery was jammed inside.

Torch battery?

He clawed the agreement forward. There was no mention of Konfipaks Unlimited. The heading read: 'Conflagrates Illuminated.'

Kepler squeezed his brow and closed his eyes. These last minutes – hours, days? – he felt he'd pitched around, sliced across, so many time branches he belonged nowhere. He was a muddle of motives. And now, Sadim's touch had disintegrated, backlashed him into the most harrowed track of all, where only this bout of destruction was real and his self-concern had pulled off its final trick.

The enormity sank home. He tossed his Konfipak to the floor. He rose slowly, went into the parlour to the telephone and dialled. 'Police . . . ? '

Back in the lab again, he sat down to wait. Drifting in from somewhere came the music of the fair.

HE didn't wait long. Odd, that . . . The police arrived, as though they'd already been on their way. Kepler sat motionless. Even under the watchful eye of the constable, he felt the daze of solitude. The inspector and sergeant were murmuring together as though Kepler was in a different world. But he could detect their undertones as clearly as the fairground melody. Glass crunched under the sergeant's foot, followed by the inspector's rebuke, 'Careful where you're walking'. They should be wading through trampled Konfipaks, except there weren't any Konfipaks. Only glass. Kepler stayed immobile, waiting for them to take him away.

' . . . gipsy woman says Moncreif won the carvers this evening. Bannerman started arguing with him. Later, a slot-machine attendant saw them leave.'

Leave . . . ? Tonight? Kepler frowned among private thoughts. But hadn't the fair itself left, a fortnight ago? His mind was an inconsistency of futures and pasts. Was *this* the night of Sadim's television interview?

The inspector picked up a torch case from the floor, and put it on the bench. *Only one torch case* . . . The one Kepler had thrown from his pocket? Or squashed underfoot? The one Sadim had used for demonstration – three years ago?

Kepler felt encircled from reality, in smug isolation. The music played, the inspector droned, ' . . . if that message of Moncreif's had reached us earlier, we might have been on time. He stayed silent too long. Must have feared this way back.'

'That's where respect for the patient gets you.'

Patient . . . ? Kepler's senses jolted briefly.

'This draft agreement,' the inspector murmured. 'Conflagrates Illuminated? Could it be part of Bannerman's therapy? It reads as though he was out to coax Moncreif into a public swindle. Flogging botched-up torch cases, claiming they worked on infra-red and had superior powers . . . Crazy piffle.'

'That television interview. Could Moncreif's denials of prediction have been to keep this fellow fooled?'

'In case Bannerman believed Moncreif foresaw the swindle? Maybe. Even if it is only therapy, it might have weakened their relationship and led to the violence Moncreif feared.'

'It happened, anyway. What was Moncreif's line of work?'

'From what I gather, curing psychosis by solid-state techniques. For research patient, he chose Bannerman – some crank of a columnist.'

Kepler felt the inspector's glance steal over his face. He sat amid his jumble of times, seeking ultimate withdrawal from the physical world. He was a living silent scream of torment. He saw nothing; felt nothing. Heard only the remote droning: ' . . . sense of isolation; violent fear of inability to affect anything. *Delirium temporans*, a rare mental aberration, going by Moncreif's records. Known for some ungodly medical reason as Sadim's touch.'

ON THE WAY TO THE STARS

PART FOUR: GALACTIC EMPIRES

BY PETER WESTON

On the day the first ship returns from Centauri mankind will be committed to a whole new history of colonisation and exploitation, rebellion and the birth of new nations. Nothing quite like it has happened since Columbus discovered his new world and set in motion the conquest of the Incas and Aztecs, the growth of the Spanish and Portuguese Empires, and the eventual birth of the United States.

In science fiction the evolution of interstellar societies has proved one of the most fascinating of all themes. Stories have considered almost every conceivable stage in our expansion into space, from the planting of the first tiny colonies on planets of near-by stars to the ultimate, although hardly probable, ambition of uniting the entire Galaxy into one mighty Empire.

Let's begin with Larry Niven's highly popular stories of 'Known Space', set in a seven-hundred year period from roughly AD 2100 to 2800. They follow the settling and development of a small number of worlds within about a fifteen lightyear radius of Earth, the earlier colonies at least – Jinx, around Sirius, WeMadeIt around Procyon, Wunderland in the Centauri system and Plateau about Tau Ceti – having been reached by 'slowboats', below-lightspeed fusion-drive ships carrying their passengers over the decades in cold sleep.

Next comes a brief period of manned ramscoop rockets, speeding up interstellar transport in Niven's Universe and encouraging commerce between the lonely, isolated worlds. By 2400 a variety of independent governments have developed, under the general scientific, cultural and moral umbrella of a UN-ruled Earth. And then in the later part of the series the secret of the hyperspace 'Blind Spot' allows FTL travel and the subsequent knitting-together of Human Space, as well as contact with a variety of alien beings (the Kzinti, Grogs, puppeteers, Outsiders, and so on).

Niven's series has some rough edges, largely the result of being conceived story-by-story rather than as a coherent whole from the beginning, but it succeeds better than most in conveying a picture of an immensely vast Universe in which mankind's is but the tiniest of corners. Indeed, this has become the accepted viewpoint of most modern sf writers and earlier notions of humanity conquering or assuming some sort of automatic leadership of the other races of the Galaxy (as in the *Lensman* epic) have begun to seem colossal over-simplifications and most monumentally conceited.

Poul Anderson puts this contemporary viewpoint very well indeed. In *After Doomsday* men are still newcomers on the scene, still finding their place in the Universe. The first thing they find is that space is simply too vast for there to be any sort of organising body:

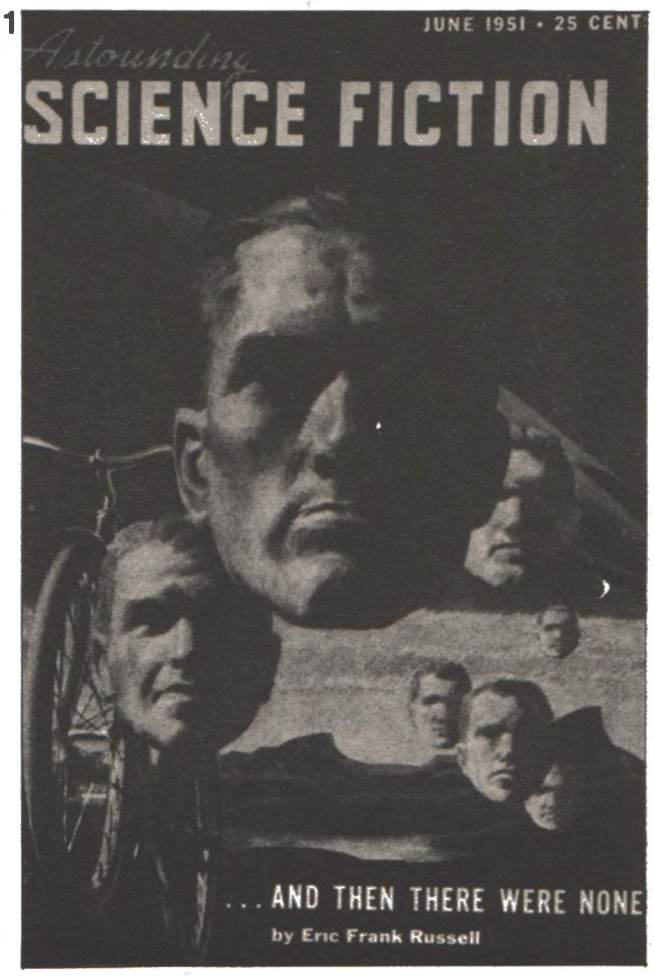
> 'Higgledy-Piggledy, helter-skelter, civilisation spread out among the stars. A million clusters, comprising one to a hundred planets each, furnished the only pattern there was. Between the clusters no pattern whatsoever existed. There was little enough pattern within any given cluster. It was no more than a set of planets not too widely separated, which maintained some degree of fairly regular contact with each other. No wonder the speculative writers had misunderstood their own assumptions. The universe was too big for them . . .'

Still, most writers are concerned with human expansion to the nearer stars; they assume planets will be available for the taking and as a matter of course will be settled in the same way as Europeans populated the Americas. The question rarely asked is *why* did people settle new lands on Earth? Not often because they really wanted to. Usually they were driven, by greed, idealism or persecution, if not forcibly transported in chains. And doubtless it will be so again.

Three stories take a look at these *motivations* for emigration; they are Anderson's 'Robin Hood's Barn' (in *Orbit Unlimited*), Eric Frank Russell's 'And Then There Were None' (*Astounding*, 1951), and Mack Reynolds 'Ultima Thule' (*Analog*, 1961).

Earth is sliding rapidly downhill in Anderson's novelette. It has the technology – just about – to plant a colony, and a marginally habitable world has been found around the star e Eridani, twenty-two lightyears distant. But why should anyone want to bother? The cost is prohibitive with no chance of an economic return – anyway, in a totally urban culture who wants the harsh life of a pioneer? In the end the voyage is put under way only through the machinations of one idealist, who skilfully manipulates events to *create* a new persecuted minority who feel they have no alternative but to get up and go.

'Sooner or later man will be able to travel between the stars. But then what sort of societies will emerge?'



1

'And Then There Were None' was written in the early 1950s. Suppose, said Eric Frank Russell, that with the advent of star-drive every disaffected sect and nut-cult could head out and find its own world. Further, suppose one group were followers of Gandhi and carried his principles through into every phase of life on their distant planet. How would they react when rediscovered by an Earth government intent on tidying-up the fragmented cosmos? The result is hilarious!

Mack Reynolds takes exactly the same basic idea, a universe colonised willy-nilly by every type of oddball splinter-group. Worlds of anarchists (Kropotkin), matriachs (Amazonia) and everything else:

> 'Here's Monet, originally colonised by a bunch of painters, writers, musicians. They had dreams of starting a new race . . . with everyone artists. For three hundred years they were uncontacted. What did they have in the way of government by that time? A military theocracy, something like the Aztecs. And what's their religion based on? That of ancient Phoenecia, including plenty of human sacrifice to good old Moloch.'

However, in 'Ultima Thule' the Earth government officially practises a strictly 'hands-off' policy. As part of the United Planets organisation each world is entitled to run its own affairs, no matter how weird its institutions. But in Section G of the Bureau of Justice is a little-known group whose job it is to subvert these worlds, nudge them out of the artificial patterns and nasty habits into which they have been set by their founding fathers.

There's an interesting philosophical idea here, which Reynolds doesn't fully develop. Will every society, freed of constraints, gradually evolve for the better? Will all these planets eventually reach a common level of maturity and enlightenment, a sort of Utopia from which level all earlier doctrines of capitalism, Communism, and so on will appear as children's games?

Developed in this way the story might have been a parable upon our own world, in much the same way as Ursula LeGuin's magnificent *The Dispossessed*. But Reynolds isn't this sort of writer. Instead his protagonist goes on a Grand Tour to various planets, handing out transistor radios to make the young people of Kropotkin desire material possessions and destroy their state of anarchy and so on. Why? Because alien intelligences have been discovered Out There and mankind must be ready for the inevitable conflict, when it comes.

Still, even if Russell's and Reynold's ideas are a little corny, it's quite likely that some existing national characteristics will be carried into space. In Heinlein's *Citizen of the Galaxy* we have the 'Terran Hegemony', a vast sphere of stars some nine hundred lightyears in diameter, with its individual worlds retaining their distinctive flavours. Woolamurra, for instance, a pioneering, farming planet. Or more sinister, Jubbulpore, capital of the Nine Worlds, settled by Irish and Orientals and riddled with nasty customs like branding, flogging, and slavery. Even more fascinating than Heinlein's portrayal of these land-bound cultures are the 'Free Traders', a whole people who live permanently in space, nomads roaming from star to star and paying allegiance to none:

> 'Oh, the People are free; this old Galaxy has never seen such freedom. A culture of less than a hundred thousand people spread through a quarter of a billion cubic lightyears and utterly free to move anywhere at any time. There has never been a culture like it and may never be again.'

1 A mile-long spaceship, a bicycle and an idea; combined together they could destroy the power of Earth!

The notion is not entirely new; Anderson's 'Commercial Society' pre-dated Heinlein by several years in *The Long Way Home*. But no one else could so well visualise the intricate customs the Traders have developed to keep them sane and contented in their metal prisons. The only comparison that can be drawn is with James Blish's classic 'Okie' series, in which his flying Cities are similar wanderers through interstellar space.

Many writers, however, prefer to think that exploration will be more controlled, less fragmented, and the idea of some sort of overall union is a familiar one in science fiction. Take H Beam Piper's 'Future History' series, centred around the Terran Federation which he expected would colonise many hundreds of other planets in the next thousand years or so.

Piper's stories are not widely available today, although there is cause to hope that an American publisher will shortly be re-issuing most of them in book format. The 'Future History' series comprises several novels, notably *Space Viking* and *Junkyard Planet*, plus *Little Fuzzy* and two sequels. There are also a half-dozen shorter works of which the most interesting is 'A Slave is a Slave'.

'Will all these planets eventually reach a common level of maturity and enlightenment, a sort of Utopia from which level all earlier doctrines of capitalism, Communism, and so on will appear as children's games?'

In Piper's chronology all dating is reckoned in terms of the 'Atomic Era', beginning from 2 December 1942 when the first self-sustaining atomic reaction was achieved. Thus by AE 200 the first voyage has taken place to other stars, and by AE 400 the Federation is busily colonising hundreds of planets. However there is civil war, the secession of the System States Alliance, from AE 842 to 854.

The Terran Federation wins, but the strain has been too much. In less than three centuries it has vanished completely, and has left the worlds in such a state of savagery that only a few of the oldest-settled are able to retain their civilisation. Meanwhile, on a few isolated planets many hundreds of lightyears away the descendants of the System States fleet, which fled at the collapse of their rebellion, have grown strong and powerful. These, the Sword-Worlds, cautiously probe back into the space-volume of the old Federation . . . to find easy pickings among the disorganised and defenceless planets.

For three hundred years these 'Space Vikings' plunder and loot, until in their turn they are vanquished by the rise of the Galactic Empire, the beginnings of which are described in the novel, *Space Viking*. The events parallel with our own history are clear; there is a little of the US Civil War, the fall of the Roman Empire, and even, as readers will find, the birth of Nazism. Piper was a great believer in the cyclic nature of history, and partly for this reason some have found his writings distasteful. Certainly his political opinions were, and are clearly seen to be, highly conservative; but even so the sheer wealth of detail with which he embellished these stories makes them fascinating reading.

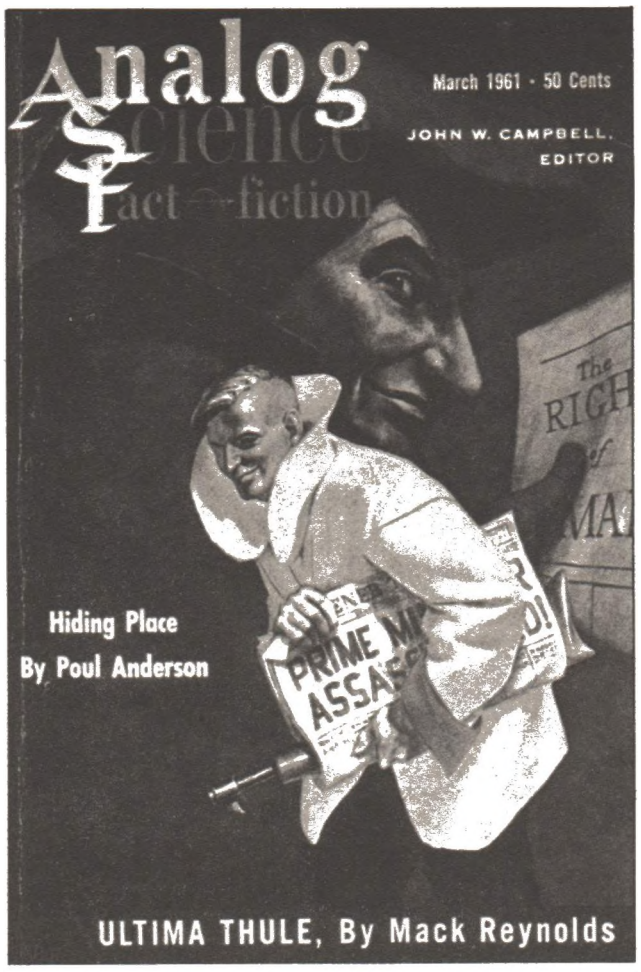
Despite its grandiose title, Piper's Galactic Empire never encompasses more than a tiny fragment of the Milky Way. Much the same applies to Poul Anderson's Terran Empire which, like Piper's, consolidates an earlier, much looser state of government (or non-government!).

Nicholas van Rijn is a character well known in science fiction. He is the fat, oily, but deadly shrewd boss of the Solar Spice & Liquors Company, one of a number of trading companies, human and non-human, which have banded together to establish their spheres of influence, form alliances and, for their own selfish reasons, keep the peace:

> 'Selfishness is a potent force. Governments, officially dedicated to altruism, remained divided; the Polesotechnic League became a supergovernment, sprawling from Canopus to Polaris, drawing its membership from a thousand species. It was a horizontal society, cutting across all political and cultural boundaries. It set its own policies, made its own treaties, established its own bases, fought its own minor wars – and, in the course of milking the Milky Way, did more to spread a truly universal civilisation and enforce a last *Pax* than all the diplomats in the galaxy.'
>
> *Trader to the Stars*

I *like* the Polesotechnic League; it offers credibility where so many of these jury-rigged Empires and Federations do not. What are the silly things for? Read Niven and Pournelle's *Mote in God's Eye* where there is a particularly flimsy cardboard 'Empire' and compare it with Anderson's League, where van Rijn and his cronies are so utterly true to life, engaged in everyone's favourite occupation – making money! But all good things come to an end. Poul Anderson has combined the 'Trader' series with another set of stories he has written, much older in conception. These are the Dominic Flandry tales of swashbuckling interstellar intrigue, originally published in the flamboyant days of *Planet Stories*.

2



2 Tens of hundreds of planets have been settled by man, but 'Tom Paine' is subverting their individual cultures in Mack Reynolds' 'Ultima Thule'

Here there is a Terran Empire; and more recently Anderson has justified this retrogression by explaining that 'the Traders grew too greedy'. True craftsman that he is, the author has fleshed-out this gaudy backdrop to set a whole crop of modern stories within his Imperial framework. Flandry has now become a gallant knight who knows in his heart that his efforts are futile, but, he broods, they will help to hold back the Long Night for another few years. And in a few recent pieces – one of which is the award-winning 'Sharing of the Flesh' – he takes us beyond the date at which the Empire has fallen.

Once again the historical parallels are here – this time illustrated by the happy days of the British East India Company, which ruled the sub-continent in association with the native princes for nearly a century, until that rule was hardened under the British Empire of India.

Clearly science fiction readers and writers alike are fascinated with the endless permutations which can be played with our stellar future. The ultimate result so far has been Isaac Asimov's Galactic Empire, which means what it says; it really *does* control every single star in our island universe.

According to Asimov, the Empire at its peak encompasses two hundred million inhabited worlds and something like 8 x 10^{17} people. Who else would have the audacity to conceive such a monster! It is in fact possible to slot into this one chronology almost every story Asimov has written. We begin just a few thousand years from now, with the two 'robot' novels, *Caves of Steel* and *The Naked Sun*, where only about fifty colonies have been settled, the Outer Worlds, which have a deep contempt for Earth. Then there is a gap of a few centuries during which colonisation recommences, but some sort of atomic war takes place. In *The Stars Like Dust* Earth is radioactive, but there are one thousand other inhabited worlds.

The Currents of Space is set at least twenty thousand years later, when the Galaxy has mostly been occupied and the rival star-systems are jostling for place, uneasily aware of the growing colossus of Trantor. Sure enough its power is irresistible, and *Pebble in the Sky* takes place during the early centuries of the great Galactic Empire. The *Foundation* saga, of course, is set at the close of its 12,000-year span.

What remains to be said about the *Foundation* series? It has been voted 'Best all-time sf series' and its scope is breath-taking. Yet somehow a re-reading now conveys not the sense of a remote and inconceivable future but instead recalls the dim and dusty days of 1942 when it was conceived. Written at a time of Earthly Empires, *Foundation* suffers in these more liberal, more sceptical days.

'According to Asimov, the Empire at its peak encompasses two hundred million inhabited worlds and something like 8 x 10^{17} people. Who else would have the audacity to conceive such a monster!'

In contrast, there is one writer who better than most has succeeded in cutting adrift from our own century and visualising an interstellar future of true strangeness and enormity. Jack Vance began writing for the pulp magazines of the 1940s, but from the beginning brought a richness of description and an altogether new perspective to science fiction. His work leans heavily upon cultural anthropology, to present the most weirdly intricate societies, both human and non-human. A passage from a recent novel, *The Grey Prince*, explains the setting of his current series of stories:

> 'The space age is thirty thousand years old. Men have moved from star to star in search of wealth and glory; the Gaean Reach encompasses a perceptible fraction of the galaxy. Trade routes thread space like capillaries in living tissue; thousands of worlds have been colonised, each different from every other, each working its specific change upon those men who live there. Never has the human race been less homogenous.'

So, in various books Vance introduces his differentiated types of man; in *Five Gold Bands* the skeletal Alpheratz Eagles and the sinister Shauls, in *Son of the Tree* a whole variety of physical types. Socially, his people live in equally disparate environments; good examples can be found in his famous *Big Planet* and more recent companion novel, *Showboat World*, and in the first of the 'Durdane' trilogy, *The Anome*.

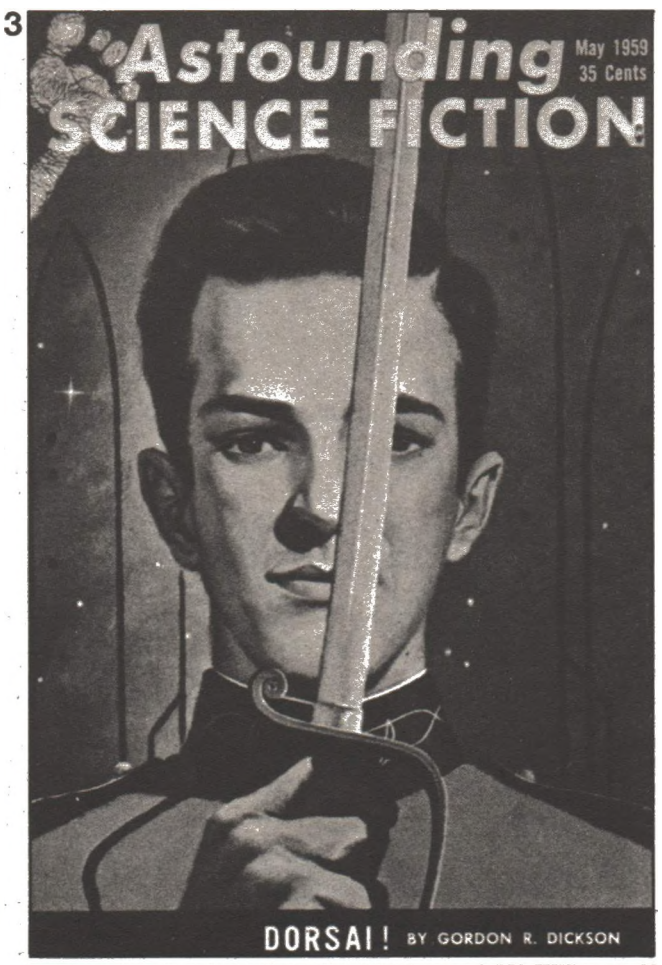
Finally there is a beautiful short story by Walter M Miller which has always been one of my favourites. In a poetic, ringing prose style his 'The Big Hunger', in his collection *The View from the Stars*, captures in a few thousand words the essence of that restless drive to reach the stars:

> 'They wanted the Big Freedom. They built me, these pale, proud bipeds, these children of an Ape-Prince who walked like a god. They packed themselves in cylinders of steel and wandering, riding starward on a heart-tempest that had once sung them down from the trees to stalk the plains with club and torch. The pod of earth opened, scattering its seed spaceward. It was the time of the great bursting, the great birth-giving. Empires shivered in the storm. Sky-chariots flung themselves upward to vanish beyond the fringes of atmosphere.'

Miller's idea is that the call to space is implicit in our genes. A fraction of the population – the most restless, footloose contingent – will go outwards, leaving the stay-at-homes to remain on Earth in peace. The colonists land, settle, invariably revert to a primitive condition before climbing upward again and once more building starships.

So the process goes on: man's trail crossing and recrossing; Earth lost and forgotten among the stars; each generation growing more restless than the one before it. The restless carry on moving, the contented stay at home. And eventually the whole Galaxy is filled – with the planet-bound. It is a superb little story, probably the ultimate expression of its theme.

3



3 Dorsai, the solders' world in Gordon R Dickson's portrait of a future civilisation spread over fourteen planets of near-by stars

4 The huge ships of the Space Vikings descend to plunder in the aftermath of the break-up of the Terran Federation. (*Space Viking* by H Beam Piper)

5 The entire Galaxy has been colonised by man, and a mysterious Foundation is established to avoid 30,000 years of barbarism (part of Asimov's *Foundation* trilogy)

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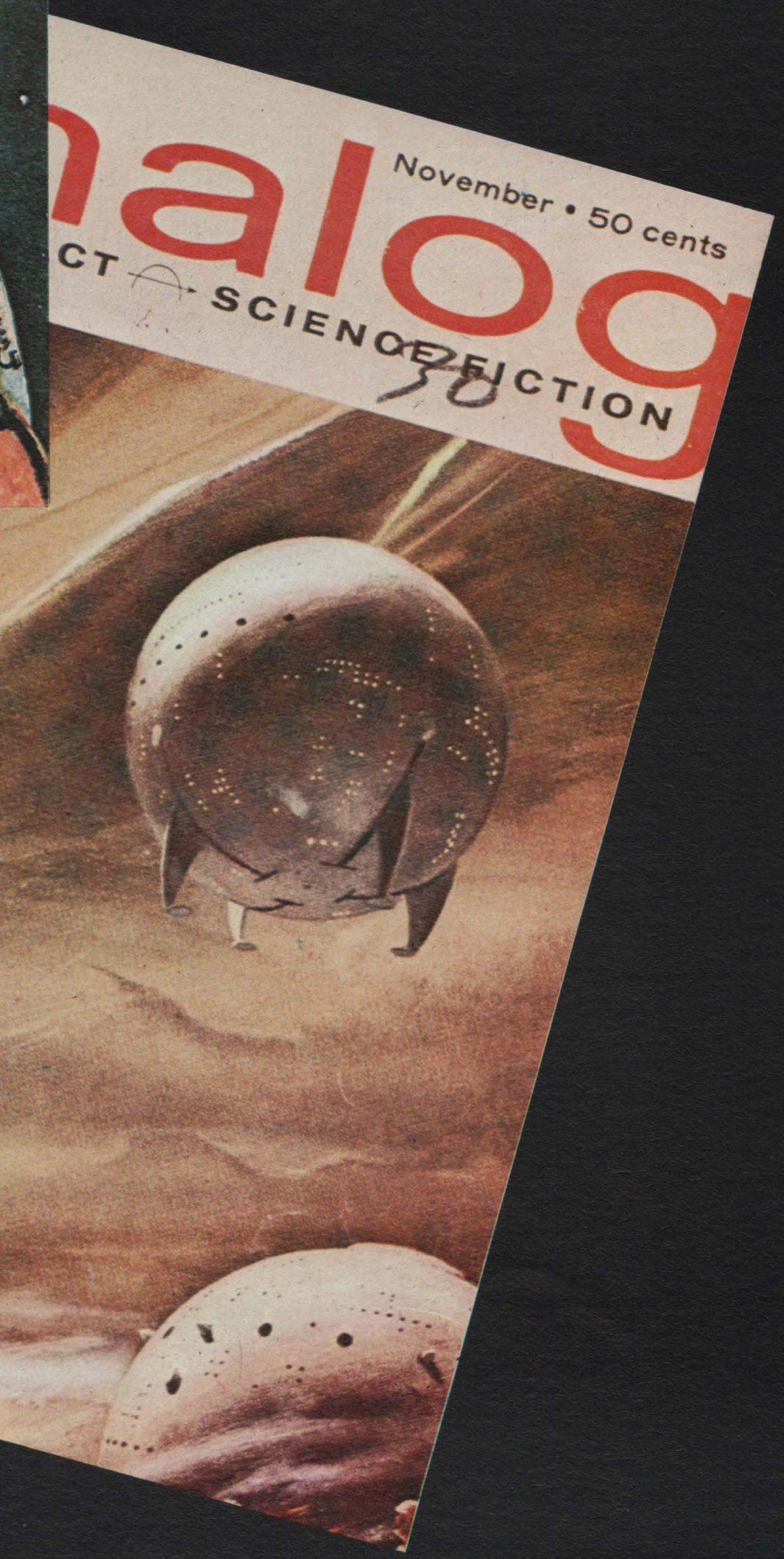
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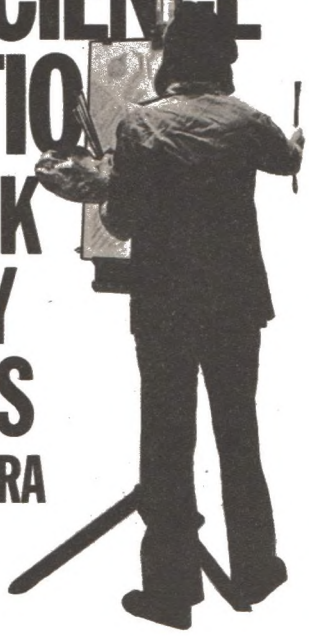
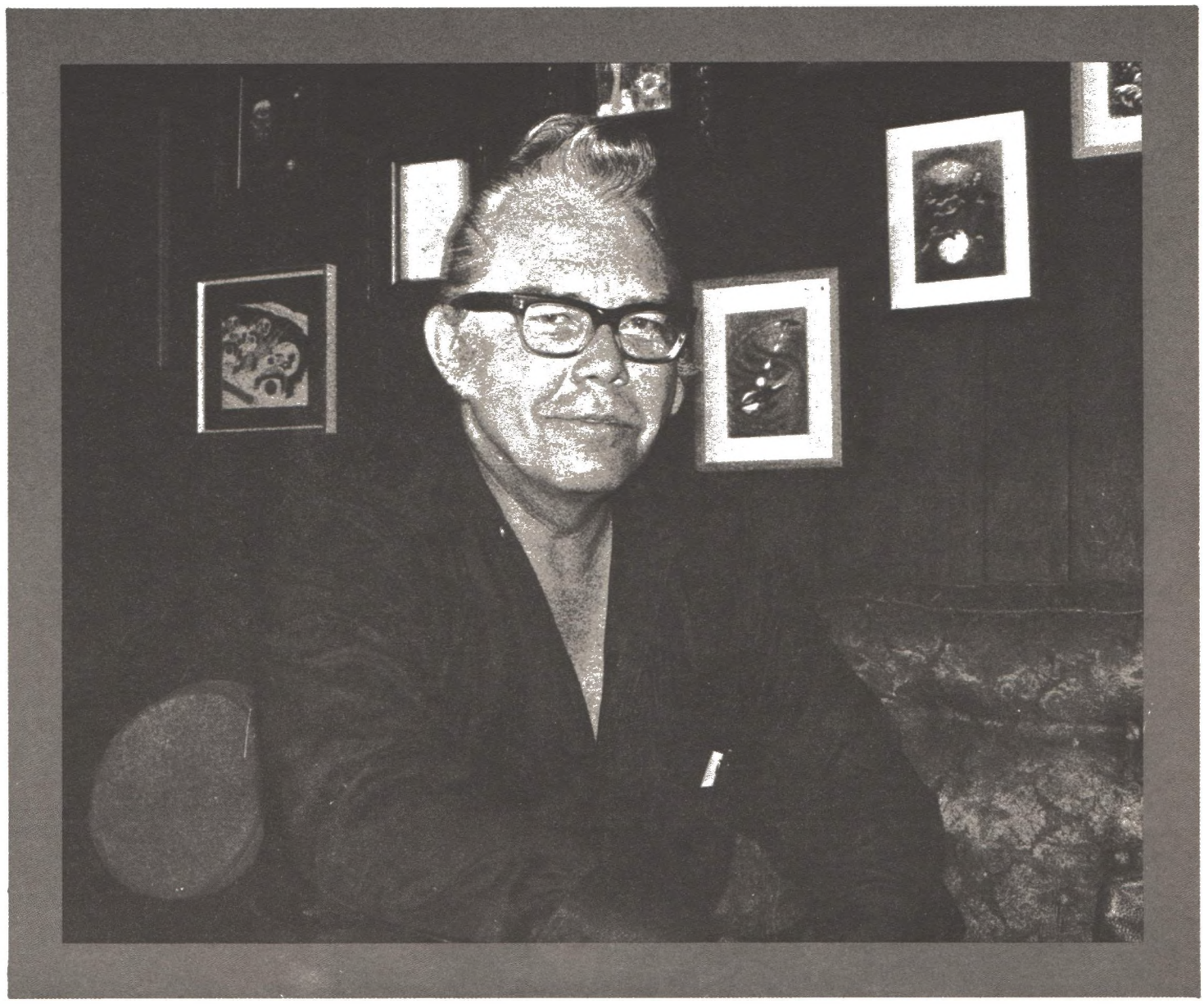
THE ARTIST IN SCIENCE FICTION

FRANK KELLY FREAS

BY SANDRA MIESEL





Frank Kelly Freas was born in Hornell, New York, on 27 August 'a long time ago'. At present he resides in Virginia Beach, Virginia. He is a regular contributor to *Analog,* DAW, Ballantine, and other American publishers and is the exclusive cover artist for Harlequin's Laser series.

The Freasian universe is a lush habitat populated by voluptuous women and craggy-faced men whose gleaming spaceships race towards gloriously brilliant stars. It is, in short, romantic. Freas advocates romanticism in sf illustration because that is the most intense means of communicating the *human* reaction to imaginary environments. For him, communication is the essence of art, and the relationships between people and their universe the essence of sf. His purpose is to show his audience how some new aspect of reality would *feel* to a participant.

Freas attacks this challenge by combining authentic detail with sensuous symbolism, thus convincing the viewer that a hypothetical situation is inevitable. The spaceship, one of his most distinctive images, is a good example of this process. Its design embodies a rationale for drive type and function and its luminous surface is rendered with extraordinary virtuosity, but it is also a consciously employed symbol of forward thrust and a component of our racial libido. Note the phallic vehicle on his cover for *Zenya*. In Freas' work space travel is an emotional experience rather than a technological feat. He paints dreams, not hardware.

Freas treats astronomical subjects in similar fashion. The rays and auras of his stars are scientifically justifiable but his romantic sensibility infuses them with an enthralling quality no stellar photograph can convey. His approach contrasts with the classicism of a Bonestell.

Stars as decorative devices and symbols of the marvellous are recurring motifs as, for instance, in the *Sins of the Fathers* and *Womanly Talent* covers. It is tempting to consider stars as the feminine counterparts to the masculine spaceships in Freas's iconography.

Although his symbols balance there is an interesting divergence in the treatment of men and women in the artist's figurative work. His men, often stocky of build and sardonic of expression, are individual members of a stylistic family; his glossy, curvaceous women are much less individuated. Not that Freas' women really all look alike any more than Utamaro's but they have been unduly idealised. They are archetypal rather than personages.

Freas' figures may betray a touch of advertising art slickness in their lineage but he likes to display them against backgrounds of clouds, fire, ruins, or fantastic landscapes rendered in abstract expressionist style. Such effects are achieved by working with a loose, fluid medium (usually acrylics) and 'letting as much happen accidentally as possible'. The cover for *The Second Kind of Loneliness* is a typical example of this representational-abstract tension while that for *The City Machine* demonstrates the artist's skill at leading from the familiar to the fantastic.

But, however far afield the viewer's destination, Freas insists that art should begin with reality. First of all, this means awareness of the real world. For example, he takes compositions from random natural phenomena like oil slicks and wood grains in order to keep his designs as nearly organic as he can.

It also means knowledge *about* the real world. The emotional and aesthetic qualities of Freas' art are buttressed by careful research, processes in which the assistance of his wife Polly 'can never be adequately assessed let alone stated'. Manuscripts are read three times, files studied, scholars consulted (one prime reference tool is a list of experts' telephone numbers), models built, and costumes made. Once he had to endure the company of a rotting duck for two weeks while struggling to capture the exact appearance of light shining through its feathers. Acquiring enough information to build a mental universe for one assignment, then tearing it down to start preparing the next, is a considerable mental strain. 'For the serious sf illustrator,' he observes, 'future shock is almost a way of life.'

Freas never fails to do his work properly although fine details are doomed to be lost in reproduction. Almost as a matter of routine his illustrations are cropped, blurred, or saturated with the wrong colour ink. One was even printed upside down and backwards. Frustration has led him to issue portfolios of high quality reproductions himself. These enable the public to see the picture as it was actually painted.

Freas attributes his zeal for authenticity to his long association with editor John Campbell who taught him 'a great deal about the intransigence of facts. Campbell liked facts, the more obscure the better'. The discipline of working with this relentlessly practical man combined successfully with the inspiration he received from other artists. Among mainstream figures he cites Bierstadt, Moran and Church for their ability to convey the alienness of the New World; Remington, Russell and other Western painters for representing accurate detail; and Klimt for colour and light. Within the sf field he expresses great admiration for Finlay's superb penwork and Cartier's 'light-hearted and light-handed' approach to illustration. Beyond these, he claims, 'I have been influenced by every painter that I have ever seen'. Freas maintains that the only proper approach for an illustrator is eclecticism.

He pursues appropriately varied hobbies (history, Oriental studies, weaponry, music and, formerly, the martial arts) and has enjoyed an unusually diversified career. Although Freas has read sf since childhood and sold artwork since his teens, it was only after serving in the Air Corps, trying college programmes in engineering, mathematics and medicine; studying art at the Art Institute of Pittsburgh, Carnegie Institute, and the Columbus School of Art; doing commercial art for the aircraft and construction equipment industries, and directing television advertising, that he brought all his interests together and became a science fiction illustrator. He sold his first cover to *Weird Tales* in 1950 and worked extensively in the pulps before obtaining his first *Astounding* assignment in 1953. (This cover, for Tom Godwin's 'The Gulf Between,' was subsequently used on the *John W Campbell Memorial Anthology.*) His two decades of contributions to *Astounding/Analog* have shaped its visual image. He has won more Hugos – nine – than any other individual in sf as well as awards for fashion design, billboard art, and editorial illustration.

Freas has also painted comic covers for *Mad,* done hundreds of portraits of saints (who look suspiciously like *Analog* characters), and illustrated children's books (most recently *Gremlins, Go Home* by Gordon R Dickson and Ben Bova).

Freas has expressed his keen support of the space programme in a set of posters which is in the collection of the Smithsonian Institution. He has attended the launches of five manned space missions and was an official NASA artist for the recent Apollo-Soyuz Test Project. He designed the mission patch for the Skylab I crew at the request of the astronauts. Barring the availability of a berth to Mars, his fondest wish is for a chance to ride the Space Shuttle.

Freas is the complete professional. His romantic vision is coupled with devotion to fine craftsmanship, self-discipline, and technical competence ('a word in disrepute among the painters and their agents who prefer to stress novelty and shock value, which they can palm off on the uninitiated as originality and deep insight').

He regards art as a pleasure-giving mode of communication, not an expression of the artist's psyche. The artist must subordinate his private concerns to his work's purpose, in the case of an illustrator to conveying fictional moods and ideas. He insists that 'any illustration must be the better for knowledge of the story'. (Conversely, one might maintain that many stories seem the better for his illustrations.) He is especially proud of the cover for *The Warriors of Dawn* as both an illustrative and an aesthetic achievement.

But rather than be cited for this or any other single accomplishment, Freas would prefer to be remembered as an illustrator who 'tried his very goddamnest' in working for the field that he loved. Not only does Freas love sf, he has a lofty opinion of the genre's importance for civilisation. 'Sf is a literature and art of inquiry and alternative,' he declares. 'Culture, human or alien, is *our* business. Our work is nothing less than the growth and development of the human soul.' He is anxious to convince society of sf's message, 'that it is a very big and withal a very beautiful universe'. Freas predicts: 'There will always be a need for artists, particularly of the type we call "Science Fiction Artists", to putter around the edge of reality and point out their perception of its beauty and its wonder.'

FRANK KELLY FREAS

NB: If you like the examples of Kelly Freas' work published in this issue, you may be interested to know that colour prints are available by post. In the USA they cost $19.95 per set of six, but for prices in the UK you should write to this address for details:
Kelly and Polly Freas,
Route 4,
Box 4056A,
Virginia Beach,
Va 23457,
USA.

THE ARTIST IN HIS STUDIO

BY SANDRA MIESEL

Whether it means confronting a goat or cruising on a nuclear submarine, Frank Kelly Freas will do whatever is necessary to produce effective illustrations. This dedication expresses his confidence in the importance of his profession. 'It's all right to question your own ability to express the idea; but when an artist questions the value of what he has to say, he hasn't anything *to* say.' Worthwhile pictures are the fruit of firm convictions.

Among Freas' own convictions are beliefs in the value of illustration and in the legitimacy of commercial art. An illustrator is first of all an adept fine artist, 'but his *work* begins where his *play* as an easel painter *ends*'. He denies any automatic superiority of status to fine art. This species is now chiefly defined by its uselessness although the admired works of other ages were purposeful creations which expressed the concerns of their societies. 'Self-expression is unquestionably good psychotherapy – but there its significance stops.' Artists should not be solipsists. Illustrators cannot be.

Illustrators are distinguished from other artists by 'a desire, which eventually becomes an ability, to dig into and drag out of the subject aspects, moods, relationships, nuances which are absolutely *not* expressible in words'. They make their audience ask questions (Why does a crossbow coexist with a high-energy artillery piece in *The Miracle Workers*? How were those glassy battlements constructed? Who, or what, is wearing that garish costume?) and summarise their emotional experiences (desire in *Zenya,* trust in *The Gulf Between*). Illustrators function by expanding and focusing their viewers' minds.

Freas strives to create mind-expanding and mind-focusing science fiction illustrations that will be both aesthetically pleasing and commercially useful. The following descriptions of his working methods are necessarily schematic. Each assignment is unique. The artist tries to avoid stereotyped routines lest he hobble his imagination.

First catch your rabbit; first catch your manuscript. At the beginning of a career getting work can be more difficult than doing it. The first portfolio Freas submitted to John Campbell was a masterpiece of neophyte pretention consisting of expensively contrived mockups of *Astounding* pages. It was returned to him scorched by Campbell's wrath. Only after several humbling years in the pulps (when the train fare to a magazine office might equal the fee earned there) did he dare approach Campbell again. This meeting soon led to his first *ASF* cover, *The Gulf Between,* which Freas still counts among his special favourites. The painting shows a giant robot beseeching Someone to heal the mortally-injured human he holds in his hand. This sombre and innovative illustration ignited the artist's career in sf.

Over the past decades Freas has worked with every breed of editor: experienced ones able to propose illustrations intelligently and those whose notions of sf are shaped entirely by Japanese monster movies; those who leave everything to the artist's own initiative and those who leave nothing; ones who specify the exact quantities of nuts, bolts or bubbles on a gadget, and others more concerned with the number of sequins on a costume.

As a joke, Freas recently sent one of his more restrictive clients a preliminary sketch featuring a totally nude girl. (A few spangles painted on an acetate overlay sheet only compounded the scandal.)

After the shrieks subsided he dutifully clothed the heroine in a skin-tight garment on the finished cover – just as he had intended all the while. The usual compromise in such cases is a judicious pose. This approach can be more titilating than actual nudity, as in the cover for *Ambassadors of Flesh* from *Planet Stories*.

In addition to the editor, an illustrator also has to satisfy the art director. His challenge is to reconcile the demands of a verbal (but non-visual) party with those of a visual (but non-verbal) one. Freas' response to this challenge begins with thorough preparation for each assignment.

When a manuscript arrives in the mail, Freas reads it. (Most sf artists do the same, but other kinds of commercial illustrators often work from a page of specifications instead of a text.) His wife reads the story too, and they discuss it. Then he reads it again with a critical eye, searching for potential subjects of illustration. His notebook contains such entries as a

sketch of two figures standing on riveted steel plates or the scribbled comment: 'Frog-like robot comes through iris-door in wall'. He also takes down descriptions of major characters and settings.

Sometimes the subject is so obvious that no search is necessary; the problem is to find the best way of presenting it. For example, the *Hero* cover had to feature a black hole but the phenomenon itself is impossible to see. So Freas painted an aesthetic construction of astro-physical equations, a scene only instruments could detect. He visualised the inexpressible and expressed the invisible, beautifully.

Once his mind has thoroughly absorbed the story, both visually and intellectually, Freas is ready to sketch. He works quickly and spontaneously on a small scale using fluid tempera applied with brush, pen, or airbrush. When an interesting pattern starts to emerge, he sets the sketch aside and begins another. After all available flat surfaces in the studio have been covered with drying studies he goes back to the beginning and develops the set further. He starts transforming the initial abstractions into recognisable forms: a splotch becomes a girl's face, a swirl a pillar of coral. He never dictates the direction these images take. He tries to keep his mind as free and fluid as his paint, thus letting the picture come forth as it will.

By this time four or five studies show promise and receive further attention. Many potentially lovely paintings have to be discarded at this point because they are not functional as illustrations. Art for art's sake will not suit here. An illustrator must constantly balance the idealistic demands of beauty with the practical ones of communication.

Freas combs the manuscript once more to confirm that the studies are self-consistent and faithful to the story. Now research is needed to fill in the finer details: how is the tracking mechanism of a radio telescope constructed? What does the inside of a linear accelerator look like? His own library is larger than most small towns' but still inadequate. The local librarian's help is supplemented by consultation with experts – he made hundreds of dollars' worth of telephone calls in connection with the black hole painting mentioned above and visited the nearest observatory.

Direct contact with the subject itself is also useful. Photographs of Kennedy Space Centre are no substitute for experience there – a point superbly demonstrated by his drawings and Gordon R Dickson's text for their *Analog* cover article 'A Matter of Perspective'. In order to depict an alien's 'goat-like' eyes for *The Unreachable Stars,* Freas observed the square irises of a live nanny-goat. A week underwater on the *USNS Lapon* yielded the information he needed for another assignment. Unfortunately it was subject to security classification and the article was never published.

This kind of attention to facts always delighted John Campbell. 'No one else ever took quite as much pleasure in knowing that you had spent two hours with a top-flight marine biologist solving the problem of the turbulence–crystallinity ratio in a flash-frozen liquid-atmosphere interface.' No matter that the result on the *Star Light* cover is a dark, blurry mass indistinguishable from a beaver dam. However, Campbell was not inevitably pleased with the results of such research. He scoffed at the wrinkled space suits shown in *The Ark of Mars*. Years later photographs of astronauts vindicated Freas' judgement but he tactfully refrained from mentioning the issue again.

The artist considers background research one of the advantages of working in the sf field instead of in some other. It gives him an excuse to study an immense variety of interesting subjects and acquire a curious range of skills – even though the expertise gained for one assignment rarely survives the beginning of the next.

These last essential details complete the studies' evolution from splashes of colour to vivacious 5 inch x 7 inch paintings. After removing the one he likes least – else it would surely prove to be the editor's favourite – Freas mats the best three or four survivors and mails them off.

Once the editor has returned his selection along with written comments, preparations for the actual cover become even more intense. By this time the artist has a sound grasp of the information he needs to present and the technique with which he can present it. For instance, he knows the performance characteristics of space hardware and the methods of indicating distance in the absence of aerial perspective and so is prepared to paint a space station convincingly.

Yet sometimes problems still remain which neither memory nor imagination can solve. Terrestrial experience has not equipped our species to imagine lighting conditions under multiple suns. But table-top models can easily remedy this deficiency. Freas contrives alien landscapes using sand, crumpled paper, tinted spotlights and a cocktail shaker as a spaceship. He has also made models of different kinds of spacecraft: faster-than-light, slower-than-light, impulse-powered, patrol boats and so on, and deploys his little fleet as needed.

Impromptu solutions like a fishbowl for a space helmet, or a doll wrapped in plastic film for a girl in a transparent spacesuit, work in some cases but others require even more ingenuity. Freas once wanted to do a lunar Christmas scene with the moon-base reflected in a Christmas tree ball as the focal point. Rather than try to approximate the distortions and perspective, he set up a mirror-finished lawn ornament on a building site and photographed the building reflected on the spherical surface. The resultant image gave him a useful starting point for his own.

Work involving people requires simple costuming and appropriate models. Freas enlists family (his daughter posed for *A Womanly Talent*; the boy in *Second Kind of Loneliness* resembles his son), friends, and even total strangers in this enterprise. So indefatigable is he in the pursuit of interesting faces – restaurants are favoured hunting grounds – that an American fan has written a song warning people to stay alert in the artist's presence lest 'when you wake up, you're on the front of *Analog*' (this clever fellow appears on the cover for *Renegades of Time*). Freas also impresses himself into service as a model occasionally. He can grimace and wave a blaster convincingly (as for *Your Haploid Heart*) but finds comic roles more congenial: the hairless, green voyeur in *Martians, Go Home!* and the battered lion-man in *Pandora's Planet.*

The artist is continually adding to his mental file of artefacts as well as faces. Real jewellery becomes alien jewellery. (The designer of the bracelet worn in *Hard to Be a God* was so flattered he bought the cover painting and a hundred copies of the book to use in advertising.) Structures at Kennedy Space Centre are transferred to other planets. Alien creatures are designed similarly to known ones since form can be reasonably expected to follow the same function elsewhere in the universe. The extraterrestrial being in *Sins of the Fathers* has extra fingers but joints which are not unlike our own.

These are only a few of the ways in which Freas obeys his own injunction to observe the known world before attempting to paint an unknown one. He insists that 'the more fantastic the effect desired, the more essential it becomes to produce a feeling of conviction in each contributing detail.'

At last the artist is ready to distil his accumulated knowledge into image. The chosen study must be enlarged to working size (usually 16 inch x 20 inch). One way of doing this is with an opaque projector focused directly on the illustration board. Freas normally paints with acrylics which he prefers to oils because he is allergic to turpentine. He applies paint with brushes, pens, palette knives, sponges, crumpled paper or plastic film, hollow reeds, split sticks, airbrush, or any other tool that comes to hand. He uses the airbrush only sparingly (for example, to accent the hearts of stars) despite his skill with the instrument. He does not object to its mechanical nature but to its obviousness. However, he obtains unusually subtle effects by glazing areas with dye suspended in thinned acrylic gel. There is little chance of overusing this technique – it is so excruciatingly difficult to clean the airbrush afterwards.

Work begins with thin layers of paint which grow progressively thicker until highlights are applied with a virtually dry brush. The subtle colouring of the background in *Sins of the Fathers* was stroked on with a palette knife on top of brushwork.

Freas achieves some especially lovely effects in his backgrounds by swirling, splotching, or crackling the paint, blotting it with tissues or paper towels, or spreading it out in haloes with a drop of detergent. The enclosing maelstrom in *The Second Kind of Loneliness* and the dappled night sky in *The City. Machine* are examples of such controlled randomisation. Freas' debt to abstract expressionism has rarely been noticed.

The artist is most often asked about his techniques of rendering surfaces: 'How do you make metal look so metallic?' His exasperating answer is: 'You look at metal and paint what you see.' A shining surface is the same whether on a suit of armour, a coffee pot, or a distinctive Freasian spaceship. The artist's success here rests on his facility with the use of light since textures are duplicated according to the way they absorb, reflect, or scatter light.

He calls light 'my most important pigment' and explains, 'I use light as a tool rather than as a subject. When I work I am not concerned with *how* to *render* a *lighting effect.* I am concerned with how to *use* light to express the mood or idea I am after.'

Freas uses these skills to the fullest in *Zenya,* a science fictional cousin of Gustav Klimt's *Judith.* He expresses the allure of feminine ecstacy in the shimmering language of lighted surfaces. The most subtle touch is the glow from the rocket reflected on the woman's satin-like cheek. This links the major and minor motifs of the painting together. Thus the symbol and the archetype share the same order of preternatural reality.

The same virtuosity is superbly exhibited in *The Warriors of Dawn.* Colour tones unmistakably indicate the time of day. A delectably blue atmosphere holds rugged mountain peaks and orbiting meteors in convincing aerial perspective. A tiny vehicle and the sparkling trail of its exhaust lend scale to an enormous ovoid vessel. All the elements blend smoothly. The image owes something to Magritte but the luminosity is pure Freas.

The artist takes certain ingenious precautions to protect the art he has so skilfully created. He wants his work to last for the sake of his collectors and also to satisfy his own standards of good workmanship. Fortunately, acrylics are exceptionally durable – the paint film can be expected to outlast the illustration board which supports it. But five minutes' exposure to the intense lights used in photographing art for reproduction is equivalent to years in sunlight. Even acrylics can be damaged under these conditions. Freas knows from experience which pigments are most likely to suffer. He reinforces these areas by spraying them with a dye sensitive to light suspended in acrylic. The camera lights destroy the dye instead of the pigment and the picture returns to normal. After final coats of polyurethane varnish and a special mat-finish product sold for protecting photographs, the cover painting is ready for delivery.

The cover may or may not be accompanied by interior illustrations. These go through a much shorter evolution, from simple compositional sketches directly to finished drawing executed in pen and ink, tempera, marking pen, or acrylic. The interiors are not necessarily easier to do – they may require extensive background work of their own apart from the research already done for the cover. Although printed in black and white they are not always drawn that way. The acrylics are often painted in monochrome brown to allow a wider range of tonal possibilities. But the advantages of using colour can still be negated by bad printing. The originals of the fuzzy, murky interiors for *Lifeboat* had been exquisitely rendered in sable brown and deep purple tempera.

Since magazines require many more interior illustrations than covers, Freas has more opportunities to experiment inside. He can employ a wider variety of styles, even within the same story. Each instalment of the serialised *Pritcher Mass* is illustrated in a different way. There is also more call for the artist's gifts of humour and abstract design. The confident draughtsmanship which characterises Freas' drawings, whatever their style, was developed by an unwillingness to correct errors. When the artist makes a mistake, he starts afresh.

Delivering the cover would seem to be too routine a matter to deserve mention. But like every other aspect of illustration, it has complications. Freas chose a standard dimension for his cover paintings because it was the largest size that would fit into a portfolio he could carry on an aeroplane as hand luggage. Covers that must be shipped travel in plywood cases sturdy enough to survive being run over by a truck – as has happened. When Freas was living in Mexico he had to beg passing tourists to carry his paintings across the border. The export restrictions on mailing art are as severe for a magazine cover as for a Mayan fresco.

The editor must approve the finished work before publication. This cannot be taken for granted. Freas' third cover for Campbell was a surrealistic landscape in which an airbrushed ochre plain receded into an arid, sunbaked infinity. To the artist, it was a technical *tour de force.* To the editor, it was illogical. Campbell demanded revision: 'Put some grass on that featureless plain'. Only after Freas had painted in the turf, blade by individual blade, did he admit this improved the picture. He will alter a cover – under protest – expecting to be able to paint out the changes later. But he will never compromise on interiors.

So a few weeks (or even sometimes a few days) after the manuscript was received the completed artwork goes to the printer. Covers are photographed with a one-shot camera which separates colours into the three primaries plus black. Four-colour offset lithography is the standard means of commercial reproduction today, but pulp magazines used a cruder three-colour system which did not register black at all. (Muddy purple made a poor substitute.) Moreover, artists were also instructed to keep contrasting colours isolated in different parts of the picture. This lack of proper shading and the inability to show transitions gave the pulps their distinctive garishness.

Although current printing methods can reproduce any image with total fidelity, cost is prohibitive. Freas tries to work within known limitations. He compensates for the 30% of colour due to be lost in reproduction and reinforces textural qualities. Some of the vividness and sheen of his originals stem from these strengthening measures. All too often, he need not have bothered.

Bad printing is not the only way to spoil visual impact. When designing the patch for Skylab I mission Freas not only devised a striking emblem, he paid equal attention to practical considerations. His design was photogenic and suitable for machine embroidery. But he could not foresee how NASA would display it – slanted.

Yet despite everything, visual excellence does prevail. The disciplined imagination of Frank Kelly Freas creates science fiction illustrations that delight the eye and stimulate the mind. In our enjoyment is his victory.

SF TV REVIEW BY JOHN BROSNAN

THE INVISIBLE MAN

Forty-two years ago Universal Studios made a marvellous film of H G Wells' novel *The Invisible Man*. It starred Claude Rains in the title role, was directed by the great James Whale and was not only a fast-moving, exciting film but also a very funny one, full of black humour and those eccentric touches that Whale, himself a rather eccentric person, loved to include in his work. Even when seen today it remains an admirable film, despite the occasional creaky line of dialogue, and of course the special effects also remain as impressive as ever thanks to the skill of Universal's effects chief of that period, the late John P Fulton.

This year Universal, continuing their recent tradition of remaking their fantasy classics of the 1930s for television, have exhumed *The Invisible Man*. *Frankenstein* and *Dracula* are two others that have suffered this indignity; they were turned into four-hour specials for American tv but released in Britain, in shortened form, as feature films. *The Invisible Man*, however, has suffered an even worse fate; it's been made into an entire series (actually it's the second time that a tv series has been based on the character – some years ago there was an awful British version produced by Ralph Smart) and though I've only seen a few episodes to date that's more than enough to be able to say that any similarity between the series and the film is minimal. In fact the *only* thing the same, apart from the title, is that both Claude Rains and David McCallum, the star of the series, are rather short men of British origin. McCallum, unfortunately, lacks a distinctive voice – an important asset if you're playing an invisible character. It was thanks to Rains' velvety tones that his version of the character remained so memorable (and also launched him as a Hollywood star, despite no one seeing his face until the end of the film).

The story in the first episode of the series was mediocre in comparison to the Whale film, in that the Rains' character, called Griffin, was a scientist whose mind had been affected by the invisibility drug, turning him into a megalomaniac with dreams of world conquest. McCallum is also a scientist but he discovers the secret of invisibility as a spin-off while working on a matter transmitter (that's similar to trying to find a cure for cancer and coming up with a faster-than-light drive instead). His mind isn't affected by the experience, at least not in any obvious way, and most of the drama in the first episode resulted from his trying to prevent his secret from falling into the hands of the military and a group of criminals. All rather basic formula stuff that you can see on almost any American tv series. The humour of the original was also missing, though there were one or two wary jokes about what effect being invisible was going to have on his sex life. The one touch I really liked was the sequence where he broke into a blind man's home and asked for assistance, but instead of being the kindly souls that blind men usually are in films of this type, this one pulled out a gun and started blasting in the general direction of our hero.

Another major difference is that McCallum, unlike Rains, isn't invisible all the time. Instead, with the help of a plastic surgeon friend, he has devised a 'life-like' mask and gloves which, when he's wearing clothes and a wig, make him seem all there. Obviously he can't open his mouth too wide, for people would see the back of his wig. The problem of his eyes was overcome with contact lenses – overlooking the basic problem that if a man was really invisible the light would pass right through his retinas, causing him to be completely blind.

Of course, the major attraction of the whole thing is the invisibility itself and the skill with which it is handled by the effects people. The major difference in the effects is that in the film they were created photographically, while in the tv series they are created electronically with the use of Video Image Transform techniques. In a recent issue of *The American Cinematographer* the head cameraman on the series wrote: 'Filming the effects involved the use of two sets, each of which was shot with its own separate video camera. One was the *actual set* which was designed and constructed like any conventional set with very real furniture and props etc. Then there was the *blue set*, which was backed by a large monochromatic blue cyclorama and had duplicate furniture and props also painted in the same light monochromatic blue. When the system was properly balanced by the video engineers anything in the blue set that was blue remained invisible while anything that was *not* blue appeared as visible. The signal from the video camera viewing the blue set would insert anything that was not blue into the signal from the second video camera which was framed on the actual set. Thus an object, face or body that was *not* painted blue could be made to appear realistically in the actual set, provided that positioning, aligning and panning of the separate cameras were matched and synchronised precisely. By using monochromatic blue make-up, blue body stockings etc, *parts* of a body wearing a sweater or trousers could be made to move around on the actual set. This composite picture was first recorded on video tape and transformed to film.' So now you know.

Actually, because I'm a traditionalist in most things, I prefer cinematic special effects to the rather more modernly developed video ones. No matter how well the latter are executed – and there have been some spectacular achievements in the field in recent years – they still somehow seem cheap compared to the conventional photographic methods; they seem to lack a certain artistry (I feel the same way about most aspects of the film versus videotape question). That probably just proves you can be pretentious about anything, even special effects, but I do believe that the effects in the film version of *The Invisible Man* were more impressive and more of an achievement, despite the primitive techniques, than those in the series. Obviously there's a limit to what you can do in a tv series because of the lack of time and money and I do admit that some of the effects in the first episode were quite spectacular; particularly in the sequence where the surgeon painted McCallum's invisible face with the rubber solution, and also the one where he inserted the contact lenses into McCallum's eyes (it takes a brave man to allow someone to insert lenses into your eyes when he can't even see your face), but many of the effects were just too carelessly handled. For instance, not enough care was taken with sequences that involved the collar or the cuffs of the invisible man's sweater – naturally the camera on the blue set is only going to transmit those parts of the sweater that are visible, which means that even though McCallum's blue-painted face, hands and neck will appear invisible in the finished composite they will still obscure parts of the sweater, such as the back of the collar. In other words, if he was really invisible you should, from certain angles, be able to see *into* the sweater but of course this is not possible. The same thing applied when, in one scene, he unzipped his trousers (purely in the interests of fighting crime) – you should have been able to see the back of his trousers but instead you saw through them. It would be extremely difficult to overcome this problem, it would probably involve the old and time-consuming technique of hand-painting each frame of film and that's obviously out of the question as far as a tv series is concered. Really, all they can do is to try and avoid using set-ups which reveal this rather serious flaw in the system.

The possibilities of what one could do with the subject of invisibility are almost endless, but on the evidence so far the tv series isn't going to break any new ground. Instead it appears to be just another variation on the theme of cops, robbers and secret agents, and there's enough of that kind of thing on tv already.

SCIENCEFICTION

NEW ENGLISH LIBRARY MONTHLY

Kelly Freas

A SOUND OF THUNDER
PLANET STORIES, JANUARY 1954

SCIENCE FICTION
NEW ENGLISH LIBRARY MONTHLY

Kelly Freas

A SPACESHIP FOR THE KING
ANALOG, DECEMBER 1971
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SCIENCE FICTION
NEW ENGLISH LIBRARY MONTHLY

Kelly Freas

THE ARK OF MARS
PLANET STORIES, SEPTEMBER 1953

KELLY FREAS

SCIENCE FICTION

NEW ENGLISH LIBRARY MONTHLY

Kelly Freas

BEYOND THE ECLIPTIC
PLANET STORIES, NOVEMBER 1953

NEWS BY JULIE DAVIS

ManCon 5: A Reminder
The 27th British Science Fiction Convention will be held from 16 to 19 April this year at the Owens Park complex in Manchester. Robert Silverberg will be the Guest of Honour and several other sf personalities are expected to attend. Full attending membership will cost you £2.50 and details can be obtained from Brian Robinson at 9 Linwood Grove, Manchester, M12 4OH.

The 'Death Ray' Arrives
The 1976 edition of *Janes Weapons Systems* includes mention of a 'death ray', a weapon which has previously only existed within the world of science fiction. Mr Ronald Pretty, the book's editor, refers to it in his discussion of the advances made in the military use of lasers. Lasers are extremely powerful beams of light which are already being used in bomb-guidance systems and the kind of ranging devices for guns that can be found in Britain's Chieftain tank.

In the foreword, Mr Pretty says, 'Beneath the guarded references to high-energy laser research and development in American Department of Defence publications, and behind the virtual Soviet silence on the subject, it is probable that these two powers are locked in a costly super-scientific struggle to be first with a practical laser weapon capable of destroying a military target . . . [by means of the energy the laser is able to generate] . . . in fact the "death ray" so beloved of generations of fiction writers'.

Janes Weapons Systems 1976, edited by R T Pretty, is published by Janes Yearbooks; £19.50.

MUSIC & SCIENCE FICTION

RED OCTOPUS
Jefferson Starship (RCA BFL1-0999)

Reviewed by Maxim Jakubowski

One of these days, if time, wife, bouncing daughter and *SFM* editor allow, I might well neglect current releases and get around to write a long, in-depth analysis and review of a critically underrated record issued back in 1970. I am referring to Jefferson Starship's *Blows Against the Empire,* a beautiful blend of sf spirit and ideas and high-flying music full of feeling and energy, devised by Paul Kantner and assorted friends in the San Francisco area.

This idea is of course prompted by the fact that *Red Octopus,* the new offering by Jefferson Starship, is now in the shops and, furthermore, at the time of writing, No 1 in the US record charts. Of course it hasn't got anywhere in the UK, thanks to our ever discerning record buyers!

Ever since the famed Jefferson Airplane began to crumble and reorganise as a Starship around Kantner and Grace Slick, there had been a severe critical backlash against their various musical contributions. It is only with the new record that reviews have once again become favourable and commercial success has followed. This is a pity. Don't get me wrong, *Red Octopus* is way ahead of most of the music being released nowadays and unashamedly deserves its popularity. What I do regret is the fact that with the return of mellow-voiced, sentimentalist Marty Balin to the group, Kantner has had to subdue somewhat his sf obsessions and fury. I, for one, was very fond of Kantner's idealistic attempts at injecting the soul of social revolution into rock music through the intermediary of SF, in spite of the admitted naivety of the subject matter. Nobody's perfect.

Red Octopus? Well, it's a lovely album in its own right and deserves a listen, but I fear the Starship's next record might not warrant inclusion in a sf and music column. Musically, it's a treat: Balin's unctuous love songs will bring throbs back to bed-sitterland; Grace Slick (who, in recent photos, is getting to look more and more like the Elizabeth Taylor of rock) still has that incredible soaring voice; Papa John Creach's violin swirls around the complex melodies; and Kantner does contribute one Wagnerian driving sf song 'I Want to See Another World', while Pete Sears' instrumental 'Sandalphon' goes nowhere beyond its evocative title. There is no doubt that Marty Balin's songs not only dominate the record, but also are the best and, I don't know if it's wishful thinking, but there are hints here and there in his lyrics that he might well have caught that old sf bug off partner Kantner:

> (You're) . . . warm as a piece of the sun
> and darker than night to a blind man
> softer than starlight shining . . .

A love and sf album? Now, that is something I would look forward to.

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SF IN THE CINEMA

BUG

Reviewed by John Brosnan

Last year when I was interviewing American producer/director William Castle he was very enthusiastic about the film he was then about to make. At that time it was called *The Hephaestus Plague,* based on the novel of the same name by Thomas Page, but it has now been released in England as *Bug.* (No doubt an attempt to get on the *Jaws* bandwagon, though obviously they couldn't call it *Bugs* for fear of creating the impression it was about a well known rabbit.) However, it isn't quite the same film that Mr Castle was enthusing about. For one thing the bugs themselves seem to have shrunk. According to Castle they were going to be ten inches long: 'There *are* actually cockroaches that big,' he told me excitedly, 'so we won't have to make them, we can use the real thing. They come from the jungles of South America and are nearly a foot long and very frightening.' Perhaps all the ten-inch roaches died off before shooting began, leaving behind only their smaller relations who appear to be a mere four to five inches. Another thing that is missing is the 'feelie' gimmick Castle told me would accompany the film. 'During the screening of the picture the roaches will seem to get loose in the theatre – we're working on something that will enable the audiences to *feel* the roaches actually crawling over their legs! It will be similar to the vibrations in *Earthquake.*' I wasn't very impressed with the idea. It's one thing to have your fillings shaken out by a simulated earthquake but to feel cockroaches crawling over your legs, even four-inch ones, while watching a film seems to me to be the sort of thing that would empty a cinema rather than fill it. Apparently someone succeeded in getting this across to Mr Castle; either that or it was found to be too expensive to put into operation.

William Castle has always been a showman, he made his reputation with a series of horror films in the 1950s that utilised far-fetched publicity gimmicks such as 'fright breaks' which involved stopping the film for sixty seconds to allow frightened patrons to leave the theatre (of course, few ever did). His films were usually of the cheap exploitation variety though often they contained at least one sequence of outstanding horror. Castle had always been a capable film maker when he wanted to be but he had long ago decided that exploitation films were his forte and he maintained this attitude until he came to produce the classic *Rosemary's Baby* in 1968.

Now it appears that he has returned to exploitation with a vengeance, as *Bug* offers little more than cheap and unlikely thrills. I suspect that the novel, which I haven't read, may have a serious method – an Old Testament type warning for mankind to mend its evil ways lest God be provoked into unleashing a fiery retribution – although the author had a hand in the screenplay his original intention, whatever it may have been, is kept obscure. True, the film (which is directed by Jeannot Szwarc) does begin with the interruption of a church sermon by a timely earthquake but after that the biblical theme gets lost in the confusion. The earthquake, situated near a small mid Western American town, creates a fissure from which emerge a number of strange insects. (Castle's South American roaches). The bugs are capable of creating fire by means of rubbing two rear appendages together and immediately start igniting sections of the surrounding countryside, along with cars, people and one unfortunate cat (cat lovers are advised not to see this film). A scientist, played by the dependable but unexciting Bradford Dillman, becomes obsessed with the unusual little creatures and discovers that they are unable to breed, or even survive for very long, because they come from deep inside the earth and are therefore suffering from enormous internal air pressure (he proves this by sticking a pin in one and watching as its insides blow out with incredible velocity). While he is carrying out this nauseating experiment his own wife falls victim to the bugs. One of them crawls up her back while she is at work in the kitchen and sets her head alight (in a typically macabre Castle touch she is reading aloud from a cook book on how to prepare smoked salmon when the bug strikes). Up she goes in flames, and at the same time is transformed from a slim woman in a denim suit to a hefty stunt man dressed in bulky protective clothing.

The scientist goes a little mad after this and starts breeding the bugs in a special pressure chamber. He mates them with a local variety of insects and ends up with a new species that has a liking for raw meat besides the ability to spell (yes, spell). He discovers this latter attribute when they spell his name on a wall with their bodies. This upsets him a lot but he doesn't crack up completely until they consume his best friend's wife who had come to lend him, of all things, a bible. The bugs all disappear then and when he goes out into the night to look for them a number of glowing insects fly out of the fissure (very spectacular too). He runs back inside the house but they break in and set him on fire, so he runs back out and falls straight into the fissure. The fissure explodes in flames, the bugs all fly back down into it – then the fissure conveniently closes. End of film – and the members of the audience begin to scratch their heads in puzzlement.

What it was all supposed to mean I have no idea; nor, I suspect, does Mr Castle. It certainly wasn't science fiction, though at times it pretended to be, and if it was supposed to be religious propaganda it was equally ineffective. Actually it reminded me a great deal of *Phase IV.* Both films were about a scientist who became obsessed with a new species of intelligent insects and was eventually destroyed by his obsession (oddly enough, both scientists fell down a hole at the end). Another thing the films have in common is that the brilliant Ken Middleham handled the insect photography in both, though his work was put to better use in *Phase IV.*

I don't know – perhaps the roaches crawling over the legs of the audience would have been a good idea after all.

BUG

Matz looked sideways at Jorvin, that lumpish head inches away to the right who shared the shoulders, shared all of the muscular, skin-clad body with him. Jorvin was intent upon the goat in the verdant, shut-in space between the stained cliffs of dead buildings with their rows of empty, black eye-sockets. They needed the goat. They had quenched the thirst of the dust bowl in a sewer where the water ran sweet after a couple of centuries of winter rains; but their hunger remained.

A girl appeared, walking into the sunlight from a dark, square cave at the foot of one of the buildings. She skirted the corn patch, coming towards the goat. Her hair was long, the colour of honey. She, too, was dressed in skins. Matz glanced sideways again. Jorvin was staring; his near, crooked eye had managed to widen a little from its usual droop-lidded state.

Matz stared too. 'She's a normal!' he said.

'Norm pig!' Jorvin raised the bow and squinted along the shaft.

'Two eyes and a nose don't make a norm, Jorv.'

'Two eyes and a nose, two feet and ten toes . . .' mocked Jorvin. 'It's enough for me.'

'Jorv, no! She's beautiful!'

The girl was perhaps 18 years old and came close to the normal ideal of symmetrical loveliness that all freaks secretly acknowledged.

'She's a norm pig!' said Jorvin again as he drew the bow back in an angry curve, his skew eye glaring.

'We'd caught a norm. Matz tossed him a knife and he killed himself before we could torture him'

As the archer, Jorvin needed to control the arms; he could usually master them both in spite of Matz when a struggle of wills developed, if he was prepared for it. But Matz gave no signal. He jerked the left arm just as Jorvin released the arrow. The dart buzzed past the girl, piercing the rusty tin wall beyond with a clang. She ran like a scared rabbit.

'My little idiot left-hand brother,' hissed Jorvin. 'One of these days I'm going to cut your throat.' He began to run.

Matz could probably not have hindered the legs, he did not try; he was loath to lose sight of the girl. They ducked into one of the buildings. In the first small room a few etiolated plants grew in the rubbish that had collected in the corners. They rushed along a gloomy corridor emerging beside a stairway in a hall where their footsteps echoed. Through a broken door in a wall of glass, and they were running down wide steps onto a boulevard. Some of the trees that lined the street were enormous, some were dead and fallen. A few wild ones grew now, cracking the asphalt. An old barricade stretched across, partly buried in blown earth and grass with the rusted frames of cars sticking out like the skeletons of dinosaurs.

A manhole cover banged shut.

'She's strong,' said Matz as they lifted it.

The iron rungs still jutted solidly from the concrete wall of the shaft. At the bottom were black tunnels and the low-key sound of running water.

BROTHER'S KEEPER

BY ANTHONY PEACEY

'We'll never find her down here without a light,' said Jorvin.

They began to ascend again.

Matz and Jorvin were once more at the sixth-floor window from which they had first observed the oasis of green. The sun was setting, bathing the upper walls of the silent buildings in a residual warm light. Down below, the corn patches, the vegetable garden, the hut and sheds and water tanks lay sunken in a filling pool of shadow.

'Do you think she'll come back, Jorv?'

'Where else would she go?'

'I don't know. But what's she doing here all alone?'

'What's anybody doing anywhere?' He paused. 'She'll be back.'

'There are the goats, I suppose. She's young and alone – she must love the goats.'

'Love!'

There was a silence.

'Jorv . . .'

'What?'

'You're not still going to kill her, are you?'

'O my soft little brother! You're cow-eyed over a norm.'

'No, Jorv . . . but you mustn't kill her.'

'Well what else shall we do with her, then? Oh, I know, I know. I saw her legs when she ran. That's it, isn't it, eh?'

Silence.

'Well, why not?' went on Jorvin. 'So what if she's a norm? There's no one here to find out.'

'No, Jorv . . . I don't know.'

The last washes of light were dwindling upon the concrete clifftops.

Matz spoke again, 'We'd better find something to sleep on. It's getting dark in here.'

'Yeah. She'll be back in the morning.'

She was. They watched her cross the space to the goats. She seemed to speak to them, then she entered the hut, warily. Matz and Jorvin ran down the stone stairs from their window.

The tin door of the hut was ajar. They looked around the post, leapt and grabbed her before she could make for the sack-hung window. Her eyes were wide, a clear grey-blue. Then she kicked and tore one hand free.

'Quit that or I'll break your arm,' said Jorvin.

She shrieked.

Matz said, 'Don't, Jorv,' and to the girl, 'It's all right. We won't hurt you. We just want some food.'

'Who are you?'

They still held her wrist. 'I'm Matz, he's Jorvin. We're alone. We're just travelling through, but we ran out of food and water in the dust bowl.'

Her eyes were less fearful now. She looked away. 'I can get you some food, but not while you hold my arm.'

Matz made to let her go, but only the left hand slackened its grip, then it tightened again as Jorvin took over. 'He won't hurt you, but I will if you don't behave, and I control the body. Don't try to run away again. I'll find you and kill you. I can follow scent like a dog.'

Matz felt an impulse to reveal this lie, but he let it pass.

She gave them leathery cakes of cornflour, some apples and some goat's milk. She sat upon the earthen floor before the stove, spread her knees and took a block of softwood between her bare feet. She placed a hard spindle in a hole in the wood and began to twirl it with a fire bow.

'What's your name?' said Matz.

She did not answer immediately, concentrating her whole body upon the production of fire. The stick squeaked as it whirled, smoke rose from the tinder about its lower end. The goatskin skirt had slipped back from her knees. Jorvin paused in his eating. The girl picked up the wood, blew the tinder gently and carried it to the stove.

'What's your name?' said Matz again.

'Annika.' She was watchful.

'How is it that you're living here alone?'

'My father died.'

'He was a norm too, of course?'

'No. His left arm was tiny with six fingers. Some norms cut it off.'

Jorvin spoke, his voice deeper than Matz's, his mouth full of food. 'So you and your father were always alone?'

Annika looked at him. 'What's your name?' she said.

'We told you. Jorvin.'

'Where are you going?'

'Anywhere, or maybe nowhere.'

To Matz this answer held a threat, but if the girl noticed she gave no sign. She had built a blazing fire in the stove and was warming a pot of stew. 'What about your family?'

'They threw us out,' said Matz.

'They threw out my idiot brother, here,' said Jorvin. He showed his teeth. 'We'd caught a norm. Matz tossed him a knife and he killed himself before we could torture him.'

'Why didn't you stop Matz?' She watched the pot, stirring.

'I didn't know what he was going to do quick enough.'

'And if you hadn't argued about it afterwards no one else would have known,' said Matz.

'He's always been soft, but lately he's got worse,' said Jorvin. 'I'll cut him off in the end and burn over his neck.'

Annika divided the stew into two bowls which she placed before them. 'I've never seen a freak with two heads. Were they both there when you were born?'

'Yes.' Jorvin showed distaste.

'Sometimes things grow later,' she said. 'A boy in our family grew a third arm, but it wasn't much use. I've heard normals can grow new parts, too.'

'Then their families kill them,' said Jorvin.

'When I was young I used to wish I could grow another eye and be a proper freak.'

'You had a family?' said Matz.

'It was small. Father was bossman. Three normal children were born, I was one. Our parents made nearly half the family, so they kept us, but there was a lot of trouble.'

'You were driven from the family too?'

'No. We got along until I was 9, then the family was wiped out in a norm raid. Only father and I escaped. We travelled a year before we found an empty city.'

'Has no one ever been here?' asked Jorvin.

'A few have passed through. One man found us. He stayed a few days then disappeared. I think father killed him.'

The stew had been hot. Now they started eating it.

'How do you catch the pigeons?' asked Matz.

'Fish hooks baited with corn cake.' She looked in the stove. 'I'm going to get some wood.'

She went out.

Matz turned to Jorvin. 'We're going to treat her well, or . . .'

'Or what?'

Matz spooned his stew. 'I'll kill you' was Jorvin's phrase; Matz said nothing.

'Jorvin was in control once more. He cut the throats of the two norms with savage delight'

The cry seemed to come from some distance: 'Matz, help!' Matz's impulse was to run to the door, to the girl, but Jorvin was in control seizing the bow and arrows, tumbling out of the window. As they crashed through the young corn plants Matz looked back. Annika was running to the buildings on the opposite side pursued by four norms. Two of them turned and raced towards Matz and Jorvin, the others caught Annika and she fell. Then Jorvin threw their body down and shot like a snake into a hole at the foot of the grey cliff. They crawled through a room filled with blown earth, bumping their back against the ceiling. Deep into the dark they went, a shout sounding behind them. They found a narrow concrete stair more by touch than sight. They climbed rapidly, both their mouths open, gasping. At the third level they made for a window. The norms that had chased them were walking back to the middle of the garden where the others held Annika, twisting her arms to that she doubled over.

'It's the norms from the dust bowl,' said Matz.

'An arrow, Jorv. Those there, holding her.'

'What's she to us? There's four of 'em, maybe more.'

'No, hurry! They're hurting her. They'll kill her; they saw she was with us and she warned us. You want her don't you? I know, when she was making the fire . . .' As he said it Matz knew he betrayed her, and perhaps it was not even necessary – Jorvin was already fitting a shaft.

He ignored the norms holding the girl and took one of the nearer ones. The bowstring whipped the air, the arrow fled. The norm fell, hammered iron arrowhead digging into the earth beneath him, flight feather standing from his back.

Now one norm held Annika and the other two readied their bows, facing Matz's

and Jorvin's building as they retreated. A sagging iron stair zigzagged down the wall beside the window.

'Quick, Jorv! We must go after them.'

'Shut up!'

'Once they're in the block we'll never find them.'

'If we go down there in the open we're dead meat.'

Jorvin ran. Matz watched. Jorvin's face was stony with anger. His hair and beard stood out stiff. They passed through the dusty corridors and rooms of the building, dark at its hollow centre, grey-shadowed nearer the faces of its cliffs. They came to a slot between two walls that reached far up to a white streak of sky. The iron bridge and doors were rotted. Jorvin jumped into the next block.

Then they slunk for an hour in the stony shadows of the first four levels. They ceased to quarrel; two heads, four eyes, could watch in all directions and in the end they found the norm before he found them. He died with an arrow through his throat at short range. The others must have heard. Matz and Jorvin saw them flee into the tree-lined avenue at the front of the building. They threw over their caution and went after them. The norms leapt down behind the old barricade. An arrow from Jorvin's bow struck the hindmost low in the back and he collapsed from sight.

Annika scrambled back over the barricade at a new point some yards away and ran along below it. For a second Matz and Jorvin watched her, and an arrow sang down on them piercing their right shoulder. Jorvin faltered. Matz jerked their body into a run towards the barricade. Annika stopped, turned and ran back. She was ahead of them. As they topped the bank by the jutting, rusted bones of a truck they saw the last norm running. Annika had the bow of his fallen companion. She sped the arrow; it took the runner in the thigh and he fell. Jorvin was in control once more. He cut the throats of the two norms with savage delight.

It was dark when they got back to the hut. They had hidden the bodies of the norms. Annika lit a lamp and heated some water, then she dressed their wound. Jorvin seemed exhausted and after they had eaten he lay their body on the bed that was made up on an old door supported by boxes. Soon he slept.

jarring his mind into confusion, almost terror. Jorvin lifted the left arm and struck Annika viciously. She was dazed, but conscious; she stopped struggling.

'Jorvin, stop it, stop it!' shouted Matz. He had no control over their body now, he could not even slow the left arm as Jorvin tore the goatskin tunic from the girl. Her breasts spread goldenly in the lamp light, the nipples standing in large circles of darker skin. Jorvin was fumbling between their loins. Matz was saying, 'I'm sorry, I'm sorry . . .' Annika screamed. Now Matz was not trying to hinder Jorvin; he gave himself over to the tide of lust and cruelty.

Matz could not sleep. The lust was gone, he was cold and hollow. Jorvin snored; Annika was still crying quietly. Matz reached down with the left arm and felt the tramped earth floor. He found a small stone, and abandoned it. He felt under the bed: a box, a pot, something cold, heavy, iron. He drew it out, raised it in the darkness and smashed it down on the side of Jorvin's head.

Jorvin roared. Matz's head jerked back as their body sprang up. The left arm snapped from his control and the fist struck his jaw.

'That's it, little brother. That's all.' the words stinging crystals of rage. The left hand grasped Matz's neck, the thumb digging into his windpipe. His mind sagged with pain, then leapt frenziedly, a beast in a cage, and the body was far outside the cage, beyond his control. But he could not lack breath while Jorvin breathed. A painful light flared – Annika had lit the lamp from the embers in the stove. Jorvin released Matz's throat. With dreadful deliberation he took a loop of wire from a nail in a wallpost. He twisted one end to the nail, wrapped it round Matz's neck, twisted the other end onto the handle of his knife.

'No, Jorv, no . . .' croaked Matz.

Jorvin drew the wire tight, tighter, tighter . . . Annika was screaming. It came to Matz from far away through clouds of darkness. His head was being cut from the body. The arteries in his neck were crushed. Now Jorvin leaned into the wallpost and lunged back. The top of Matz's spine burst with a crack . . .

'Can I come with you today, Jorvin?' said Annika when breakfast was over. 'I haven't been away from the hut for weeks.'

JOHN HIGGINS

Matz smiled at Annika, and after a moment she smiled back. 'A busy day,' he said.

'It's been lonely here sometimes,' said the girl. 'I've wished for somebody to come, but I never thought . . .' She was not facing Matz fully. The light and shadow of the lamp deepened the relief of her face. Her cheekbones were high and smooth, her mouth wide, curving wryly. 'All my dreams were peaceful ones,' she said.

'I guess so. You've wished for company; I've wished to be alone.' He paused. 'But I don't expect you wanted a freak to turn up.'

'Yes, I did. Normals dealt wickedly with my mother, my father and all my friends – no worse than most freaks deal with norms, I know, but I hate them just the same.'

'But you . . .'

'Who knows that? Who knows what's inside me waiting to grow out? Maybe another head. But I wish you had only one. I don't like Jorvin.' She had risen to look at the fire in the stove. 'The right hand one is always the boss, isn't it?'

'More or less. It was good when we were children, we always agreed.'

'He's ugly. It's because of the way he thinks, that's what my mother used to say. And that eye . . .'

'We quarrelled with a boy. He had long arms like a monkey. He threw a stone. Jorv always says it was my fault; perhaps it was.'

They looked at each other. Annika sat on a box. She coloured and glanced away. Matz reached for her hand and she came to the bed. He pulled and she bent over. They kissed lightly, then again while moments fled.

'I wish there were only you,' she said again. Suddenly her face was startled. 'Matz, he's awake! His eye . . .'

Matz turned his head. Jorvin's crooked eye glared at the girl. 'His eye, his eye,' he mimicked. 'Well Matz has told you how that happened, hasn't he? And you wish he had only one head? He has; this one's mine, and the body too. Matz is a parasite.'

The left hand tightened on her wrist.

'Get away, Annika,' hissed Matz.

She pulled but could not free herself. She hit Jorvin's face. In one movement Jorvin raised their body and threw the girl down under them. The pain of the wound made the room darken for Matz, then the overflow of Jorvin's rage cleared his senses,

'No, my little darling. A woman's place is at the cooking fire, and I don't want you running away from me, do I?'

Her glance strayed to the right of his head again.

'That's what you want, isn't it?' he said sharply. 'To run away.'

She looked him in the eyes for a moment, then dropped her gaze. 'I couldn't run away from you, could I?'

Jorvin stood up. The feeling of unease was back and he was suddenly angry at her. He'd beat her . . . no, the rod was broken. 'Well, you won't get a chance,' he said. 'Get out and get into the tank.'

He followed her outside and watched her drop onto her hands and knees and crawl into the rusted iron box. A scab from the last beating showed above the low back of her tunic. She was more tractable now, though not cowed, and he doubted that it had anything to do with the beatings. But she no longer visited the spot where she had buried Matz's head.

Jorvin closed the opening behind her with a thick iron plate and slid the bars into the staples he had riveted to the tank. He took his bow and went to look at the pigeon lines.

Out in the boulevard two rabbits were feeding on a patch of grass by the barricade. They sat bolt upright. Carefully Jorvin raised the bow and sighted along the arrow. As he released it the left arm jerked and the dart flew wide. A cold, silent chuckle rippled inside him. Jorvin's stomach clutched; he had not laughed. He strained to turn his head to the right, and realised in a flash of understanding that he had not done so, or thought to do so, for a long time. Suddenly the invisible bands broke and his eyes slid round. Matz! The head was still as small as a child's, and the eyes closed in perfect repose. But the features were adult, and not quite the same as before – the pinched, underdog look was gone. Jorvin whipped out his knife, but the arm stiffened half way to the new throat. He tried to take the knife in the left hand; that one would not move. Then, slowly, one by one, the fingers of the right hand opened and the knife fell to the ground. Jorvin closed his eyes in horror, but after a few seconds the lids jerked up. Through the cloud of fear Jorvin thought: he still needs my eyes, but not for long.

THE QUERY BOX

CONDUCTED BY THOMAS SHERIDAN

Readers' questions on any aspect of science fiction are dealt with in this regular feature by Thomas Sheridan, who is internationally known as one of the foremost experts on the medium. Address your questions to THE QUERY BOX, 'Science Fiction Monthly', New English Library Ltd, Barnard's Inn, Holborn, London EC1N 2JR. They will be answered as soon as possible.

ZENNA'S PEOPLE
Could you give me any information on Zenna Henderson and her work?
DJ Arnold, Bromley, Kent

Have Zenna Henderson's tales of The People been published as a book?
Larry Arndt, Cutts, Aberdeen

Except for two years teaching in France, Zenna Henderson has spent her life in Arizona, where she took up writing on graduating from the State University. Her experience as a primary school teacher and her sensitive talent have enabled her to write stories about children from the viewpoint of a sympathetic adult; and her chronicles of The People – survivors of an alien spaceship wrecked on Earth – have been highly praised since they first appeared in *Fantasy and Science Fiction* in the early 1950s.

The earliest of these tales formed the basis of her novel *Pilgrimage: The Book of the People* (Gollancz 1962; Panther 1965), which was followed by *The People: No Different Flesh* (Gollancz 1966; Penguin 1973). Collections of her short stories from several magazines have appeared under the titles *The Anything Box* (Doubleday, New York, 1965; Panther 1969) and *Holding Wonder* (Doubleday 1971; Avon, New York, 1974).

LORD TARZAN
I have just read Philip José Farmer's *Tarzan Alive*. Is he seriously suggesting that Tarzan is based on a real person? Nowhere does he make it clear that this might not be so.
William S Kerr, Dalkeith, Midlothian

The Panther (1974) edition of *Tarzan Alive* is described on the cover as 'the true and definitive biography of Lord Greystoke' and is listed in their stock list under Biography – unlike Farmer's own imitative novel *Lord Tyger*, which he dedicated to Edgar Rice Burroughs. But the offspring of the English nobleman, John Clayton – who perished in the African jungle with his wife, Lady Alice, leaving the boy to be raised by an ape – is a purely fictitious character.

Burroughs pretended that he had derived his first account of Tarzan's exploits, which appeared in 1912, on 'written evidence in the form of musty manuscript and dry official records of the British Colonial Office' and 'the yellow, mildewed pages of the diary of a man long dead'. In *Under the Moons of Mars* (Holt, New York, 1970), editor Sam Moskowitz suggests that Burroughs may have resolved to improve on an inferior tale called *The Monkey Man*, by William Eldridge, serialised in *All-Story* two years before *Tarzan of the Apes* made his bow in that magazine. Author Farmer, it would seem, has used his persuasive powers to give the Tarzan legend the ring of absolute truth.

MEMORABLE MORGAN
Can you tell me the name of the sf radio series of the early 1950s which featured a character named Morgan?
V Beard, London SW19

You must be thinking of 'Jet' Morgan, hero of the series *Journey into Space*, which broke all BBC radio listening records in 1954. The pioneer British astronaut was played by Andrew Faulds, and the other crewmen of the rocketship *Luna* were her Australian designer Mitch (Don Sharp), Cockney radio operator Lemmy (Alfie Bass), and 'Doc' Matthews (Guy Kingsley Poynter) who kept a diary of the adventure, which was published as a novel by Jenkins the same year, and in paperback by Pan in 1958.

The author was Charles Chilton, the BBC producer who started as a liftboy and is better known as an authority on the Wild West. After visiting the Moon, Morgan and his men led an expedition to Mars in the flagship *Discovery*; this story was retold in *The Red Planet* (Jenkins 1956; Pan 1960). How they saved the world from a Martian invasion was put down in *The World in Peril* (Jenkins 1960). Jet's exploits were also featured in strip form in *Eagle*.

LINK-UP
I have an aged Digit paperback edition of AE van Vogt's *Mission to the Stars*, which I believe is adapted from three linked stories which appeared in *Astounding*. One of them is *The Storm*; can you give any information on the other two?
Joseph M Nicholas, Camberley, Surrey

Mission to the Stars, as published by Digit in 1960, is a version of *The Mixed Men* (Gnome, New York, 1952), that takes its new title from the last story in the series about Captain Maltby and the Dellian Robots which appeared in *Astounding* (January 1945). The earlier tales were *Concealment* (October 1943) and *The Storm* (November 1943). *The Storm* is included in *The Best of AE van Vogt* (Sphere 1974) and *The Astounding-Analog Reader: Book 2* (Sphere 1973), but I have no knowledge of the other stories being reprinted separately.

COLLECTOR'S ITEM
I have a copy of *Wonders of the Spaceways* No 6 which seems to have been published around 1945. Could you give the correct date and say if it is likely to be worth anything to a collector?
Mark Jenkins, Shrewsbury

Ten issues of this British magazine were published by John Spencer between 1950 and 1954. No 6 appeared in April 1953. I fancy a collector might pay anything between 75p and £1.50 for it, depending on its condition – and his enthusiasm.

FREE FALL
Some years ago I read in an anthology a story in which Columbus sailed westward to circumnavigate the Earth and sailed over the edge. Do you know who wrote it and where it can be found?
Roderick A Parkes, Woodhouse Park, Manchester

Sail On! Sail On! is by Philip José Farmer. It first appeared in *Startling Stories* December 1952 and was reprinted in Popular Publications' *SF Yearbook No 4* (1970). It is also included in *A Century of Science Fiction*, edited by Damon Knight, published here by Gollancz in 1963 and in paperback by Pan in 1966.

ARTISTS ANONYMOUS
I have seen many fine illustrations by Mike Little in *SFM*. Did he paint the cover for the Corgi paperback edition of *New Writings in SF 22*? The style seems to be similar.
Duncan Carr, South Shields

I referred your query to editor Ken Bulmer, who confirms that you have correctly identified artist Little's handiwork. But I wonder why so many publishers – as distinct from editors, who often have little say in this department – still hesitate to give cover artists a credit line, especially when they rely so much on a striking cover to sell the book.

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I am writing because I am becoming increasingly terrified by the growing significance certain types of sf novels are having in the world today. The kind of novel I am referring to is the 'doom' novel, the New Wave, *Nineteen Eighty-four, Brave New World* type of thing. Not so long ago I was intending to write about this but with exactly the opposite intentions. I remember someone writing in saying how prophetic sf was and how it was the literature of the future. I also remember that I was planning a long letter deriding this and asking you to refrain from printing such rubbish in *SFM* again.

Now, however, my attitude has completely changed. I'm scared stiff by reading books, newspapers and magazines which make it obvious to me that we're half way there already! Looking more deeply into the problem it also becomes clear that modern science is the cause. It's dragging morality through the gutter and spitting in its face. Sex and love have gained different meanings, marriage is old-fashioned, God is non-existent. Test-tube babies, abortion, birth control, artificial preservation of life, sex before marriage, artificial insemination, parthenogenesis, transplants, transfusions, sterilisation, mechanical hearts and organs, sex changes, etc, abound everywhere. If you believe that any of these are perfectly natural then it just shows how you've been conditioned by society to accept them.

I get very annoyed when I listen to Arthur C Clarke, Carl Sagan and the rest of the futurologist group telling us how science is going to make the world a better place to live in. The universe will never be as they picture it, with man skipping daintily towards the golden age without a care in the world. It can't be, human nature won't allow it. The world is spinning downhill all the way but people refuse to admit it.

You may not agree with what I say, but if you want proof, just look around you.
Ian Garbutt (Torbrex, Stirling)

I have this month (October) cancelled my order for *SFM* for the following reasons:
(1) The magazine should be retitled *Science Fantasy Monthly* due to the fact that I like my science fiction to be reasonably believable. The recent fiction in the magazine would appear to be the product of disturbed imaginations.
(2) There are far too many articles on authors and books.
(3) The posters were excellent to begin with but now they have deteriorated into pure rubbish.
(4) Who needs comic strips?

I know of at least two other people in my area who have recently cancelled the magazine for the same reasons. However, you are not the only publisher to fall into the fantasy trap, I have been interested in science fiction practically since I was able to read and I have noticed this recent trend towards the ridiculous. Thank Heavens for Clarke, Asimov, Wyndham, Anderson and 'Doc' Smith.
David Quinney (Clackmannanshire Central, Scotland)

From the date of your letter, I assume you made your decision to cancel *SFM* on the strength of Vol 2 No 9. I have looked back over the last four issues and I can see why you consider many of the stories fantasy-orientated, but surely this is because so much of sf is speculative and extrapolative and as so many people have said – it is a literature of ideas. Even the authors you mention, Clarke, Asimov, Wyndham, etc, simply work on images of the future based on our present times; I admit Clarke and Asimov are more credible than a lot of authors, but they are both trained scientists. Wyndham's work is typical of the British sf disaster school, he envisaged nuclear disasters, invasions from outer space and so on; do you find that less credible than 'The Antique Restorer' (SFM Vol 2 No 9) which, incidentally, featured a quite incredible time machine – but so did H G Wells – **Ed**

As an annual subscriber to *SFM* I would like to make the following comments:
Painting Competition In my humble opinion, the calibre of entries this time was infinitely inferior to the last competition. Your method last time of printing them all on a double page and then individually on full pages was absolutely ideal. Why not this time? And if I may make a suggestion, when you have another painting competition print, say, ten of the best and ask readers to vote for the winner.
Short Story Competition Please could you have another one. I missed the last one and I would dearly love to try my hand at writing a short story.

Thanks muchly for the magazine, it gives me and many people such pleasure; it is an excellent publication well worth the annual subscription. I think (remembering your readers' poll of some editions back) that although your readership appeared to be quite young, most people of my age group (24) didn't have time to put pen to paper in order to show you that people of all ages and professions read *SFM*. For example, everyone I know who reads *SFM* is much older than myself, including my parents!
Christopher Hunt (Maidstone, Kent)

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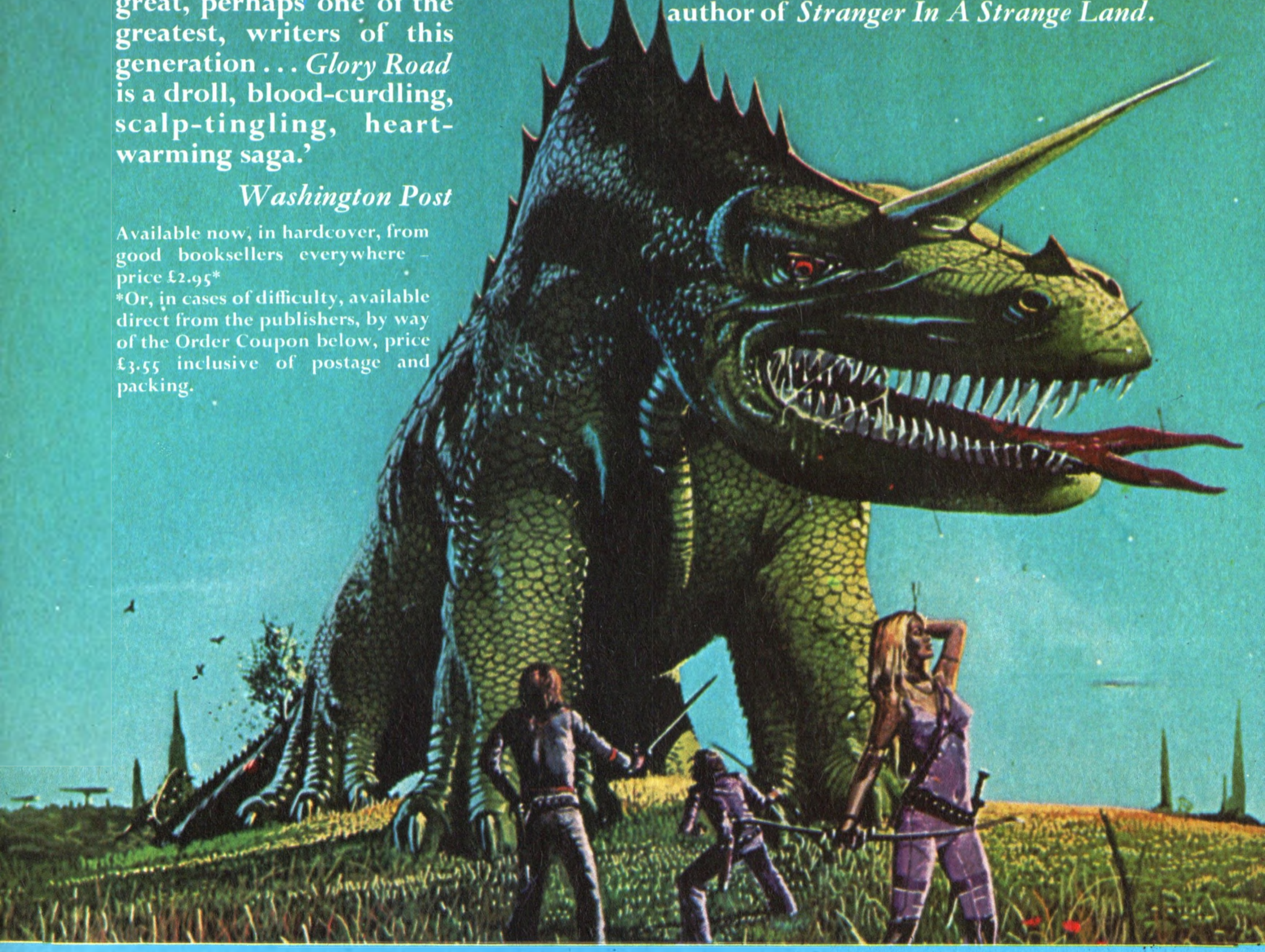

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