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THE MAGAZINE OF
Fantasy AND

Science Fiction



SEPTEMBER

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RON GOULART

ALAN E. NOURSE

MIRIAM ALLEN deFORD

ISAAC ASIMOV

VANCE AANDAHL

WILLARD MARSH

ALL HUNTER

Fantasy and Science Fiction

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The Magazine of Fantasy and Science Fiction, Volume 27, No. 3, Whole No. 160, Sept. 1964. Published monthly by Mercury Press, Inc., at 40¢ a copy. Annual subscription \$4.50; \$5.00 in Canada and the Pan American Union; \$5.50 in all other countries. Publication office, 10 Ferry Street, Concord, N. H. Editorial and general mail should be sent to 347 East 53rd St., New York, N. Y. 10022. Second Class postage paid at Concord, N. H. Printed in U.S.A. © 1964 by Mercury Press, Inc. All rights, including translations into other languages, reserved. Submissions must be accompanied by stamped, self-addressed envelopes; the Publisher assumes no responsibility for return of unsolicited manuscripts.

Can readers help us with a perplexing problem? It has to do with Ron Goulart and his socially objectionable problem of submitting stories written on translucent paper which is hard on the editor's eyes. We have repeatedly asked him not to, and have several times considered placing an embargo. All these efforts, however, have been stymied repeatedly by the fact that stubborn Mr. Goulart writes Good Stories . . . like this one about the glorious and trouble-shooting Chameleon Corps. "My advice to you," said the drunk anchorite, revealing the secret of life: "Take a good course in accounting . . . Avoid lawsuits . . . Don't drink to excess and make a formal will . . ." We would like to add, "And don't write on translucent paper"—but what's the use?

CHAMELEON

by Ron Goulart

THE MIDDLE ROW OF VIEW screens showed a half dozen images of a wrecked man. Resting his palms on his backside, the Chief stopped pacing the office and said, "I can't buy him."

Azeler, the Junior Chief, jerked his pale close cropped head in agreement. "Too pathetic, not heroic."

Slouched in a dark wing chair Ben Jolson said, "Which is why you sent for a Chameleon Corps man?"

Chief Pritikin said, "Can't you sit up straight during a briefing, Jolson? After all, the Political Espionage Office should command

every good man's respect."

Azeler added, "We put your file through one of PEO's personnel brains, Jolson. You're not the best man in the Chameleon Corps by any means."

Jolson's dark eyes narrowed. "For the last five months I've been in the wholesale pottery business. Then yesterday CC recalled me for an emergency mission. You're free to request another man."

"You're all that's available in these tense times," said Chief Pritikin.

"We're hoping," said Azeler, "your notorious instability won't crop up on this assignment." Jol-

son's slump was making Azeler uneasy and he kept absently throwing his narrow shoulders back. "Once on Peregrine you refused to stop playing your role. It took six Police Corps men to make you come back home to Barnum here."

"I liked that part," said Jolson. "Being the ruler of that jungle kingdom. I like outdoor work."

"Later, on Murdstone, you spent two months being a baboon," continued the Junior Chief.

"That was a mistake now that I look back on it."

"This," said Chief Prittikin, pointing at the hollow looking man on the screens, "is our problem at the moment."

"Can you become him?" Azeler asked Jolson.

"Sure. You don't want him looking that bad, though, do you?"

"Of course not," said the Chief. "That's the whole trouble."

"His name," said Azeler, straightening so much that he was standing up, "is F. Scott Cutler."

"I read about him," said Jolson. "Imprisoned on Pedra for six and a half years. By mistake as it turned out. Probably a frameup. Before that he was a rising military man on the planet of Barafunda."

"Just look at him, though," said Azeler. Cutler was sitting in a cane chair in an all grey room muttering to himself. His hands danced gently in his lap and his shadow rimmed eyes blinked too rapidly. "That's not my idea of a hero."

Chief Prittikin said, "It's a shame so many martyrs end up looking so unattractive."

"Where is Cutler now?" Jolson asked.

"In a sanitarium near here. We brought him in secretly from Pedra after his pardon came through." The Chief reached up and punched the switch that cut off the pictures. "I can't stand too much of him. He doesn't lift my spirits."

"He's not hero material," said Azeler. "So few heroes are. That's where you come in, Jolson."

The Chief laughed with relief. "Let's look at those pictures of F. Scott Cutler at his trial." He threw another switch and the top bank of monitor screens lit up and showed an assortment of younger, upright Cutlers. "He was thirty four then. A bit weak in the chin perhaps but I could buy that man as a positive figure."

"I go along," said Azeler. "Jolson, we want you to be the man Cutler might have been if he had aged more gracefully and not succumbed to prison conditions."

Jolson stood and came up to study the images. "Isn't there a chance Cutler will recuperate on his own? Why not wait?"

"It will take," said Azeler, "a full year and even then we can't be sure."

"A clean limbed, sturdy, positive-looking F. Scott Cutler has to appear on Barafunda by this weekend," explained the Chief.

His eyes on the moving pictures of the former Cutler, Jolson said, "Why?"

"Barafunda, as you may know," said Azeler, "still uses reactivated workers in many of its nonskilled industries."

"Zombies," said Jolson. "That's right. Cutler got in trouble, in part, because he was against the using of zombies."

"There is still a strong pro-zombie faction on Barafunda," said the Junior Chief. "The President of the United Territories is, however, believed to be anti-zombie."

Jolson said, "That's that pretty girl, isn't it? The current President."

"Jennifer Crosby," said Azeler. "Five feet five, 110 pounds, complexion medium, hair auburn, posture and muscle tone excellent, age twenty six, formerly President in Territory #13. She won the presidency of Barafunda at last season's Seaside Political Festival. She'll hold office for another two years."

"And you want Cutler," said Jolson, "to work on this President Crosby girl. Get her to come out positively against the zombie trade."

"We know she's considering the almost immediate issuing of a proclamation against the whole zombie industry," said the Chief, striding over to his low grey desk.

"Cutler, as a now-hero and a

long time anti-zombie man," said Azeler, "will have a favorable influence on Jennifer Crosby. His return to Barafunda and the attendant parades, speeches and ceremonies will be only one of the assorted pressures that the Political Espionage Office has planned and in various stages of operation."

"This weekend," said Chief Pritikin, sitting rigidly down, "a reception celebrating Jennifer Crosby's first half year in office will be held in the capital of Barafunda. We're hoping she can be pushed into making an anti-zombie statement at the reception."

"How tall is Cutler?" asked Jolson, backing away from the view screens.

"Two inches taller than you," said Azeler. "His weight should be about yours. It isn't of course because of his eating habits while a prisoner. For the purposes of your masquerade we'll say he weighs what you do."

Jolson frowned and shifted his position slightly. Then he grew two inches. "About right?"

Azeler, swallowing, said, "Fine. I never get used to you fellows, though." He added, "Being chosen for the Chameleon Corps must be quite an elating thing."

"I was twelve when I was tapped to start undergoing the conditioning and processing," said Jolson. "At the time I guess I was elated. My father arranged it. He was." He tucked his chin once and

his face blurred and his features quivered and shifted.

Turning away Azeler said, "You are aware of our central Keystone government's reasons in this Barafunda business?"

"Sure. They want all the planets in the Barnum system to have fully automated factories and so on." Jolson checked his new face with the images of Cutler. "Automation is more functional, less expensive. Besides which, the Keystone government quietly controls two of our biggest automating outfits. Whereas, the zombie process is privately owned."

"You're not pro-zombie?" said the Chief, half-rising.

"I'm pro nothing," said Jolson. "Well? Is this what you want?"

The Junior Chief moved up to study him. "That's wonderful." He glanced at Prittikin. "A little more suffering around the eyes?"

"Yes," agreed the Chief. He motioned to Jolson. "Walk up to me and let's see how you register."

Jolson walked. "Okay?"

"Beautiful," said Chief Prittikin. "I buy it. Could you fake the chin just a bit, make it a little more positive?"

"Like this?"

The Chief popped up, patting himself on the backside. "I'm abundantly satisfied. I know this is an image that's going to sell."

"Definitely," said Azeler. "Now, Jolson, you can report to our Indoctrination Cottage for some

sleepbriefing and a quick course in Cutler's voice and background. You'll be on tomorrow's rocket to Barafunda, arriving on the morning of the day after. That will give you a couple of days to work on Jennifer Crosby before the reception."

"Be sure not to get in the way of our other pressure groups," said Prittikin.

"Tell them the same for me," said Jolson. He took a last look at the still running films of F. Scott Cutler and walked to the door.

Azeler came alongside him. "I'll escort you to Indoctrination."

"By the way," said Jolson, "do you have any information on a guy named Jose Terranova?"

The Junior Chief reached for the door lever. "He's a citizen of Barafunda, isn't he?"

"Yeah," said Jolson. "When I was at the Chameleon Corps Senior Academy I used to follow his exploits. I just thought of him now. He was Barafunda's greatest romantic figure. A great operator. I admired him."

"A thoughtless womanizer and playboy," said Azeler. "He dropped from sight several years ago." He turned to face the Chief. "I'll report back shortly."

"Excellent," said Prittikin, laughing. "I'm really very happy with the way this has gone so far."

"So far," said Jolson, following Azeler into the quiet green corridor.

Jolson shook his head and poured the poisoned cup of chocolate into the disposal hole of his small metallic cabin. He was still a half a day away from Barafunda and this was the third poison attempt. Not to mention the retired dentist who had taken a shot at him in the TV lounge. The Barafunda pro-zombie faction was apparently as well informed and widespread as the anti group. They already knew that the man they believed to be F. Scott Cutler was heading for their planet to do them harm. Maybe they even knew he was a fake. Either way they were trying to eliminate him.

Jolson was in his sleeping robe. He scratched himself and sat on the arm of his relaxachair and rocked thoughtfully. He, his real Jolson self, was twenty-nine now and the Chameleon Corps work bothered him increasingly. You could never, once they'd processed you, quit the CC. You could go inactive after a certain number of years. It always hung over you, though. They had called Jolson back twice since he'd dropped out of the corps five months ago. He'd never really liked it but, as Azeler's files showed in detail, Jolson had enjoyed some of the fringe activities of his work. But he was becoming increasingly interested in devoting his time and effort to being only Ben Jolson. It seemed about time.

A faint polished sliding sound

came from his closet area. Jolson looked around the room. He unseamed the robe and tossed it down on the chair. He hesitated and then crossed silently and sat on the edge of the bunk. He concentrated and changed into a good facsimile of a orange tufted pillow. Some of the Chameleon Corps men didn't like to switch to inanimate things but it had never bothered Jolson too much. In fact, it was less unsettling than being another human.

The bright closet door arced open and a fat sweat-dotted man in a blue sleep robe dropped into the cabin. He had a stun pistol in his hand and a medical kit tucked into the fat shoulder crotch between his left arm and side. He scanned the cabin and then ran into the bathroom. He came back and dropped to all fours in the room's center. "Now where in the heck is he?" the perspiring fat man asked himself. "Hiding in some other quarter of this vast ship I'll wager. Cutler's turning out to be a more artful dodger than I had at first fancied." The fat man rose up and padded into the closet. In a second the sliding secret door sounded again.

Jolson decided to remain as he was. He spent the sleep period as the pillow.

Jolson, playing it safe, came down the disembarking ramp wearing his own face. Even so, he

flinched when something was thrown at him. It turned out to be only a handful of yellow flower petals, let loose by an impetuous member of a grade school reception committee. The little girl apologized and asked Jolson for her petals back.

The crowd seemed about half for F. Scott Cutler and a quarter against, with the rest there to meet other passengers. Parked against a far blue grillwork fence was a long shiny ground car with the official seal of Barafunda on its side and roof. Jolson worked free of the crowd and moved casually in the car's direction.

There was a plainclothes driver at the wheel, stiff and straight-staring. When Jolson was clear of the assorted reception groups he let himself return to the resemblance of F. Scott Cutler. "You sent to meet me?" he called to the driver.

"For heaven's sake, get down!" called someone behind him.

Jolson turned, dropping to one knee. "What?"

The land car blew up.

Jolson flattened, cradling his head with his locked hands. A piece of plastic bumper nicked at his elbow and a heavy fragment of tire slapped into the small of his back but that was all.

"The car was a decoy, driver a dummy," said a raspy voice. "They went for it. You've exposed yourself, though, which is a mistake."

Pushing to his feet Jolson looked at the tall wide man who had grabbed his arm. "The President send you?"

"Yes," the man said, flicking open his dark coat to reveal the secret identification labels sewn in it. "I'm Dennis Winslow. For the lord's sake, come along with me." He swung out his hand and clamped a pair of dark glasses on Jolson. "There. Now act natural. I'm not known to the pro-zombies and we may be able to get away from here on a couple of bicycles. I had hoped to catch you while you were still on board, Cutler, but you slipped by."

They had started walking, away from the remains of the car, as the crowd hustled toward it. "I take it," said Jolson in his Cutler voice, "my release is not universally appreciated."

"No," said the government man. "I wanted to sneak you in without any fanfare. Orders came from Keystone itself calling for pomp and ceremony. They won't listen on Barnum. Have the idea they know how things actually are on Barafunda. Here."

Two black bicycles leaned against a striped out building on the edge of the spaceport grounds. "Can we slip into the capital on these?"

"Let's hope to the good lord we can," said Winslow. "Hop on."

"Okay," said Jolson, running his bike along after Winslow's.

Winslow jumped onto his bike and rode through an opening in the fence.

"How far is the capital?" Jolson asked, mounting his rolling cycle.

"Don't you remember?"

"Roughly three miles as I recall," said Jolson, letting his sleep-briefing knowledge answer for him. "I've been gone for quite awhile."

"Understandable."

The countryside was free of buildings, low hills bordering both sides of the rundown road they were using. After a few minutes they passed a roadside restaurant that announced it sold frozen harkness, which Jolson's Cutler background told him was a custard made from a native Barafunda plant.

Jolson's mind was checking details and his body was intent on pedaling the bike. He jerked his head when Winslow suddenly cried out. "What?" asked Jolson.

"Into the fields," yelled Winslow, letting his cycle carry him off the roadway. He was in midair, aiming for the grass, when a blaster rifle crackled and Winslow ceased to be there.

Jolson threw himself into the high crisp grass and rolled. He'd had a glimpse of the two land cars that blocked the road and the grey suited men running from them. Maybe they wanted him alive but he didn't feel like gambling on it.

He unsealed his suit as he edged

on his side, hidden by the grass. He had gotten out of his clothes and footgear before a voice shouted, "Over there! The grain is wavering."

Jolson changed into a small compact neutral colored rodent. He crept carefully away from his clothes, scurrying and dodging, hoping he wasn't making waves.

"What the heck," one of the pro-zombie men said. "He's stripped down to the buff. Left all his clothes behind."

"Fear brings on strange reactions," said someone else.

"Screw you," thought Jolson. He changed himself to a local grass-colored bird and twittered for awhile. He hopped further from the men, making sure he established the idea that he was a bird. Jolson chanced a spring into the air. Nobody shot at him and he flew away in what he hoped was the direction of the capital city.

The sign hanging askew on the dirty stone building said: Welcome To The Tenderloin. Optimists Meet Every Tuesday At The Lighthouse Mission. Jolson had become a scrubby looking dog and he was working his way through the outskirts of town. He was wondering how charitable the social welfare groups in the capital's tenderloin would be. If he walked into a welfare store completely naked would they generously clothe him or would they make ar-

rangements to lock him up someplace.

Maybe he could slip into a secondhand clothing store and sneak a suit of clothes without being seen. The F. Scott Cutler role was too dangerous to continue with. Jolson had made up his mind to work out an alternate plan. He'd tell the Political Espionage Office and the Chameleon Corps about it after he'd done the job of getting the President to make an anti-zombie proclamation. He preferred working this way, which was one reason for his complex reputation.

He trotted along the dusty street, keeping clear of the sprawled derelicts. Down this close to the street the tenderloin had an intense odor he'd never noticed when walking upright in similar places.

A lopsided man with a veined nose and cheeks came up and kicked Jolson. Jolson considered biting him but couldn't work himself up to it. He trotted faster and reached the corner. Across the cobblestone street was a vast secondhand clothing store with three entrances. Steamer trunks made a protective wall in front of its time smeared windows.

Jolson crossed over and was about to sneak into an unguarded doorway when he saw a man leap out of a bar and grill named The Realms Of Gold. The man flapped his arms and shuffled to keep his balance. He was tall, in his forties someplace. His coat was a few

years older than his trousers and his cap was of the style that had been popular in the Barnum system when Jolson was in his teens. That hat and the way the man moved, now that he was capable of moving again, added to Jolson's initial impression. This derelict was his old hero, Jose Terranova, once Barafunda's greatest romantic figure. A prolific lover and renowned swashbuckler.

Jolson followed him. It took Terranova several minutes to work down the block and through the doorway of a hotel which seemed to be named, according to its transparent door, simply Hotel. Jolson changed into a rodent again to be less noticeable in the tattered lobby. He hurried up the swaying flower-patterned ramp after Terranova.

The old swashbuckler let himself, eventually, into room 3 and Jolson dived in before the door closed. While Terranova hinged over onto a military cot Jolson investigated the closet. There were no extra shoes but Terranova had a spare pair of trousers and a pull-over tunic. Turning back to himself again Jolson put the old clothes on.

He stepped into the room and said, "Mr. Terranova?"

Terranova's surprise took the form of a brief grunt. "So?"

"I was a great admirer of yours."

"Good." Terranova had a large, sharp cut face with a strong,

though fuzzy now, profile. His hair was too long, tangled and grizzled.

"I'm Ben Jolson, from Barnum."

"Swell," said Terranova. "How come you have my yachting outfit on?"

"I was ambushed outside of town and lost my clothes."

"Funny kind of ambush." Terranova shrugged vaguely. "Bring my clothes back when you're through. They steal all your stuff around here anyway. I never take this casual outfit off anymore."

"I still don't understand exactly why you . . ." began Jolson.

"You said you'd heard of me before?"

"Sure. Jose Terranova. I read about you when I was in school. The time you ran off with the Princess of Condominium A. The affair with the all-girl orchestra. The time you won the twin girl prime ministers in a game of seven-up. Sure."

"I've had," said Terranova, "a little bad luck." Although it was only mid day outside the small musty room had a twilight look to it. "Take a good course in accounting. That's the secret of life. Avoid lawsuits. Don't ever sue anybody. Don't drink to excess and make a formal will. My advice to you."

"How long have you lived in the tenderloin?"

"Few years."

"Do you want to go back outside?"

"No. I've retired from all that.

Too much pressure, boffing every which broad. Too demanding. I live like an anchorite now. A drunk anchorite. But all the same." Terranova looked up at Jolson. "Why'd they ambush you?"

"The pro-zombie partisans don't want me to get to the President."

"You know," said Terranova, "that girl, Jennifer Crosby. I knew her family. When she was fifteen she had a crush on me. Well, so did most all the girls on Barafunda. Jenny I knew and she wrote me letters. A nice sensitive girl. I haven't seen her for lord knows."

Jolson sat down in the single chair. "Would she still know you?"

"Jenny? I suppose if I spruced up. But I won't. Not likely."

"Look," said Jolson. "Would you mind if I borrowed your identity. I've got to talk to the girl and the identities I've been using are worn out."

"Borrow?"

"Like this." Jolson gestured at his face and changed himself gradually over to a replica, cleaned up and sober, of Terranova.

Terranova grunted. "That's a good trick." He closed his eyes for a second. "You must be one of those Chameleon Corps guys. Right?"

"Yes."

"I don't know if you can walk right in and see Jenny. Even as me. Most people don't know I'm here. They think I retired to one

of my plantations. So that part's no problem. But even Terranova in his prime had to make an appointment and wait around to see a president. Except for Katy Beecher and I had to marry her."

"Then you don't mind my impersonating you?"

"No. It amuses me. If you promise to come back and tell me how you do as me."

"I will," said Jolson.

"What's her name," muttered Terranova.

"Who?"

"Carol Hammersmith. There was an announcement on the news in the bar. A cocktail party at the new zombie plant they just opened at the edge, the good edge, of the city. It's tomorrow night and this Carol Hammersmith is giving it. We were close once. Her husband is one of the Junior Prime Ministers in Jenny's government, a pro-zombie man, and also on the zombie plants' board of directors."

"I go there as you and Mrs. Hammersmith will let me in?"

"Right," said Terranova, sitting up and leaning toward Jolson. "You work on her and she can get you an invitation to the reception Jenny is having this weekend. Once at the reception you won't have trouble finding a chance to talk to Jenny."

That would be cutting it close. Still it might be the best chance he'd get. And nobody was likely to try an assassination of Terranova.

"You're welcome in both pro and anti zombie circles?"

"Terranova took no sides," he said. "What about money? You ought to check into the Ritz-Capitola Hotel, my favorite old hang-out. Get some formal clothes and lots of luggage."

"I don't have any money now," said Jolson. "I think in a couple of hours I can swipe some here and there, by switching identities around. Then pay it back when I get in touch with the Chameleon Corps again."

"Steal from a better neighborhood than this."

"Sure," said Jolson, getting up.

Terranova squinted down at Jolson's bare feet. "Sorry I can't spare any shoes. Say hello to Jenny. Let me know what happens."

Jolson said he would and Terranova dropped back on the bed. He was asleep when Jolson closed the door.

The buffet table was set up, crisp and white, just in front of the conveyor belt in the reactivating plant's bright new anteroom. So was the bar. Jolson, as Jose Terranova, was hoping he could sprint over and grab a drink in the interval between passing bodies.

The conveyor belt went into a tube high in the pale green wall. Far across the big crowded anteroom there was another tube from which issued new completely workable zombies.

Carol Hammersmith exhaled warmly in Jolson's ear. "Forty two zombies an hour," she said. Her left hand held a glass and her right was arched on his stomach. "Would you like to see the packaging department, Jose?"

"After I get a drink."

"Packaging is everything. When the zombies get decked out in coveralls with the right color scheme they can be very pleasing. Our color consultants worked that out." She shook her head and whispered, "I don't see how you could ignore me for seven and a half years, Jose."

"Nor can I. But let's not talk about the past," said Jolson.

Mrs. Hammersmith was a tall taut woman in her mid-thirties. Pretty in a sharp angular way. Her hand flattened on Jolson's chest and she said, "Oh, no. Look over there. It's that damned girl from Barnum who says we bought her late father without proper authority. I'm sure she's crashed with the intention of making a scene. Come along." She caught Jolson's arm and led him in an opposite direction.

Being Terranova was interesting. Almost every woman there noticed him. They seemed, most of them, unable to keep from reaching out for him. Jolson gave them all his Terranova smile and stayed in the wake of Carol Hammersmith.

Down a dark corridor they went

and into a silent room. The woman spoke something to the door and it locked them in. "Now then, Jose."

The room was filled with drawing boards and easels. "Your advertising department?"

"Yes," said Mrs. Hammersmith, reaching around behind herself. "We're hoping to get a billboard campaign into full swing soon. There's still, oddly, a lot of people who need winning over."

"How's your husband?"

"Tony? He's fine. We walked right by him just now." She narrowed one eye. "You hardly recognize me until I grabbed you, Jose." She took off her crimson dress and threw it. The dress flapped once and buckled over an easel. "You haven't forgotten everything?"

"No," said Jolson. "About that reception, Carol."

"I'll see that you're invited in plenty of time for tomorrow night, Jose. Little Jenny Crosby has to have Tony and I, even though we hold different points of view. I'll arrange an invitation for you." She moved closer. "Well?"

"Well," said Jolson, carrying on the impersonation.

In the lobby of the Ritz-Capitol a redheaded girl jumped in front of Jolson as he neared the musical fountain. "Jose Terranova?" she asked.

The mythological figure that capped the fountain centerpiece was just starting a bass clarinet

solo and Jolson pulled the girl across the mosaic floor and into a quiet alcove. "Yes, mam?"

"I'm Karen Witherspoon of the *Barafunda Sun-Sun*."

"Sun-Sun?"

"*The Barafunda Sun* merged with the *Territorial Sun* three years ago, you know."

"I've been on a retreat."

"I want to know all about it."

The girl was lovely and fragile. She leaned against Jolson and said, "I have a mike concealed on me and if you'll agree to let me interview you I can record the entire thing right now."

"Wouldn't . . ." said Jolson.

"Wouldn't your suite be a more relaxed place for an interview. I was about to suggest that myself."

If you were Terranova you didn't have to work at all. "We're in agreement then."

His suite, payed for with money Jolson had burgled out of four jewelry stores, a liquor store and a delicatessen, was, due to his Terranova reputation, walled with mirrors. The ceiling consisted of foot wide circular mirrors set in red plush. "Sit down," said Jolson after he'd brought the girl in.

"How do you stand on the zombie controversy?" asked the girl, hesitating between a black ottoman and a yellow love seat.

"Neutral," said Jolson. He unseamed his formal jacket and happened to glance at the far wall. He had the illusion that he had three

eyes. His hand felt automatically. No, he wasn't getting sloppy. He smiled at the girl. "Terranova is neutral in all things except the field of love." Someone was in the mirror doored informal wear closet, watching with an eye at a crack. "About you, Karen, I feel quite strongly." He took a step toward her, then stopped. "Perhaps I'd better change first. I left my robe in the next room. If you'll excuse me."

"Yes. I'm anxious to hear the rest of what you have to say."

"And I to hear what you may have to say in reply."

In the long wide bathroom Jolson undressed and put on the robe he'd left on a wall prong. He stood near the door and listened. There was a faint murmur of talk. Which meant that Karen was a decoy, sent to distract him. The guy in the closet might not be alone either. Jolson couldn't be sure whether they wanted to question him about his sudden, for Terranova, reappearance and his possible influence on the President. Maybe Carol Hammersmith hadn't been as preoccupied as he'd thought.

He looked over at the waterproof television set on the shelf in the shower stall. He nodded and stuffed his evening clothes down the valet hole. Then he took off the robe and yanked down the TV set.

The small window of the room

looked down on a jungle decorated courtyard. Jolson checked and made sure there was no one down there in the moonlit darkness. Then he threw the set through the window, dived into the shower, swung up onto the narrow shelf and changed into a replica of the television set.

In a few seconds Karen called. "Mr. Terranova? Jose? Did you slip and fall?" Then the door was tried and opened. "Lord, Bosco, he dived."

"Dived?" a high pitched male voice asked. "Into the bath?"

"Out the damn window."

"Three stories?" Bosco was a small dark man with a blaster pistol in each hand.

"Fear makes people do odd things," said the girl.

People were always moved to philosophy by his escapes.

"How in the world are we going to question him now? Mr. Hammersmith said Mr. Merkle's curiosity was aroused. It's possible Terranova has come back to put the screws on the President."

"We don't even know if he's anti-zombie," said Karen.

"Just because he tried to softsell you."

"Well, let's get down and see if the poor man is still alive."

"I'm doubtful."

Jolson sat quietly on the shelf until the sounds of their departure had faded. Merkle they'd said. That was Jennifer Crosby's Assist-

ant President. So he was pro-zombie, too.

Turning back to his Jolson self he ran into the other room and got into one of the quiet dark casual suits. The reception was tomorrow night and his Terranova disguise had worn out, too. Jolson scooped up all the money he had left and hurried out of the suite.

The capital building, a two story white building with turrets and cupolas and seven separate flag poles in use, sat behind a high stone wall. Jolson was having lunch in the Capital View Cafe. With increasing frequency, he noticed, land trucks and hoppers were heading for a side gate in the wall. Probably delivering props and supplies for the reception tonight. Jolson left the cafe.

Two uniformed men guarded the gate. Jolson watched a delivery man, after identifying himself, begin to unload a land truck. Bottles of wine in wicker cases. Jolson walked on. In an alley a half block down he got out of his clothes and thought for a second. Then he changed into an unobtrusive looking bird.

He flew over to the capital delivery gate and landed just behind a truck. When no one was in sight he hopped up inside. The truck was filled with half-size white statues of, apparently, heroic figures from Barafunda's past. Jolson studied them and then turned him-

self into a bearded military looking statue that he hoped would fit someplace in Barafunda's history.

The delivery man had little sense of the pageant of history and so he carried Jolson into the capital building without noticing that he was not one of the original group. No one checked the number of statues and Jolson ended up in a second floor ballroom.

Now all he had to do was wait, then find some clothes and talk to President Jennifer Crosby. He wasn't quite sure who he would pretend to be when he did that.

It was nearly dark outside and the workmen, servants and visitors had been gone from the room for several minutes. Jolson was on a wood pedestal near a hanging tapestry. He was about ready to change back to himself and use the tapestry for a robe. He still hadn't decided what he'd do after that and so he was hesitating.

A slender auburn haired girl came into the room. She had a sheet of paper in her hand and a

pen, knifewise, between her teeth. She checked around the room, then locked all the doors. Finding a folding chair behind a pedestal she shook it open and sat down. According to his briefing this was Jennifer Crosby herself.

The girl crossed her legs, took the pen, and began reading half aloud from the paper in her hand. ". . . proclamation . . . as of this date . . . no more zombies . . . shall cease . . . gradual changeover to more . . . this is my wish and . . . respectfully, etc. . . ." She bit her lip and then, finally, let her head nod positively.

"An unwise decision." A door stood open, the doorway framing a slight wrinkled man. He came in, relocking the door with his own key.

"It's no use, Nathan. I've talked to a good many people about this. I'm going to come out against the zombie trade. I'll read this proclamation at tonight's reception."

"How will that make your own assistant look?" the man asked.

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"Silly and foolish."

Nathan Merkle this was then. The Assistant President and the pro-zombie man behind the attempts on Jolson in his various identities.

"One of the workmen," said Merkle.

"What?" said the girl.

"Has unfortunately turned out to be a crazed fanatic who slipped in through our tight efficient security."

"Nathan?" the girl began to rise.

"He assassinated you in a most savage way before I could break in and stop him." Merkle had produced a heavy forked crowbar from his cloak.

It was a hell of a way to introduce himself to the President but Jolson had no choice. He turned into himself and jumped from the pedestal. His barefeet skidded on the just polished flooring and he hit into Merkle sideways. He managed to get his hand on the crowbar as he and Merkle fell over.

"This has little dignity," shout-

ed the Assistant President.

Jolson knocked him out with an elbow jammed into his chin. He unfastened the fallen man's cloak and put it on. Stepping up and clear he tossed the crowbar away. "Excuse me," he said to Jennifer Crosby.

The girl president looked at him. "You must be with the Chameleon Corps."

"Yes, mam."

"Thank you for saving me," she said.

"It seemed like the thing to do."

She licked her upper lip. "Is this your real appearance now?"

"Yes," said Jolson.

"I didn't know Chameleon Corps men did anything in their own guise."

Jolson said, "I just felt like trying it."

"I'll get you some clothes from one of our wardrobe rooms," the girl said. "Would you like to attend tonight's reception. As yourself?"

"Sure," said Jolson. "This job is over."

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F-9

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Philip H. Smith is a New York City physician; Alan E. Nourse is a Washington State physician. This is Dr. Smith's first appearance in general print; Dr. Nourse has written many stories (his last here being THE COMPLEAT CONSUMATORS [April 1964]) and many books. Their transcontinental collaboration points up the anomalies in the situation of an M. D. who finds himself involved in matters more familiar to the Scriptures than to the AMA. It is a common phantasy to desire certain powers: after reading this, you will desire them no more.

A MIRACLE TOO MANY

by Philip H. Smith and Alan E. Nourse

WHEN IT FIRST BEGAN, DR. Stephen Olie's curious gift appeared in the manner of most true miracles, insidiously and without fanfare. At first Dr. Olie wasn't certain that *anything* out of the ordinary had happened. Later, when it became obvious that something more than his own native skill as a physician was at work, he refused to accept the idea of a miracle and resisted for weeks the temptation to analyse his gift scientifically. In those rare cases when medical miracles do happen (as indeed they do) few doctors are foolish enough to inquire into them too closely, and fewer still expect them to occur again. But in Dr. Olie's case

things were disturbingly different.

It happened the first time with the one patient of all his patients that Dr. Olie most dreaded to see. Mary Castle was a small, pale six-year-old whose weekly visit to his office was an ordeal for her mother and her doctor alike. Childhood leukemia is always a fearful illness; in Mary Castle's case the progress of the disease had been swift and inexorable since diagnosis had been made a few weeks before. In the face of expert consultation, the newest drugs, transfusions and supportive care the little girl had become steadily sicker, until the doctor found himself shrinking from each weekly visit.

Now, as the child and her mother were escorted into his examining room, Dr. Olie reviewed the chart hopelessly. Last week her white blood count had begun climbing again, her hemoglobin level sagging dangerously. He knew that today he would again find the enlarging lymph nodes and distended spleen, the hemorrhagic blotches on the child's legs, the shortness of breath—all the dreadful stigmata of a cruel and relentless killer. And he knew, bitterly, that he had nothing to offer the child but a word of encouragement and a smile as false as the smile of death itself.

As the office nurse poked her neat head through the door, Dr. Olie closed the chart. A wave of anger and frustration swept through his mind. *If only there were something I could do*, he thought. *If only there could be some magic in my fingers—*. Shaking his head, he walked into the examining room and smiled warmly at the child. "Well, Mary, how are you today?"

The little girl tried to return the smile. "All right, I guess."

"Fine, we'll just see how things are going." Gently the doctor examined her skin, checked her throat, then asked her to lie down as he went through the ritual of examination. From the corner the child's mother watched him, silently and hopelessly. For a moment he studied the listless child

on the table and then gently probed with his fingers, feeling the tense spleen almost filling her abdomen. The child looked worse than the week before, her skin grey, her breathing labored.

"Doctor, you've got to tell me," the mother suddenly blurted. "Nothing seems to be helping; how much longer is it going to be?"

Dr. Olie caught the mother's eye, shook his head in warning. "Why, we're doing fine!" he said. "Right, Mary? Before long your tummy will be feeling better and your breathing will be better and everything. Of course, we may have to go back to the hospital for another transfusion this week, but that won't be so bad. After all, if it's going to make you well—"

His voice trailed off and a chill went up his back as he stared at the girl. While he talked his hand had been gently probing, and now, suddenly, something had changed. The child's skin looked more pink and the enlarged spleen, like a deflating balloon, seemed to be shrinking under his fingertips. Even as he watched, a new luster was appearing in the little girl's eyes and, incredibly, she giggled. "You're tickling me!"

Dazed, the doctor felt for the swollen lymph nodes and failed to find them. He stared in amazement as the hemorrhages seemed to fade from the child's skin. Thirty minutes later Mary Castle

was a pink and glowing little girl, playing happily in the examining room as they waited for the emergency blood count report. It was impossible, and Dr. Olie knew it, but the blood count had returned to normal. Two days later the child was exuberantly healthy, eating vast quantities of food and demanding to go back to school.

And nobody understood why, least of all Dr. Olie.

In the busy weeks that followed, Dr. Olie did not forget the strange case of Mary Castle's miraculous recovery. He simply discredited it. Spontaneous remission of leukemia *had* been recorded before in medical history (though never so swiftly or dramatically); since Dr. Olie's scientific mind did not admit of miracles, he just refused to think about the case at all. Instead, he buried himself in the busy routine of his general medical practice with office hours, home calls, deliveries and hospital rounds. He was so busy trying not to think about Mary Castle that he hardly noticed the extreme rapidity with which his everyday office cases seemed to be recovering from their illnesses—the ulcer patients who seemed to be feeling better before they walked out of his office, the pneumonia patients whose fevers broke even while he was listening to their chests, the patients whose abscesses stopped hurting the moment he touched

them and were healed completely in 24 hours. There were always the possibilities of coincidence and the well-known vagaries of human illness to call to account for such speedy recoveries—but as time went on, coincidence piled upon coincidence until a case occurred that Dr. Olie simply could not ignore.

The patient was a middle-aged man complaining of progressive weakness and fever. "I'm getting scared, Doc," he said. "I've lost 20 pounds in the last two months, and last night I coughed up some blood."

"Bright red blood?" the doctor asked.

"Yes. Is that bad?"

"We'll see. Let's have a look at a film."

There was no question of the diagnosis as Dr. Olie studied the wet Xray. Advanced tuberculosis is hard to miss on a chest film. But when he began to examine the patient's chest, the characteristic sounds of the infection which had been present at first ceased abruptly. The fever and cough the nurse had noted on his chart suddenly were gone, and the man seemed to be breathing more deeply and freely.

"That's funny," the man said. "I'd have sworn I felt lousy when I came in here, and now I'm feeling great. In fact, I feel like going out and having a steak."

Dr. Olie's hand was shaking as

he put down the stethoscope. "Let me see another chest film first," he said. "And don't worry about the cost— this one's on the house."

The second film, taken 20 minutes after the first, revealed nothing but normal, healthy-looking chest.

After the office closed that night Dr. Olie sat for a long time staring at the two films side by side on his view box. There was no way it could have happened— no way at all—but there it was. This he could not ignore—and now that the dam had broken, he thought back to the succession of curious coincidences that had been tripping over each other in the past few weeks. Individually, just coincidences. Taken together, a pattern. The touch of his hand, a few words, and the patient was cured. Minor things perhaps could be dismissed as "normal remissions"—but not a case like this one. And not the case of Mary Castle.

He knew there had to be an answer, but no answer made sense. This was not scientific medicine that he was dealing with. This was miracle-working. And then he thought of the day he had leafed through Mary Castle's chart so hopelessly, grasping for straws in desperation. *If only there could be some magic in my fingers—*

Dr. Olie shivered as a hint of panic rose in his mind.

There is a time-honored tradi-

tion that the doctor may bury his mistakes without recrimination, but must never advertise his successes.

In Dr. Stephen Olie's case advertisement was hardly necessary. Little by little, word of the doctor's incredible feats of healing began to spread, first through the town and then farther afield. At first the stories were received with skepticism. Everyone knew that doctors could not cure by magic—but it was hard to argue with a living, breathing neighbor who swore he had been cured by just such curious handiwork. One by one the most skeptical themselves began slinking quietly to Dr. Olie's office and coming back cured of everything from carbuncles to cancer. Soon the office nurse was having trouble scheduling appointments; the doctor's tiny waiting room was crowded to overflowing as the lame, the halt and the blind tramped in and the doctor's fingertips continued their miracles. The office opened a little earlier each morning and closed a little later. The doctor began hurrying from examining room to examining room, racing faster and faster to keep up with the deluge of patients.

Home calls went by the board. There simply were not hours enough in the day to make them, and the doctor's hospital admissions dropped sharply as fewer and fewer of his patients seemed

to require hospitalization. Soon Dr. Olie began hearing remarks and complaints from his once-friendly medical colleagues as the traffic jams outside his office increased in frequency.

In the middle of an especially busy day three grim-faced gentlemen appeared in his office and were hurried into his consultation room in spite of the standing-room-only crowd outside. "They're from the County Medical Society," his nurse whispered as they stalked up the hall. "Some kind of a delegation. They insisted upon seeing you at once."

The leader of the delegation was a highly successful society surgeon named Bronson. He did not waste time with pleasantries. "Doctor, there have been a number of very strange reports about you at the Society recently."

Dr. Olie sighed and sank wearily back in his swivel chair. "You mean patients have been complaining?"

Dr. Bronson looked momentarily embarrassed. "Not *patients*, exactly," he said. "But some of your colleagues have become concerned about certain—ah—questionable practices going on here. You realize that it is the obligation of the Medical Society to uphold the ethics of the profession —"

"You mean that it's unethical for me to cure my patients?" Dr. Olie asked quietly.

Dr. Bronson glanced uneasily at his colleagues. "No one would say *that*, of course," he said quickly. "But we have to question a man who seems to cure so many so quickly."

Dr. Olie looked relieved. "I see! It's ethical to cure them, but unethical to cure them quickly, eh? I should drag it out a bit more?"

The surgeon flushed angrily. "Doctor, you know quite well what I'm trying to say. No one is questioning the *fact* of your—ah—success in practice, if it is a fact. It's your methods that are under scrutiny."

"I'm simply practicing medicine the best way I know how," Dr. Olie replied.

"You mean by faith healing?"

Dr. Olie pulled Xrays from his file. "Would you consider this faith healing?" he asked quietly.

"I would consider this outright fraud!" Dr. Bronson sputtered. "What's going on in this office? What have you been doing? The Society insists on an answer."

"Then tell them that I've been curing impossible cases. And that I haven't the faintest idea how."

Dr. Bronson shook his head angrily. "Doctor, we are representing the Medical Society officially. There have always been renegades in medicine who have preyed upon helpless neurotics. It is our duty to protect the public against charlatans—"

"But there's nothing neurotic

about cancer of the lung," Dr. Olie said. "Nor osteomyelitis. Nor septicemia."

"Then if you have some miraculous drug, it's your ethical duty to study it scientifically, document its actions, run 'double blind' studies to evaluate it—"

"And, of course, share it with my colleagues." Dr. Olie rose abruptly. "I'm sorry, Doctor. There is no miracle drug. I think you are wasting your time, and I'm quite certain that you're wasting mine. Now, if you will excuse me, I have patients to see."

"Then this is your final word?" Dr. Bronson said ominously, rising with his delegation.

"There's nothing more I can say."

"Very well." The surgeon drew himself up. "You realize that the Society will not be satisfied with my report. No doubt you will be hearing further."

Dr. Olie did hear further—but not quite in the manner he expected. The Medical Society delegation had hardly left when the phone was ringing with an emergency call for Dr. Bronson. "Yes, he was here—but he's gone now. I don't know where you could reach him."

The voice on the wire was frantic. "But I *have* to reach him. When he saw my husband this morning, everything seemed fine, but now John can hardly breathe. It's a cancer case, Doctor. If you

can't reach Dr. Bronson, could you possibly come yourself?"

Dr. Olie hurried, and it was well that he did. The patient's name was John Stevenson, and he was in great pain, obviously in the terminal stages of a wasting disease. He was choking for breath, his heart rate frantic and irregular. A brief history clarified the picture: an unsuccessful operation to arrest a carcinoma of the lung, followed by supportive care as the tumor spread and fluid filled the chest cavity. Dr. Bronson's treatment had been expert, meticulous and thoroughly scientific.

Two minutes after Dr. Olie's hand touched John Stevenson's wrist the man's breathing became more free and the grey color left his face. His heart rate slowed to normal. Administering a sedative, Dr. Olie reassured the family (privately hoping that the man would survive until Dr. Bronson could be contacted). Having done all he could, he hurried back to the office, and had all but forgotten the incident by the time his last patient was seen, sometime after midnight. Then, dismissing the office nurse for the night and locking the doors, the doctor settled back in his chair to drink in the blessed silence and solitude for a few moments and settle his own quivering nerves.

The silence was shattered by a pounding on the office door, and

a white-faced and furious Dr. Bronson burst in upon him.

"What devil's work did you do on John Stevenson?" Bronson shouted, glaring at him through bloodshot eyes.

Dr. Olie blinked. "Devil's work? I merely answered a call after you had left here this afternoon. I thought at first that he was terminal, but he seemed to quiet down a bit after I'd seen him."

"Quiet down!" Dr. Bronson stared at him. "Do you know what that man was doing when his family reached me? He was digging into a five-pound steak, that's what! I saw him with my own eyes—breathing freely, good color, hungry! I tell you, he was riddled with carcinoma. He was ready to die at any moment, and now he looks better than he did the first day I saw him. It's impossible!"

Dr. Olie nodded wearily. "I know. But it's true. Tomorrow he'll be even better. In 48 hours you won't find a trace of tumor in his chest. Believe me, I don't know *how* it's true, but that's what you'll find."

Shaking, Dr. Bronson sank down in a chair. "All right," he said. "I believe you. But you did something, didn't you? You *must* have done something. Will you just tell me what you did?"

Dr. Olie told him. He told him in detail, from the very beginning,

and then as the surgeon's temper and incredulity subsided the two doctors sat and talked on into the small hours of the morning. Faced with the impossible, they sought an explanation and got nowhere. When they finally parted, the sunrise was no redder than their bleary eyes.

A few days later Dr. Bronson called him up. "You won't get anything in writing from us," he said. "But we are all convinced that you're on the up-and-up. We don't like to admit that such a thing as 'healing hands' exist—and for good reason, as you damned well know. We don't dare to, because it would open the door to charlatanry, quackery, and kinds of abuse—

"But it *does* exist! Not often, of course . . . and it baffles explanation. All I can say for now, on behalf of my colleagues and myself, is: thank Heaven you are a regular and respectable member of the medical profession! There is no scientific way to explain what you are doing. But you'll have no further complaints from us, I assure you."

During the next few weeks, the crush of Dr. Olie's office practice increased in geometric progression. The miracle of his fingertips did not wear off; on the contrary, he seemed able to cure any and every case that came under his care. His waiting room filled

to overflowing, and three policemen were assigned to keep order outside. The doctor could neither sleep nor eat. Bit by bit he approached the brink of exhaustion, but still he drove himself, if only to avoid thinking about the enigma that lay in the touch of his hand.

The crusher came when John Stevenson, who happened to be the publisher of the local newspaper, featured the story of his miraculous cure in a full page Sunday editorial. The wire services picked up the story, complete with half-tone cuts of before-and-after Xrays, and certified pathology reports. From then on practice became impossible. Dr. Olie was deluged with telephone calls, telegrams and personal pleadings for help. When his office nurse found him one morning asleep in his swivel chair in the same position she had left him the night before, she firmly closed up the office, led him stumbling out to her car and drove him upstate to a friend's farm for sanctuary.

After three solid days' sleep and a week of good food and daily tranquilizers, the doctor's tremors began to subside and he felt almost human again. He continued to rest. Time had no meaning here; he might have recuperated for two weeks or two years, but one day he felt well enough to walk down to the lake shore and

take an old rowboat out to fish for awhile. Clouds played tag with the sun; when the doctor beached the boat again, he found himself whistling. Walking up the hill from the lake, he was suddenly aware of the world about him again, and once again he gave thought to grappling with the terrible power he seemed to have acquired.

Two tall men in grey topcoats were waiting for him as he reached the house. "Dr. Olie?"

"Yes."

One of them extended FBI identification. "I'm sorry, but you'll have to come with us. We need you."

"How did you find me?"

"Your trail was easy to follow. Now, if you will just come with us—"

"But why?" Dr. Olie protested. "You can't just come and cart off a private citizen—"

"I'm sorry. We have orders. You see, there has been a disaster—an assassination attempt on the President. He is failing rapidly, and the White House physician has sent for you, against considerable protest."

The trip to Washington was swift, first in a large black car and then by helicopter. Before he knew what had happened, Dr. Olie was being rushed along carpeted corridors, through a maze of rooms and into a sickroom where a small grey man lay in coma

with a bullet lodged in his brain. Swiftly the doctor examined his patient. Moments later the President was sitting up in bed, shaking his head in confusion and asking to be carried to a chair. A day later the President's recovery was so complete that careful Xray examination failed even to locate the bullet.

An attempt was made to keep the episode secret, but there was a leak to the Press from somewhere high in the Administration. Overnight Dr. Stephen Olie was famous. Congress paused in their deliberations to declare him a National Resource, while the United Nations claimed him for humanity. Leading clergymen the world over debated the moral issue of whom he should save first, since it was obviously impossible for him to go to the aid of every desperately ill patient. On one occasion, in the cause of peace, he was whisked into a bulky foreign aircraft and flown nonstop to the Kremlin to cure a certain high-ranking official of his cirrhosis. The newspapers debated the morality of that, also.

A committee was set up, composed of two physicians, two Senators and Adlai Stevenson, to determine who should have priority on Dr. Olie's services. The committee could not agree. Meanwhile, Dr. Olie was kept busy 20 hours a day treating long lines of patients on a first-come,

first-serve basis. On the second day a riot broke out; the doctor was saved from the lethally grateful embrace of the mob only with the greatest difficulty. He was taken to a master bedroom in Blair House and put to bed, given vitamin injections and subjected to electrocardiograms. Double shifts of special nurses babied him. Presently he forced them to let him sit up in a chair and was left alone to stare out the window at the grey buildings of the city (except for the Secret Service men who were assigned to insure his personal protection).

For three days he sat, hardly moving, barely eating, searching to find a solution to the dilemma as frustration, rage and desperation arose in his mind.

For another three days he sat staring at his hands. Once, he had wished for a miracle—an idle, hopeless, vagrant thought—and the miracle somehow had come about. And now, hour by hour, as committees, newspapers, television programs, governments, clergymen, doctors and lawyers all clamored for his services he was hating that vagrant thought, wishing desperately to retract it. *If only he had never wished it. If only the magic could be gone—*

His brooding was interrupted by a representative from the White House. He was most regretful to interrupt the doctor's rest, but a famous Senator had developed

laryngitis on the eve of a critical filibuster and the President requested that Dr. Olie see him.

Dr. Olie declined.

The representative blinked. "But sir, it's an important part of the Administration's program. The President personally asks—"

"I said no," the doctor replied.

"But I'm afraid the President insists—"

Dr. Stephen Olie rose slowly from his chair, feeling a chill going through his body. Then something seemed to break in his mind; in a moment of blind, screaming rage he fought them off, smashing his fists against the wall, throwing chairs through windows, tearing his clothes and cursing, as the Secret Service Men—doubtless afraid of damaging the holder of the Great Gift—fell back and looked at him, fearfully.

He felt filled with rage and hate. He had not asked that the gift be given to him; he had not even realized it when it at first was. Every trace of love or even compassion for humanity seemed to leave him, now—a mob, greedy and grasping for life, avid for it, having together no thoughts or hopes except for themselves—not caring if their incessant demands and ceaseless pressure to be healed drained the healer dry and left him dead of fatigue; just so long as they themselves were made whole.

Save me! was the relentless cry. *Save me!* And not one, not a single damned one of them, paused to say (with even a trace of concern): *Physician, heal thyself . . .*

And as the rage and hatred mounted up in him he felt—suddenly—a great change. This time it was unmistakable, though the *why* of it was as unanswerable as the *why* of the other, earlier change. Or the *how*. And with the change descended a great calm. Strangely, he now felt better. Different, certainly, but better.

"Forgive me," he said. "I'll see the senator now. I am much better . . .

"Laryngitis, hmm?" he said, happily, as the senator croaked at him. "Well, let's just see what we can do."

Smiling, feeling the power surge in him, he felt the senatorial pulse and touched the senatorial throat. The senator took a horrified gasp, turned blue and dropped dead at his feet.

The Secret Service men stared at Dr. Olie, moved towards him, moved—except for one—away from him. The exception clasped him grimly on the shoulder. And at once fell, choking, to the floor. In a second he was still. Dr. Olie shrugged.

"It's really very simple," he said, answering the unvoiced question. "You've all heard of the

power of life and death." Those in the room shrank back still farther from him. He got up from his chair, stretched. "Now," he said, "it's complete, you see. Now it's complete . . ."

No one tried to stop him as he walked out. The word had spread rapidly. He went to his hotel room and there, humming tunelessly, he cut his common carotid artery with a razor blade.



EMSH .

CORRECTION, PLEASE

In the introduction to Philip K. Dick's story, CANTATA 140 (July 1964) we said that ". . . all presidents so far have been . . . of British descent . . ." Allow us to be the first to point out our own error and to acknowledge the Dutch origins of the Van Buren and Roosevelt families. Sorry. Sorry. Sorry.

—A. D.

Have you ever experienced "the in-between", as Davenant called it? Voices heard and sights seen just after passing from wakefulness, just before passing into sleep? If you ever have, you will recognize the reference at once. If you never have, do not scoff—the phenomenon exists and is real. Let's check a little bit farther . . . have you ever felt a curious little electric-shock sort of thing inside your head while you were walking down the street, after which things were never quite the same? If you have not, count your blessings. If you have—as Davenant had—and if you haven't yet figured out the what and how of it, then Miriam Allen deFord's story has much to tell you . . .

SLIPS TAKE OVER

by Miriam Allen deFord

DAVENANT LOOKED UP FROM his beer with interest. Words were a hobby of his, and though he had often seen "Bah!" in print this was the first time he had ever heard anybody say it.

"Interviews with Martians—and photographs of them!" the man next to him had said. "Bah!"

Davenant had checked out of his hotel, frugally, to save another day's rent, and had two hours to kill before his plane left for Boston. He was through with the work that had brought him to New York, and he could think of nobody he wanted to call up or go to see.

Strolling with his traveling bag in the general direction of the air terminal, he had been brought up short by this little bar he had never noticed before.

"Tim's Place," it said in modest neon; and it had an old-fashioned air. A good place to waste time in, he thought, if it happened to be quiet.

It was quiet enough. There was nobody in the bar at this mid-afternoon hour except the bartender and this bald middle-aged man in a tweed suit. Davenant ordered a beer and had just lifted his glass when he heard that "Bah." He

wasn't sure whether the man was talking to the bartender or to him.

It was Davenant he was addressing. His left hand indicating a headline on a newspaper spread before him—which one, Davenant couldn't make out—he gesticulated with a half-full highball glass in his right.

"Science has proved," he went on to the receptive expression on Davenant's face, "that not one of the planets of our solar system is habitable, at least not for creatures like ourselves. The best you could hope for on Mars would be a thinking mushroom. Venus, a thinking fish—a very odd kind of fish. Jupiter, a thinking salamander."

"You don't believe, then, that beings from other planets are watching the earth?" Davenant asked.

"I didn't say that. This universe is full of suns, and a lot of them must have planets revolving around them. Some of those planets may very well be populated by sentient beings. But any civilized—let's say entities—capable of traversing illimitable space would probably be so different from our pattern we wouldn't recognize them as human, or even as individuals. They wouldn't resemble us the least bit, let alone be able to communicate with us.

"No," he went on reflectively, "truth is so much stranger—and so much more familiar. Like this world we're in right now."

"You mean—just our world?"

"I mean *this* world—this frame of reference parallel to the one you come from—I imagine, the same one I did—this one we've both slipped over to."

Davenant gaped at him. The man seemed sober, and perfectly sane.

"I don't get you," he said.

"Look," retorted the bald man. "I can tell. I've never missed a slip-over yet. But maybe it's just happened to you and you don't understand."

"You seem to be an educated man. Know any higher mathematics?"

"I ought to. I'm an accountant."

"I don't mean arithmetic. I mean this high-up stuff. Space-time continuum, things like that."

"Sure, I know a little."

"Well, then, didn't you ever hear about multidimensional worlds—parallel frames of reference? I don't know how many there are—nobody does; innumerable ones, possibly. But I do know that in each of them, some few people are so constituted psychologically that the film between is weak—so that they can and sometimes do slip over from one to another. And I miss my guess if you aren't one of them—just as I am."

"I'm afraid you're way beyond my depth," Davenant said.

"No, I'm not. See here." The man in tweeds emptied his glass at a gulp. "Tim!" he called down

the bar. "Another of the same for me. And fill up this gentleman's glass."

The burly bartender did the needful, and then stood listening. Davenant nodded his thanks. The bald-headed man went on.

"Ever hear about the farmer who went to his barn to milk his cows, and the cows were found unmilked and the farmer never seen again? Or the private plane that crashed with only the owner in it, and the plane was found, but never the pilot? Or the diplomat who walked around the horses of his carriage—and vanished? Hell, Charles Fort's books are full of cases—supposing you ever heard of Charles Fort. Take Dorothy Arnold, and Judge Crater, and, away back in the early 19th century, Chief Justice Lansing. Where did they all go?

"And how about the people who suddenly turn up on a park bench or on some busy street, years and miles from the life they used to know? Usually they say they can't remember. But where had they been?

"Or take the universal myth, in every country and older than history, of the children stolen by the fairies, or the shepherd who finds a hole in the mountain and enters it. Or Rip Van Winkle. Or the Pied Piper of Hamelin. Myths are just attempts to explain facts without the necessary data.

"And take it another way—

what about people like Kaspar Hauser, who suddenly appear—where from?

"So what did happen? In my book, they all slipped over. They slipped into the slot and the zipper closed on them."

"You mean you think they got themselves transplanted into some other dimension?"

"Not the way you probably mean. They couldn't walk out of locked rooms, or turn themselves inside out, or dig holes from the bottom up. But I know darned well they slipped over. I don't know where Crater is—maybe he just got himself murdered—but I've met Miss Arnold—here. She's pretty old by now. And I've seen plenty of others—like you. I recognized the look in your eyes the instant you stepped in here.

"Hell, I ought to know. I'm a slipover myself, as I said. So's Tim here."

Tim nodded solemnly.

Davenant smiled uncertainly.

"Well, it's a good story," he ventured.

The bald man frowned.

"Is that what you think?" he said. "Tell me, a while back, didn't you feel a—a kind of electric shock? In your head? We usually do."

Davenant started. That described it exactly—that funny feeling, just before he'd noticed Tim's Place: like a minor earthquake inside his skull; and then

everything seemed to right itself in a second, as if it had been—crooked, before. For a moment he had thought worriedly about high blood pressure, wondered if he'd had a slight stroke. He nodded involuntarily.

"I thought so," said the man.

Davenant got hold of himself with an effort.

"Now wait," he cried suddenly. "I've got you cornered. If this is a different world, how does it happen you speak English?"

"Why not? Don't you? This is New York, isn't it?"

"You mean, you think every city—every place on earth—has its—what did you call it—parallel?"

"Sure. I know they have. I've been in enough of them, in my native world and here."

"So your—your New York has an Empire State Building, and a Rockefeller Center, and a Statue of Liberty, just like mine?"

"I didn't say that. It has the equivalents, but they may not have the same names, or be in the same places, because the history is different. For instance, in our former world I remember there used to be a florist's shop where this bar is now."

Davenant laughed.

"All right, my friend," he said.

"I'll take you right up on that. I'm just down here on business—I live in Boston. Pretty soon I'll be taking a plane home. And I'm willing to bet you anything you

like that when I get there Boston will be just where it always has been."

"You can get your plane—though the airport may not be where you expect. And you'll reach Boston on schedule. Boston Harbor will be there, and Beacon Hill, and the Charles River—all natural objects. But they might not be called by the same names (I don't know—I've never been in Boston in this world), and all the buildings will be different. And in the whole city there won't be one human being you ever saw before—unless you meet another slipover."

And even if he did meet another," the bartender interpolated, "he might not be from the same world originally, Mr. Gorham. You and me aren't."

"That's right. I didn't think of that. I've got a hunch, though, that you and I did come from the same place, Mr. —"

"Davenant. Charles Davenant."

"My name's Gorham—James B. Tell me, Mr. Davenant, did you ever hear of Aristotle, or Julius Caesar, or William the Conqueror, or Shakespeare?"

"Are you kidding?"

"O.K. Tim—you ever hear any of these names before?"

"Now, Mr. Gorham, you know I ain't had much education."

"All right, then tell me—who was Lincoln? Who was Washington? Ever hear of Hitler? Or Stalin? Or Eisenhower?"

"You've got me," Tim said soberly.

"You see? You and I have the same history—Tim hasn't. The great names he knows we wouldn't recognize. But he came from *his* America, just as we came from ours."

"But once in a while I do meet somebody from my own place," Tim put in eagerly, and then we remember the same things. Like, Randolph took Richmond in the Civil War, or Thomas Endicott was the first president. . . . It's never anybody I ever knew before, though."

"See?" said Gorham. "That's the way it goes, Mr. Davenant. History gets changed a little in each world."

"Few slipovers, relatively—in numbers, many. Hell, people disappear from every big city every day. If they happen not to have friends or relatives to notice or care about them, they're never even missed. You married?"

"No," said Davenant uncommunicatively. He was thinking.

"That's good. The worst part of it all, the way I see it, is the wife or husband left to wait and wonder and never know what happened. It's worse for them than for the one that slips over, for at least he knows he isn't dead and didn't desert. I was lucky that way too—though I'd give anything to be able to let my mother and dad know I didn't just run out on them."

"It's funny—sometimes more

than one member of a family is the special type that can slip over. I heard of two brothers, out in Oakland, California. They both slipped over, four years apart; both did it the same way—walked out of their house—two old bachelors they were—leaving the lights burning, the radio going, dinner on the stove. When the second one arrived, they found each other. If they're not dead, they're still together in Oakland—*this* Oakland.

"But I've never heard of a married couple who were both slipovers. They say opposites attract—perhaps slipover types never marry each other. Sometimes when a man or woman has been here a long time and seems likely to stay here, he or she remarries. It's bigamy, of course—but the law will never catch up with them. I'm married now myself—but then I never was before."

Davenant stared at the two men.

"You really believe all this stuff?" he asked slowly.

Gorham sighed.

"I know—it took me a long, hard time too. That's why I try now to help others, when I recognize them."

"Haven't you noticed that nobody's walked in here since you did? It's not that quiet, even at this hour, eh, Tim? I didn't want us to be interrupted. I gave Tim the wink while you had your back turned and he locked the door so

we could have a long talk. This is his own place—he's boss."

"That's right," said Tim. "Mr. Gorham's been a good friend to me—helped me buy this joint. I don't mind losing a little trade once in a while to do him a favor."

Davenant felt the blood rushing to his head.

"Hey!" he yelled. "I don't like this! Let me out, or—"

"Easy does it, fellow. You can walk out any time you want. We won't stop you."

"But look, let's discuss this quietly a little, shall we? Have another beer, and go ahead and ask me any questions you want."

Davenant's momentary anger left him. He could be a good sport and go along with a joke. He glanced at his watch. Plenty of time yet.

"O.K.," he said. "What about clothes? Or this bag of mine?"

"Your clothes were on you, and they came over with you. It isn't like teleportation. But look and see if you've got a return ticket to Boston. You won't have, because you didn't buy one here."

Davenant pulled his fingers away from his empty pocket as if they had been bitten.

"It's some sort of sleight-of-hand," he muttered. "I can feel the money still in my wallet."

"Why not? You had that on you too—though you can't spend it here. You can exchange it for as much as you need of mine. It will

look different, but it will be good, and I can keep yours as a souvenir."

Interesting new con game, Davenant thought. Gorham seemed to read his mind.

"Listen, Mr. Davenant, if you think I'm playing a silly joke on you, I can prove to you who I am."

He began producing identification—driver's license, Chamber of Commerce membership, credit cards.

"I want to help you, my friend. Nobody helped me, at first, and I know how tough it is. Say you go to Boston, and for the sake of the argument say you find things the way I've told you. You won't have your home or your job—they're off somewhere in another parallel frame of reference. See here—"

He held out a business card. James B. Gorham, assistant vice-president, Bank Mutual Life Insurance Company.

"We can use another accountant in our Boston office. You'd have to qualify, of course. But you can refer to me, and that will get you over the worst hurdle for every slip-over—not having any proof of degrees or experience."

Davenant look suspiciously at the card in his hand.

"Never heard of the company," he remarked.

"It's an old-line one," said Gorham equably. He pointed to a printed statement: "Established 1848."

Something occurred to Davenant. His face brightened with triumph.

"Got you at last!" he chuckled. "So you're a 'slipover' yourself, are you?; *You* didn't have any credentials, either, when you came. So how come all at once you're assistant vice-president of a big insurance company?;"

"Not all at once, Mr. Davenant." Gorham's voice was dreary. "I've spent half a lifetime here by now. I guess I'll die here. I don't know that I'd even want to go back any more—I've forgotten a lot, and most of the people I knew there would be dead."

"Well, what about the people who do go back?;" Davenant demanded. "Why don't they tell what happened to them?; Why do they always have amnesia, when *you* don't have it here for the—for your other world?"

"Why do they always *say* they can't remember, you mean. Maybe a few really do have amnesia from shock. But just consider a minute. What would happen to anybody who'd slipped over and back, and then tried to explain the truth?; For that matter, what would happen to anyone, in this or any other parallel world, who would tell the truth to anybody except another slipover? How long would it take to put the raving maniac in a mental hospital? I guess plenty of them are there right now as it is, poor devils.

"And think how much worse it would have been in the days before people had any scientific concepts. Think of the fate of any poor fool then who told where he'd been or where he'd come from: chained to an iron bar on a heap of straw, or burnt at the stake as a witch."

"Now, wait a minute," Davenant objected. "You're saying the civilizations are the same in all these so-called parallel worlds of yours? You mean—say this really is a different world we're in, it's in the same fix today as ours—threatened with nuclear war and destruction and chaos and all the rest of it?"

"I said they were parallel worlds, my friend," Gorham replied gravely. "The history is different in detail, but in the end, like causes lead to like effects. As for your second question, unfortunately the answer is yes, at least so far as this world is concerned.

"But you've got a problem of your own to solve before you have time to discuss politics or sociology. Ask me anything you want to about that. And any time you say, Tim will open the door and you can walk out and try to find your way to Boston."

"If this whole thing is an elaborate practical joke," said Davenant painfully, "I give in; you've made a fool of me and let's call it quits.

"But all right; I'll play along with you some more. Why do some

of these people who disappear turn up again right away, in a few hours maybe, while others never come back at all?"

"I don't know why; I just know they do. Some people slip back and forth frequently, and learn to manage it. And I've met a few who made such a short transition—'translation into the positive absolute,' Fort calls it, whatever that means—that they hardly realized it themselves. Maybe you'll be one of the short-timers; I hope so, for your sake.

"I've never heard of anybody who slipped over into more than *one* other world, but perhaps there are some of those too. For the quick back-and-forthers, it may seem that they've just had a vivid dream, if it happened while they were asleep. If they were awake, the double shock might be too great and they might just blank out and forget the whole thing. Or it might even kill them. Perhaps that's what happens to some of the people who are found dead in bed, with no evidence of disease."

Scared and sick, Davenent stared at Gorham. He was remembering things. He groped his way to a chair by one of the little tables and sat down.

One night, when he was a very small boy, he had had a strange dream that he could still remember. In his dream, he was walking down a street, when suddenly he heard a dull rhythmic booming. He

asked a woman passing by what that was, and she answered, "That's the washerwomen who live down under the earth."

A child's rationalization. But he was in that period of life when illusion and reality are inextricably mixed. So soon afterwards he asked his mother, "Why don't I hear the washerwomen any more?;" "What are you talking about?;" she asked, and he explained. She laughed. "You just dreamed that, dear," she said. . . . But he never forgot.

He remembered something else. Often, as he grew older, he had a strange experience just before he fell asleep. Unknown faces would suddenly flash before his consciousness, or he would catch scraps of conversation that he could never recall. Before he was grown, he had in his own mind divided both sight and hearing into three categories—ordinary vision and sound, purely imagined or remembered vision and sound, and what he called "the in-between." He supposed everybody shared his experience, till one day he mentioned these hypnagogic experiences casually to his chum. "Are you crazy, Chuck?" Russell wanted to know. "Why," he answered, astonished, "don't you have it too?" "Have what? You cuckoo or something?" After that, he never spoke of "the inbetween" again.

Gorham and Tim were watching him compassionately. He rose shakily to his feet. "So that was

what—"he began quaveringly.

And then all at once he recalled something. He felt his face turning white. He had never been so angry in all his life.

"Interviews, and photographs of Martians!" he choked. "Of all the dirty tricks!" How grown men could get a kick out of playing a rotten joke like that—trying to kid me into believing—

"Listen, you! It's only a few years since those flying saucer books began to come out. You've been 'here' for years and years, have you? Then where did you learn about those nuts who think they've met extraterrestrials? And don't tell me you've been conversing with some other 'slipover' that just got here and told you about it. That's not the sort of thing that would be likely to come up in an ordinary conversation!"

"I said these were parallel worlds, Davenant," said Gorham quietly. "They have parallel myths, too."

"Rats! Let me out of herel Now—this minute."

"Certainly. Let him out, Tim."

Tim walked around the bar, reached into his trousers pocket, and imperturbably unlocked the door. Then he blocked the way and held out a broad palm.

"That'll be 50 cents, mister, for that first beer," he announced.

Scarlet with embarrassment Davenant pulled a bill from his wallet, noted the "I" on the corner.

"Keep the change for the floor show," he growled.

For a second, then, he almost snatched the money back. "Nuts!" he mumbled. He pulled the door open and slammed it behind him, too furious to glance back at the pitying faces, too furious to do anything but march rapidly down the street toward where, he knew, the west side air terminal was.

It was right there. Did the airport bus look a little different? Everything was going to look a little different now; Gorham had thoroughly upset him with his nonsense. But the plane looked just like the one that had brought him down here, and so did the bus from the Boston airport to the city.

He needn't go to the office till tomorrow; he'd phone from his bachelor apartment on the wrong side of Beacon Hill. He hailed a taxi, and noted with an unpleasant shock that it was pink. Had he ever seen any pink taxis before? Well, he wasn't very observant, and there were always new taxi companies starting up. They'd gone almost the whole distance before he realized he was keeping his eyes away from the window. At the same moment the driver spoke.

"Did you say Number 12, Mister? There ain't no Number 12 on Laurel Street."

It was Laurel, all right; he recognized some of the houses. But where his apartment house had stood there was a parking lot.

Davenant felt a little sick. He'd sort this all out soon, but now he had to get somewhere where he could be alone and sit down and think things over. "Take me to the Copley-Plaza," he said in a strained voice.

"Mottley-Plaza it is," said the driver. Davenant shuddered.

He wouldn't look; he wouldn't notice the differences. He got a room without difficulty and followed the bellboy numbly into the elevator and down the hall.

"Hey!" said the boy, about to leave, "what kind of funny money is this?"

Davenant dared not glance at the half dollar he had just given the boy. Whose head should be on it instead of Franklin's? He tried to smile but the smile turned into a grimace. The boy looked a little frightened. "Cheap skate!" he muttered under his breath, and left quickly. Davenant locked the door.

"Get hold of yourself!" he admonished himself sternly. He took off his tie and doused his head in cold water. When he stopped shaking he set his jaw and lifted the phone. He gave the operator the familiar number of his office.

He hung up, and the phone rang almost immediately. With his heart beating too fast, he said: "This is Davenant. Put George Watson on, Lucille." A voice broke in; it was the hotel switchboard girl again.

"I'm sorry, sir, but I got a recording that the number you called

is not a working number."

Suddenly he was very angry.

"Look," he snapped, "I'm calling Black, Watson, and Heilkrammer, in the Old State Building. Maybe they've changed their number overnight, but I don't think so. Get them for me."

"I'm sorry, sir, it isn't my—" But he had hung up again. This time it was nearly five minutes before she called him back.

"There is no Black, Watson, and Heilkrammer listed in the phone book. And there is no Old State Building in Boston."

Davenant cradled the phone without another word. He sat back in his chair, his head whirling.

Even supposing that preposterous nonsense of Gorham's had been the truth, then how had he been able to get here at all? Why had the man in the air terminal in New York taken his money for the ticket? Oh-oh—now he remembered. He had cashed a traveler's check; presumably they were the same in both worlds. And the taxi driver—he must have paid him from the change he got at the terminal. But the bellboy's tip had come from another pocket; it was money he had had on him before he—Before.

Wait: there was one way to get the thing straightened out, or as much as it could be straightened out for the present. He fished in his wallet for the card Gorham had given him. Bank Mutual Life In-

insurance Company, James B. Gorham, assistant vice-president. He read it aloud to see if he could talk without his voice trembling; then, his lips and fingertips cold, he lifted the phone again and gave the number on the card.

He was not surprised—only scared to his very depths. Somehow he had almost expected it.

"That isn't a working number either, sir." The switchboard operator hesitated. "Excuse me, but these *are* Boston numbers you're calling?"

"Never mind," he managed to breathe, and he got the receiver back in its cradle. Something had just occurred to him.

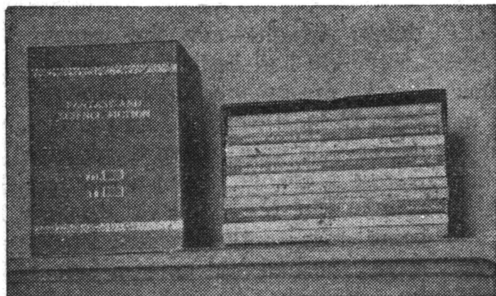
He recalled his angry exit from Tim's Place, he recalled walking

indignantly away and down the street. And now something else came back to him. Somewhere between the bar and the terminal, that strange thing had happened to him again: that tiny instantaneous explosion, like a small electric shock, piercing his brain; then suddenly things seemed to right themselves again.

But where? Into what world had he slipped then? Where in God's name was he now?

He turned his face to the back of the armchair and clung to its sides. Dry sobs shook him and his throat felt raw.

"Help me!" cried Davenant to somebody or something, a lost child. "Help me! I want to go home!"



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The connection between bears and gulls may not be at once apparent, but it's there good people; it's there. Eric St. Clair is perhaps the leading American writer of children's stories about bears, having sold close to 100 of them; and has had a rather limited range of occupations—statistician, social worker, horticulturalist and shipfitter. He is now a laboratory assistant in the University of California's Physics Department, at Berkeley. His wife is well-known as a Science Fiction writer, both as Margaret St. Clair and Idris Seabright. Two of Mr. St. Clair's bear stories have been published in The Magazine—TOO MANY BEARS (Sept. 1955) and THE MOTORMAN'S GLOVE (April 1956)—but this is his first about gulls. And, for that matter, about Olsen. "My first sale in the genre," he says of it; "though not much Science Fiction . . . no space warp, nobody named Xalff." Seems to have done all right without them, though.

OLSEN AND THE GULL

by Eric St. Clair

ONE HOT AFTERNOON, SOME five months after he had been cast away on the island, Olsen found out how to run the weather.

A gull told him how.

There wasn't a thing on the island except gulls and their nests—millions of each—and the place was knee-deep with guano. Any other man, five months alone, hundreds of miles off the shipping lanes, might have gone crazy.

Not Olsen, though. He lacked what it takes to go crazy with. He chased gulls by the hour, yelling at

them because they could fly away any time they liked, while he couldn't—but he never talked to them in a conversational way. Nor did he talk to himself. Olsen, a man of few words and even fewer ideas, had nothing to say.

As a pastime, for amusement, he kicked the gulls' nests about, and trampled their eggs. True, the eggs were his sole food—but how he detested them! They were foul and rank and fishy, and the rain-water he sometimes found to drink them down with always reeked with

guano. There were millions of eggs; gladly he trampled them!

On this particular afternoon Olsen trampled eggs in time to a chant he had made up, "Tromp tromp tromp!" and he was eggy up to his knees. He was neither sad nor happy about it; he just trampled and bellowed because it seemed the thing to do.

A gray gull swooped down, landed, and stepped daintily toward him on its pretty little pink legs.

"Olsen," said the gull.

Olsen's bellowing died away. His trampling stopped. His mouth fell open. "Hoo?" he said. "Hawm? Now I have gone crazy."

"Very likely you have," said the gull. "But pull yourself together, Olsen. I propose to do you a favor."

Olsen's mind, never a quick one, remained motionless.

"You're a fine fellow, Olsen," the gull went on, "and we all think the world of you—but couldn't you be just a little more careful with our nests?" The gull eyed Olsen's eggy legs with some sort of expression: a gull's face being the type it is, it's hard to tell just what might be on its mind.

"Well hey," said Olsen in his own defense. If you—"

"What you need," the gull said, "is something to take your attention away from damaging our nests. Wholesome recreation—"

"Burlesque shows!" breathed Olsen beatifically.

"Not quite," the gull said. "I have something different in mind. Now observe—" the gull hauled a length of stout twine from under its wing—"With this bit of twine (and the age-old wisdom I shall impart to you) you can build a cat's cradle that will raise the storm, or quiet it, whenever you feel like it. You can run the weather. My!" the gull said heartily, "Won't that be *fun*!"

"I guess so," said Olsen. "But—"

"The power, Olsen! Think of it!" the gull cried ringingly. "The grandeur of the primeval storm! The roar of the white-crested seas that you can raise! The typhoon screaming, sheets of pelting rain, jagged lightning, the boom of thunder—at *your* call, Olsen!"

"No strippers?" said Olsen. "No fanny dancers?"

Not troubling to reply to this, the gull thereupon taught Olsen the art of constructing such a cat's cradle as would constrain the weather into obeying his, Olsen's, slightest whim.

And Olsen found it sort of interesting. He tried a typhoon, a waterspout, a—but Olsen's mind was pretty limited. His slightest whim was indeed slight. He tried and tried, and after three days, he thought of doing some St Elmo's Fire with his cat's cradle. Then his ideas ran out.

The gulls, meanwhile, had been repairing nests, and laying new eggs. They hadn't much time for this, though, before Olsen got

bored with the weather. One storm is pretty much like another, especially with a dull fellow like Olsen in charge—a spot of rain, a bit of wind, what's so wonderful about that?

He had been eating eggs right along, which the gulls did not apparently mind, but now that his storms had lost what charm they had had, Olsen noticed once more how bad the eggs tasted. Ugh!

Bellowing the chant he had made up, "Tromp tromp tromp!" Olsen kicked nests right and left, and smashed many a fine egg.

"Olsen!" said the gray gull. "Oh, Olsen!"

"Tromp tromp tromp tromp."

"*You stop that!*" The way the gull said it made Olsen stop.

"Really, Olsen," the gull said. "I can't figure you out. You're on an island paradise with the power of a god over the weather, a fine climate, plenty of good, nourishing food—"

"Food!" shouted Olsen. He caught up a nestful of eggs. "Lousy, stinking eggs!" He dashed the nest to the guano-covered rocks at his feet. "Fooey on such eggs!"

The gull gazed at Olsen in frank astonishment. "You mean," it said slowly, "you don't *like* our eggs?"

Olsen merely spat loudly on the nest he had smashed.

"If it's food you want," said the gull thoughtfully, "give me that twine." Olsen did so, grinding the remnant of an egg under his heel.

"I *am* surprised," said the gull. "Why, we all like our eggs!"

Olsen was quite horrified. "*You eat your own eggs?*"

"On occasion, yes." Placidly, daintily, the gull worked with beak and claws. A truly wonderful cat's cradle took shape.

"CANNIBALS!" Olsen shouted.

"Oh, nonsense," said the gull. "Do pull yourself together, Olsen. Pay attention." It displayed the new cat's cradle, finished. "With this Wishing Pattern (which I will instruct you in making), you can command the sea to deliver any toothsome delicacy you want. For example, thus:"

At once, the sea parted beside them. A hefty little oaken cask rolled to Olsen's feet. "Me?" said Olsen, and the gull nodded. Whimpering with joy, Olsen caught up a stone. Drooling, he battered at the head of the cask.

However, the cask turned out to contain what seemed to be a blend of gravel, worms and various fish—all in a pretty well decomposed state. "Foo!" cried Olsen, shuddering at the smell.

"Well, my goodness, Olsen," said the gull fretfully. "Isn't there *anything* you like?" It pecked with gusto at what was inside the cask, making small cooing noises of pleasure. "Your very peculiar tastes are quite beyond me," the gull said after a time. "You must order for yourself from the sea. I will show you how."

Olsen would have made some comments on the dietary of gulls, but words (as usual) failed him. Instead, he allowed himself to be taught how to build the Wishing Pattern cat's cradle.

And now, whatever delicious foodstuff Olsen asked for, the sea would bring him. He scowled, as his mind churned slowly . . . what should he ask for . . . what did he want . . . ?

This time, the gulls had almost a week of peace. They repaired old nests, they built new ones, they laid a thousand eggs.

The happy period ended, though, for the same reason as before: Olsen was a man of no imagination whatever.

The Wishing Pattern cat's cradle worked just as the gull had said it would. Olsen got his hardtack and his salt pork and his tub of pineapple sherbet and his barrel of rum—and he settled down for an orgy. He gnawed at the hardtack and chomped the salt pork. He lapped up sherbet. He guzzled rum.

But the salt pork turned out to be too salty. The hardtack jarred the back of his head when he gnawed it. The sherbet melted, and ran. Only the rum really hit the spot—but even a lot of rum could not give Olsen any ideas for food other than what he was used to. Hardtack, salt pork and pineapple sherbet were all he could think to ask for: hardtack, salt pork and

pineapple sherbet were what he got. Plus the rum, of course.

So, when the week was up, here was Olsen back at work, kicking nests, trampling eggs, chanting his "Tromp tromp tromp!" Just like old times, except that the reek of rum was now added to the eggy stench of destruction.

"Olsen!" cried the gull almost in despair. "My good Olsen!"

Olsen picked up an egg. He sighted at the gull.

"Please," the gull begged, preparing to dodge. "Have you no thought for the finer things the sea might bring you?"

"A keg of stale worms!" Olsen shouted. He hurled the egg, but missed widely (because of the rum in him).

"Olsen, my pet!" the gull wailed, as a gull wails when it feels bad, "My pride! My joy! My good fellow! Isn't there something . . . something . . . I don't know what you want: don't *you* know? Tell me! *Anything* to keep you from smashing our eggs! What, oh what, *do* you want?"

Olsen stood as though hypnotized by the gull's earnest gaze. After nearly a minute, a grin took over his face. "Women," he said.

"So!" said the gull. "The love of a good woman."

Olsen nodded eagerly, as this new idea of his slowly took over. The love of a good woman. . . . He thought of the good women who stroll the streets of Buenos Aires, of

Marseilles, of Singapore. He sighed noisily, and the rum in his head went round and round.

"I'm sorry, Olsen," said the gull. "I really am—but how could I call up a woman for you, out of the sea?"

"Easy!" cried Olsen. "Like this—" With two fingers in his mouth, he gave out a shrill wolf-call. And he stared about him, as if he really expected a woman to come in answer. Five months with no company but that of gulls had done things to what passed for Olsen's mind.

Pierced by the whistle, the gull shuddered. "Don't do that," it said. "But I'll show you how to make a Mermaid Line. Wouldn't a mermaid do, a lovely, lovely mermaid?" Coaxingly, the gull spoke.

"Mermaid!" sniffed Olsen. "Half fish, half girl! Why, how could I. . . ." Olsen's voice trailed off as he scowled, trying to think. "Say!" he said after a bit. "Would I catch one just like I like?"

"You would!" the gull said. "She will be exactly what you ask for—so *beautiful*, and she will *love* you, Olsen!"

Grinning, Olsen gave back the Wishing Pattern, and the gull unraveled it. "Observe," said the gull. "Over and under. Now reeve through the bight, so. Then you . . ." Olsen tongue a-dangle, followed each move of the gull's pink claws.

After a couple of trials, no more

than that, Olsen got it clear. (He was a sailor; even swimming in rum, he understood fancy rope-work.) "Now," said the gull, "toss one end into the sea."

First, though, Olsen tied the line securely around his wrist. "But," said the gull, "What if—?"

"I don't take no chance she get away," said Olsen—and he threw the other end into the sea. It was a ten-foot line, intricate.

Almost immediately the line quivered. Olsen had caught his mermaid. No need, though, to haul her in. Gladly, she leaped from the foam; willingly, she ran to him. Adoration swam wetly in her big blue-green eyes.

Olsen threw back his head, and hollered with horror.

With her mouth, the mermaid caught the line close to the knot around Olsen's wrist. She tugged impatiently. She must get back into the sea at once: this mermaid could not live on land.

Still hollering, Olsen, resisted the tug—but rum rolled and seethed inside his head, and his knees buckled. He recovered, and pulled desperately, straining against the pull of the mermaid. The line between them sang with tension—and suddenly parted.

Olsen reeled, and fell heavily on a heap of guano behind him. The mermaid toppled backward into the sea. Her legs kicked briefly above the water before they sank.

This mermaid had completely

met Olsen's specifications. She was half beautiful girl (the golden legs that Olson had now glimpsed were a delight; the round, young hips, a promise and a treasure) and half fish, from the waist on up; an unpleasant fish, like an outsize carp or a big herring.

But now the fish part was under water, out of sight; only the lovely, lovely legs beckoned for a moment, and were gone.

Olsen's mind was slow—but his instincts were in top working order. "You wait!" he bellowed, and rushed headlong toward the legs, into the sea. But the legs were gone—no, there they were, farther out. He floundered toward them. A wave caught him; he choked on the bitter water, and it almost sobered him. There were the legs again, though, in a new direction. Instinct conquered reason. Olsen splashed and struggled toward them. A wave swept over his head, but he came up undaunted.

Now, suddenly, there was no bottom at all under Olsen's feet, and he could feel a current taking him to sea. A new instinct, self-preservation, spoke up. "Swim, Olsen," it counseled, but Olsen of course, could not swim. The golden legs flashed close beside him, and disappeared.

And something underneath the water grasped his ankle lovingly and gently. Olsen began again to holler as he felt himself being pulled under, gently, lovingly, but very firmly. After his hollering stopped, there were bubbles. Then the bubbles floated away.

The gull had watched all this with great interest. "What a *remarkable* mating custom!" it said to no one in particular. "Olsen is certainly a peculiar fellow."

It forgot about Olsen then, and set out looking for driftwood to patch up its nest.

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CARBONACEOUS CHONDRITES

by Theodore L. Thomas

THREE MAIN KINDS OF METEORITES come whistling down out of the heavens and strike the Earth. There are siderites, composed mostly of iron. There are aerolites, composed mostly of stone. And there are sideriolites, composed of a mixture of iron and stone. But there are subgroups.

Some aerolites contain grainlike inclusions called chondrules. When the chondrules are partly made up of carbon, the aerolites are known as carbonaceous chondrites. Carbonaceous chondrites are causing quite a bit of excitement these days. The possibility is growing that the carbon may have come from living things.

About 20 years after the American Civil War a French scientist analyzed a carbonaceous chondrite, proved there was carbon in it, but concluded that the carbon could not have come from living things. The cold water thrown by that conclusion hasn't warmed up until recently. New chemical analytical technics have helped.

The carbonaceous matter in a carbonaceous chondrite can be extracted with any of a variety of

solvents such as benzene and carbon disulfide. When infra-red spectra are run on the extract, you get some idea of the nature of the material. When you run the same tests on fossil-containing sediments from Earth, you get some surprising similarities. There are differences, but the similarities are amazing. Chemical analysis has now proved the presence in the chondrites of hydrocarbons, amino acids, a nucleic-acid-like substance, and organized elements resembling fossilized algae. The analytical work is just getting started, too. All of it is aimed at proving the existence of extraterrestrial life.

But we had better be careful. The whole thing might be a fake, as it was with the jaw of the Piltown Man. Someone might be planting carbonaceous material in the aerolites just to make us think there is life elsewhere. These jokesters could stay well hidden in domes on the other side of the Moon, or on Mars, and launch doctored meteorites at us. Or perhaps there is no hoax intended. Perhaps they merely want to break the news to us gently.

The discovery of a new writer is always pleasant, but in this case "pleasant" is not exactly the word. Mr. Norman Kagan, a student at New York City College, bursts upon us with the violence of an explosion—scenes, themes, styles, concepts, all absolutely new—and none of them to our comfort. Perhaps not since the Middle Ages has there been a class of perpetual, professional students such as we are now beginning to have amongst us; and this by virtue of a curious cooperation of universities, foundations, and corporations, absolutely new to the world scene. This may be good—Mr. Kagan does more than suggest it may be bad—but it is something to which we cannot remain altogether indifferent. To say that Perry Zirkle was too smart for his own good is perhaps to beg the question. As Gertrude Stein lay dying she asked her almost life-long companion, Alice B. Toklas, "What is the answer?" Receiving no reply, she said, "In that case—what is the question?"

FOUR BRANDS OF IMPOSSIBLE

by Norman Kagan

"THAT CONCLUDES THE TRAVIS-Waldinger Theorem," said Professor Greenfield. "As you can see, it's really quite trivial."

"Then why did it take people to prove it!" piped up one teenage hotshot.

The bell cut off Greenfield's reply, and most of the class bolted. All the mathematics people at my school are bad—Greenfield the geometrizer was a mild case. His motto was; "if you can visualize it,

it isn't geometry!" Which is not so bad compared to my other course, where rule one was; "If it seems to make sense, then it's not mathematical logic!"

Which reminded me I still had to find out about my grade in that subject, along with about aleph-sub-aleph other things—most important of which was securing a nice fat student-trainee job for the summer that was fast approaching. I elbowed my way past a couple

of teenage hotshots, and then I was in the open air.

I decided I'd check out my marks later—the IBMed grades would be posted on the "wailing wall" all summer. Right now I'd leg it over to the Multiversity Placement Service. I could study for Greenfield's final this afternoon.

I walked across the campus slowly, checking myself out. "Do not judge according to appearance." Try telling that to some of these megabuck research corporations! I mussed my hair and put three more pencils in my breast pocket, and decided not to wear my glasses at the interview. It's amazing how much easier it is to lie to someone you can't really see.

"Hey, Zirkle—Perry—wait half a me'!"

Harry Mandel hailed me from the psychology library. I grinned and waited for him to join me.

Harry is a swell guy, and besides he's a psychology major, not a math competitor. He joined me, puffing, a moment later. "Summer job hunting?"

"Yeah. I've got a couple of interviews arranged, Serendipity, Inc., and the Virgin Research Corporation."

"Me, too," said Harry. He gestured at my tousled hair. "Getting ready? Physical appearance is very important, you know." The short, pudgy psychology major pumped his legs to keep up with me.

It was a warm, comfortable day on the Multiversity campus. The long rows of wooden chairs were already set up for graduation, and here and there was a girl in long hair and levis, or a bearded boy with a guitar. Early summer session people. Lazy jerks.

"What's the word on the companies?"

Mandel wrinkled up his forehead. "Personnel men—not technical people. So if you've got the grades, go all out—anything to avoid the paper barrier."

"Any specific suggestions?"

"Mmmm—well, Fester pulled a full-scale epileptic fit—but then he's nearly a five point. If you're just bright, a few eccentricities ought to do it. I'm trying my bug-on-the-walls gambit."

"You mean the one where you pretend there's a bug that crawls all over the walls behind the interviewer, and you follow it with your eyes."

"No—that was last year. In this one I sort of scrunch up in the chair, cowering—give 'em the impression I can't stand confined spaces, need lots of room—like, say, New Mexico or Arizona. I'm sick of this east coast weather, and the Virgin Research Corporation has labs in New Mexico."

"That's for me, too. I'll see what I can think up."

In the 1980's, it's practically impossible to get a summer job in the sciences—not that the big sci-

ence and engineering corporations don't want you, they do. But to apply, you've got to submit about a ton of paperwork—eight commendations, four transcripts, character references, handwriting samples, personality profiles, certificates and forms and diplomas. Who has the energy?

Science and engineering majors, however, have worked out a swell dodge—we just pretend we're a little bit nuts. The big company personnel departments are endlessly amused by the antics of their nutty research wizards. With the squeeze on for technical people, it's easy to fake looniness well enough for the personnel men to see that cause follows from effect, in that wonderful way of their's, and conclude we're the brilliant boys they're looking for.

Or maybe they just get a kick out of watching us degrade ourselves in front of them.

I had a couple of swell dodges I'd worked out from one of my professors—through the length of the interview I'd keep pulling a piece of chalk from my pocket, sticking it into my mouth, then spitting it out and muttering; "Simply must give up smoking!". For dubious types, I'd offer my *piece de resistance*; all through the talk I would gesture and wave my arms, seeming to shape the very job concept out of the air. Then, when the interview had reached a critical juncture, I'd pause, drop to the floor,

and lie on my back staring at the empty spaces I'd been manipulating. As the interviewer came round the desk, I'd cry out in annoyance; "Simply must look at this from a new point of view!" It worked like a charm.

Except for this time. Not that it didn't; I just never got the chance to use it. On this job, all the craziness came at the end.

The interviewer for the Virgin Research Corporation was a big blond crewcut man with terribly stained teeth and a sadist's smile. He reminded me of one of my philosophy professors. He was talking philo at me too, about half a second after I sat down in the little interview cubicle.

"Glad to meet you, Mr. Zirkle—you're a mathematics major, by your application. Is that right?"

I nodded.

"Sit down, sit down," he said, gesturing. "Now, before I begin to ask about you, I'd like to tell you a little about the activities of the Virgin Research Corporation, Mama, as we call her around the shop. Our organization is concerned with the three aspects of pure research, what we like to call "The three brands of impossible".

I nodded at this. Harry Mandel's eyes had been shining when he'd passed me outside the room, but he hadn't time to whisper more than a fiery; "Grab it, fellow!" to me before I was ushered in. I hunched forward and began to listen.

"If we ignore subjective problems—what the Kansas farmer said when he saw his first kangaroo—we might analyze the concept of the impossible as follows;"

He pulled out a diagram, and his finger danced down it as he continued to speak.

"First, there is the 'technically impossible'—things that are not possible in practice, though there's no real reason why they can't be done. Things like putting the toothpaste back in the toothpaste tube, or sending an astronaut to Saturn—such things aren't practical at the moment, I think!" he said, smiling briefly.

"Then there is the notion of the 'scientifically impossible'—traveling faster than light, or building a perpetual motion machine. These are not possible at all—within the limitations of what we know about the universe. But you'll recall, a heavier-than-air flying machine was a "scientific impossibility" a century ago.

"These two categories have merged somewhat in the twentieth century, though the distinction is clear enough. In the first case, the 'technically impossible', theory allows you to do the impossible—you just haven't the techniques. In the second instance, the 'scientifically impossible', you've got no *theoretical* justification for what you want to do. But in both cases, men have 'done the impossible'—either developed new techniques or

found the flaws and limitations in the theories.

"But there is a third category of the impossible, one ignored by even the most farsighted researchers—the 'logically impossible'!" The interviewer's voice rose in triumph, and his other hand, which had remained in his pocket, furiously jangled his change.

I blinked at him. "But the logically impossible is—"

"I know, I know, I've listened to that stuff from our professional consultants," said the big blond man, suddenly impatient. "The logically impossible is part of an arbitrary system which would be destroyed by any attempt to—" he shrugged his shoulders in annoyance.

"Let me tell you," he cried, "that the Virgin Research Corporation has investigated the problem and decided otherwise. Our experts have—and they are some of the best men in the field, much better than any jerky Ivy League Multiversity can afford—our experts are convinced that such notions as the "round-square" are meaningful, and what's more, are of potentially great military value!"

His eyes were crazed. "When the battle's lost and won', indeed," he murmured in a low, sinister voice. He smiled at me coldly, and the rotten stains on his teeth stood out like the craters of the moon.

"We're using a two-pronged ap-

proach—psychology and mathematical logic. We've had no trouble recruiting psychology majors," he continued in a normal, tone, "but most of the students in the mathematics department weren't interested—or they've got to spend the summer with their families at home or away."

It was my turn to grin. That's what they got for trying to interest any of the teenage hotshots. But I wasn't afraid to broaden my mental horizons, I was willing to wrestle with the impossible, I was brave enough to face the unknown. My smile widened, and then my face grew serious as I took up the challenge.

"How much?"

"Two fifty a week, recommendations, room and board and a motor scooter, and free transportation in a G.E.M. cruiser to and from the New Mexico labs," said the blond man.

"Well—"

"With your record, you should jump at the chance," he said. "I've seen your transcripts, son." He began jangling his change again.

That "son" decided me. "Hmmm—"

"All right, all right, we'll talk it over," he said, a little sharply. In science and mathematics, all the old guys are scared of all the young guys. You do your best work when you are young, and everyone's scared of being "burned out

at thirty." Just like I'd love to line my teenage competitors up against a wall and plug 'em, I could see he was scared of me.

He pulled out my preliminary transcripts and applications, and began thumbing them. I slipped off my glasses, and licked my lips.

Later I found out I got A-minus on the mathematical logic final. I should've asked for fifty more than the three-twenty-five I got out of that terrified jerk.

The G.E.M. *Ruby* thundered west, the ground effect keeping it a dozen feet above the earth. The machine soared along, impossibly graceful, as night mastered day on the American Great Plains.

I peered out the big picture window, fully relaxed for the first time in many weeks. The orientation and information kit lay ignored across my knees. I'd look at it later. No more lab reports, no more little phrases like; "I'll leave that as an exercise," that meant a dozen hours of skull sweat, no more; "I'm sorry, but some pre-med sliced those pages out of the book you wanted with a razor blade last term." At the moment, I didn't care if the directors of the Virgin Research Corporation had cerebrum, cerebelum and medulla in their brain pans, or scrambled eggs. By Napier's bones, I'd escaped!

Someone was struggling up the aisle against the pressure of the

Ruby's acceleration (we'd just pulled out of Ann Arbor). With a gasp he collapsed into the acceleration chair beside me. "Greetings!" I murmured. "You one of mama's boys?" About half the people on the *Ruby* were working for V.R.C. It's only these tremendous mysterious corporations that can afford intercontinental jet flights and G.E.M.s and—and pure mathematicians, thank goodness!

"Hello, yes," said my companion. He was a skinny, baffled-looking fellow about my own age. His very pale face said; "Yourself?"

"Perry Zirkle—I'm in the numbers racket—uh, I'm a pure mathematician."

"Uh, Richard Colby—micro-minaturization and electronics—I'm a grad student at Michigan Multi. If you can see it, then it's too big. My motto." Colby's face brightened and he grinned. *His* teeth were okay. "Say, I've got those books—you must be on the logical impossibility research the same as I am—Project Round-Square!"

I nodded and smirked at the books. "I suppose so—though from what I've been taught, I doubt if the project will last very long."

Colby settled himself and relaxed. "How so?" he asked. He didn't look like a monomaniacal studier—just an electron pusher in his twenties. He wasn't one of these kid geniuses, either, and I was

rested and relaxed. So naturally, my mouth got the better of me.

"Just on the face of it—," I argued calmly. "Paradoxes and self-contradictions are interesting, and they attract attention to ideas, but by their very nature—" I found myself unable to continue.

"Maybe," Colby said. "But maybe you're just looking at the problem the wrong way—the fellow that interviewed me kept talking about 'thinking in other categories.'"

I paused. "Oh, I know what he meant," I said, and laughed. "He was trying to tell you not to argue, not at two-fifty a week."

"Two-twenty-five," he murmured.

The electronics expert hesitated, and then looked at me oddly. "I don't know about you," he muttered, "but I consider it an honor and a pleasure to be able to do some "pure" research. There's little enough of it in electronics these days—the whole subject has about one real scientist to a hundred engineers." His eyes were hooded. In the dimly lit passenger compartment of the G.E.M., his face was dark and brooding. He licked his lips and went on, talking to himself as much as he was to me.

"It's enough to make you go into industry. Take my own school, the Michigan Multiversity. Did you know we have a top secret Congressional Project to automate the

presidency? Fact. The chairman of the Department of Cybernetics told me the system philosophy behind it; "Roosevelt showed that someone could be president as long as he liked. Truman proved that anyone could be president. Eisenhower demonstrated that you don't really need a president. And Kennedy was further proof that it's dangerous to *be* a human president. So we're working out a way to automate the office." He grinned, and I laughed in response.

I reached down into my fagbag and pulled out a bottle. His eyes went wide for a moment, but I passed it to him. He took a slug, and the evening was on its way.

Colby turned out to be all right. I told him Smith's remark about how engineers are sloppy when they call "characteristic values", "eigenvalues", because "eigenvalue" isn't good English. He came back with the one about the sequence that you had to prove converged, but that all the students demonstrated diverged. The Professor's masterful reply was; "It converges *slowly*."

The ground effect machine rushed on through the midwestern night, a foot or two above the earth, supported by a flaring cushion of air. Presently it's path curved south. The pilot-driver was steering by radar beacon and navigation satellite, towns and buildings signifying no more than treacherous shoals and reefs to a

sailor. The craft was flying over ground that had never, and might now be never, touched by wheels or feet. Over these wastes we plunged southwest.

Dick Colby couldn't hold it very well, or maybe he was tired. In any event the fellow was soon sleeping peacefully beside me. I let him be and stared at the scenery.

These fellows that believe the "pures vs. applieds" battle really amuse me. Actually, science and scientists are just like anything else in this rotten world, just as corrupt. I've heard stories of research men during the great "Space Flight Bubble" that would trade jobs a dozen times in a year, doubling their salary each time. And these stories about advertising men that run off with the best accounts and start their own agencies? Nothing to the technical men that impress the Pentagon and get the generals to finance them in their own electronics company. Though I don't feel much sympathy for the big firms. Anyone that builds H-bombs and missiles and lets someone else decide what to do with them—people like that deserve everything they get!

What was wrong with me lately? I still loved to work and study, to cram till one, then feel the high tension as the papers were handed out the next day. The gong that announced the start of the

test always reminded me of the one on the old TV show; "To Beat the Clock." And there was nothing like the feeling in front of the posted grades, when I saw the shocked faces of the youngsters I'd beaten out. Tough luck, kid! Better switch to art history!

I lit a cigarette and leaned back. Well, right or wrong, this stuff would be fun. Science always is. I love to be totally absorbed in something new and strange. It's so much better than just sitting around doing nothing, or dull routine stuff. Frankly, I don't see how the hundred million unemployed can take it. My mood when I'm idle is usually a murderous rage at the kids who're going to parties and dances and junk like that. Not that that stuff is really *interesting*, like a problem in Greenfield space. But at least it's something, compared to sitting all alone with nothing to think about but myself. Frankly, I love really tough problems, the kind you have to think about *all the time*.

Dawn was peeping up over the horizon. I settled myself in my own acceleration chair, and tried to snatch a little sleep. My own watch said that in a few hours we'd arrive at the immense desert reservation which held the Virgin Research Corporation, summer student trainees for the enigmatic Project Round-Square.

"These are your quarters, Mr.

Colby and Mr. Zirkle," said the blond girl. She was worth a second glance, being the possessor of a fine body, though a little bow-legged ("Pleasure bent," Colby murmured.) Still, a very nice body.

Colby dumped his junk on the bed, and began opening drawers in the dresser and putting it away. I stood still and read the information sheet we'd been given on arrival. It said I had to report at the Computer Center as soon as convenient. I put my own bags in the closet and went.

Outside, the desert sunlight was quite bearable, since it was only a few hours after sunup. I walked across the compound, guided by a map on the fact sheet.

The living quarters were good: simple ranch-style stuff with desks, and bookshelves duplicated in each room. This was no resort, but the place was clean and kept up, without the bleakness of a straight government installation. The labs and auxiliary buildings were spread out over the desert, the whole business enclosed by a security frontier. This made internal security checks unnecessary, and there were none.

People dressed informally: chinos, dungarees, western boots and flannel shirts. A pleasant change after school, where most everyone was formal most of the time—except for the technical students.

Of course they made us pay for it. All the co-eds are hot for someone they can discuss the Great Books with, not some barbarian science or engineering major with a sliderule swinging from his belt. I've seen these Zenish girls, with their long hair and thongs and SANE buttons, wild for motor cyclers and African exchange students. Rotten snobs! Though I've got to admit that some of my friends in the engineering school depend more on force than persuasion for their pleasure. Ha-ha!

The Computer Center was mostly underground, to make temperature regulation easier. These big machines really heat up. I know that back at the Arthur Regleihopf Computing Center, at my own multiversity, they have an enormous air conditioning plant through all the machine rooms, with dozens of recording thermometers. If the temperature in the labs goes above a certain point, the electrical power to the computers is shut off. Otherwise you have something called a computer explosion, which no one at the labs wants to talk about. All I know is that during the summer, the machine rooms are the best place to relax, because they're so cool. And I can always scare the teenage-geniuses who run them into letting me rubberneck.

So I reported to the Computer Center, and found my wonderful creative position from which I could challenge the unknown—

the programming saddle of an obsolete I.B.M. aleph-sub-zero—a jazzed up Turning Engine. The same noble trade I'd learned six years before, as a youngster in the Science Honors Program at the multiversity.

An International Business Machines aleph-sub-zero tests a mathematical model against reality. The device begins grinding out deductions from the model, and checking them about facts about the phenomenon. If they check out, fine. If not, it begins to blink and tremble in agitation.

This one had a few peculiarities. The "mode" was about ten times as complex as normal, there were fifty more storage units—and the runs averaged less than ten seconds.

By the end of the day, I was bored, frustrated, and very disgusted. I could barely keep from grabbing my teenage assistant by his ankles, swinging him around in a heavy arc, and smashing out his smiling freckled face against the machine's one-to-ones. Rotten teenage competitor! Fortunately I ran into Harry Mandel directly afterwards, without having to look him up. At least that was something. One thing led to another, and two hours later, together with Richard Colby, the three of us were exchanging impressions.

"Oh, I suppose it's all I could expect," I told them disgust-

edly. "They're setting up odd sorts of logical-mathematical models—ones without the law of self contradiction, either A or not-A. Things like that. Then they run them through the aleph-sub-zero as a check. Only—" and I took a deep slug from my glass, "—none of them work."

Harry Mandel bobbed his head up and down enthusiastically, so that it seemed to flicker in the cool dim corner of the White Sands Bar. Harry has this habit of shaking his head in violent agreement, while his eyes grow larger and larger with each sentence you speak. It gives you the funny feeling that every word you say is confirming some incredible theory of his: that you're a Chinese Communist, or a paranoid schizophrenic, or an Arcturian spy. It's really quite frightening until you get used to it.

Also, his lips were trembling and his hands quivering. I knew the signs. Once he started talking, he'd never stop. So I gave the nod to Richie Colby instead.

The electronics expert looked up from his drink. "I don't know," he muttered. "I'm on the psychological-biological end, and so far I can't understand what's going on. They've got me working on topological neuron maps—mapping the circuits of the brain. But for what, I don't know." He went back to the drink he was nursing.

I took a sip from my Coke. I

don't drink more than I have to, and neither do most of my friends. In spite of all this talk about college students boozing it up, I'll be damned if I'll rot my brains, the brains that have to beat out all those teenage hotshots!

The White Sands Bar was a pretty good one, quiet with a kitchen. A while before we'd had a pizza, heavy with cheese and olive oil. It's funny how much time I spend in bars. Our civilization has wonderful extensive facilities for some things, fragmentary ones or none at all for others. It's perfectly clear how to fill out the forms and go to class and take exams and apply and student all the way to a Ph.D.—but how the hell do you have a good time? I heard they had to double the psychiatric service up at M.I.T. Sometimes I have crazy insane dreams of getting out of this whole mess, quitting. But where could I go, what would I do, who would be my friends? *Who would be my friends?* Anyway, bars are all right, and this bar, the White Sands Bar, was a pretty good one.

I took up another drink. Richard Colby was staring dumbly into his. "Okay, Harry," I said.

"To understand my end, you'll need to know what the universe is," said Mandel quickly and incoherently. "People ask; 'Why is the universe the way it is? And Kant answered them back: 'Because the universe is a tango!'"

"Huh?"

"Don't you know what a tango is?" said Harry quizzically. "Why, even all my buddy-buddy psychology major friends know *that*. You know—like this—" and he moved his hips suggestively. He grabbed up his Sloe Gin and Coke, and finished it off in a single gulp. "Daquiri!" he cried to the waitress. "Like this, boys," he moaned, beginning to sway again.

It took a little while to make our questions clear, but presently Harry was sketching on a napkin with his Mr. Peanut Pen.

"Remember that proof in high school geometry—Tenth Year Mathematics to you, Perry—where you show that a line segment has only one perpendicular bisector. You strike arcs from the endpoints, and draw the line from one intersection to the other. But why should the arcs have any intersection? And why couldn't there be *two* lines that were straight and went through both intersection points? I bet you never thought of that!"

He looked up from his diagram defiantly.

Dick Colby blinked at him, his long face weary.

"I'll tell you why!" cried Harry Mandel, downing half his Daquiri. He put the glass down and spoke decisively. "Because the universe is a tango—we see it this way because *we have to*—we're built this way. Anything else would be a

logical impossibility—a contradiction. We can't experience the world any other way. We see it this way because we're built a certain way, and the universe is built a certain way. Reality is the interaction of the two parts—and the universe is a tango!"

He tossed down the rest of the woman's drink and nodded powerfully. "Any one of my buddy-buddy psychology major friends will tell you that!"

Colby and I nodded agreement. Mandel always was something of a nut. I never trust short guys—their mothers always tell them about Napoleon when they're little, and they always take it the wrong way.

Mandel was still gabbling. "But this doesn't mean we'll always have to look at things this way. We won't have to always think of a round-square as impossible. That's what my part of Project Round-Square is all about, the part with my buddy-buddy psychology major friends. We're going to change the music. We're going to give one partner dancing lessons!"

It was five weeks more before I learned that Mandel had in fact not been kidding around, nor really drunk at all. That was the essence of the psychology half of Project Round-Square. But a lot happened between that first night at the White Sands Bar and then.

For one thing, they closed down

the mathematics-logic side of the installation. I had about a week more of that; "Start Program!" Zip-pip-pip-pip-pip! "Clang! Clang! Clang! Discrepancy! Discrepancy!" nonsense, then two days of absolutely flawless correlations—as good as any of the test runs between economics and high school math, or advanced calculus and statics and dynamics. Whatever was being sent into the aleph-sub-zero, it was a perfect fit with the real world. The first day I was wildly enthusiastic, the second I was bewildered—maybe they were checking themselves? And the third day, I wasn't given any programs. The head of my section, a young man named Besser, showed up about an hour later and told me we were shutting down. I was to be reassigned.

"But why? The last two runs were perfect!"

"The last runs—" he began, then sighed. He looked more like a truckdriver than a worker with the subtle squiggles of mathematical logic. "The last two runs were exercises in futility. You've had some undergraduate symbolic logic—you must have some idea of what we're trying to do."

I nodded.

"Well, rigorously speaking, the way to eliminate the notion of 'impossible' is to get rid of contradiction—get a sort of logic where you can have a "round-square", as a legitimate notion.

Then you build a language with that logic. Understand me?"

"Uh-huh."

"Now, this seems—ahem, unlikely. If you've ever taken an introductory course in philosophy, there's always a kid who talks about there being "some crazy kind of logic" where things could be red *and* blue, round *and* square." He shrugged in annoyance. "The professor can usually shut him up, and if he's persistent, embarrass him to death. Those kids are the sort that embarrass pretty easily."

I nodded. This guy knew something of college life.

"So that's what the meta-mathematicians and symbolic logicians upstairs have been working on. You see, while such things are silly to talk about here in the real world, you *can* have a logic without the "not" operator. Such logics have been set up in the past—but they weren't very interesting, they weren't *rich*, fruitful in new ideas. But anyway, you can make such a thing, you can even build up to a mathematics from it, the way Russell and Whitehead built up numbers from logic in *Principia*. And you use your math to build a logic and a language—to describe the world. No "not" means no opposites—which seems to mean no contradictions." He wiped his face and tried to look annoyed, but it was difficult. Good old air conditioning.

"Do you see?"

"I think so. Real world again—didn't match up."

"Kee-rect. Your math is no good for the real world. It's just wrong—like trying to navigate an ocean liner with plane geometry. Since the earth is round, it doesn't work out."

I nodded.

"I mean, it's *right*—its *valid*—it just doesn't describe anything real," he corrected hastily. "Seems as if you *must* have contradiction."

"That's why the runs on the aleph-sub-zero were so short? The computer would spot a contradiction, and start yapping. But how about the last two runs—perfect straight out. What was the matter with them?"

"Oh, those," he groaned. "Those were that jerk Kadison's idea. The exclusion approach."

"Go on."

"Well, you know there's another way to eliminate the notion of a contradiction. By exclusion."

"Elucidate."

"Think of it this way," said Besser. "You understand the notions of tall and short, and you know such things are relative. But if you decide that everyone under twenty feet tall was short—then you couldn't have a contradiction, a notion of 'short-tall'. Everyone would be short, and you'd eliminate one sort of contradiction. 'Tall-short' would mean the same as 'mimsey-short'—'nonsense word

-short', or just 'short'. And you keep on going that way. This was Kadison's idea."

"It worked perfectly in the machine."

"Sure it did. And it's also perfectly useless. All gradations and comparisons drop out—and brother, you don't know how many there are. You know, most every quality has its opposite in *something* else. Even the notions of matter and empty space. You get nothing left—I mean *nothing*—the problem becomes trivial."

"The universe is an uncle," I said.

"Yeah, except for uncle say any other word. The universe becomes one solid, undescribable lump, with no qualities at all."

Also, Harry Mandel began to crack up. I didn't notice it while I was working—that aleph-sub-zero had some good problems—but when I was unassigned, the only real activity I had was going to the White Sands Bar. It was during the drinking sessions that his madness began to blossom.

Now of course I know all about the science of modern psychology—it's one reason I've remained so balanced and stable. Myself, I'm what is known as a shame personality. It's a matter of personal honor with me that I fight to the limit for the highest grades and the most scholarship. I'll beat 'em all out. That's me.

Dick Colby was clearly a guilt personality. He really believed all that guff about the scientist's worldview, about the search for truth, about following an abstract pattern of behavior. Poor old Dick, he had an abstract moral code too, as I might have expected. Well, he had to follow the rules, and he might get kicked in the belly, but at least he was stable in his sad, picky way.

Now Harry Mandel was a fear personality. He tried to belong to some sort of whole, to link its destiny with his own. A gestalt. You find a lot like that: fraternity boys, soldiers, club members, athletes on a team. And of course the intellectuals—the literary group and Zenish girls and the interdependent independents.

Ain't social psychology great!

Anyway, Mandel's kind of twitch, the fear personality, is okay as long as he really has his buddies and believes it. If he doesn't have them, he wanders around until he can link up with a new bunch. If he doesn't *believe* he has them—look out! A fear personality with doubts about its gestalts, can slide right over into paranoid schizophrenia.

It came out in funny ways, distorted, because Mandel was very intelligent, and the more intelligent, the more little links can begin to snap and break. One night in late August he came up with this:

"I mean, I have nothing against that particular minority group," he said loudly. "It's just that—well, look at it this way. The original members were selected on the basis of crude physical strength—the smart clever ones escaped the slavers. Then they were brought over here, and were slaves for several hundred years. Now it seems to me that if you have slaves, you're going to encourage breeding among the stupid and the strong. You don't want smart quick ones. As a matter of fact, the smart quick ones would try to escape, and would be shot. Or else, if they're clever, slip over the color line and intermarry.

"So you see, you've had forces at work for three hundred years that bred—I mean in terms of human genetics—for less intelligence. You do that for three centuries and it shows—as a matter of fact, it *does* show. In terms of modern science, they might even *be* inferior."

He was crazy, insane. For one thing, three hundred years isn't long enough to matter genetically for humans. For another, "the smart clever ones" *didn't* escape the slavers' round-ups any more than the others did. Maybe if Mandel had been a slave owner he'd have tried to encourage only the stupid to breed, but such eugenically-oriented thinking didn't exist in times past. As for shooting would-be escapees, you don't

destroy valuable merchandise like that, you bring it back alive. [Anyway, you don't talk about races, you talk about human beings.] Mandel was rationalizing, justifying immoral attitudes on the basis of a "science" which really doesn't exist. As for "scientific morality," Hell, science and morality are different, and by trying to base one on the other you are setting up for something like Hitler's "final solution."

Yet poor disturbed Mandel had *thought the theory up*. And for an instant, thinking of the exchange students and the Zenish girls back at the multiversity, my own brain had become enflamed. Science, reason, intellect—there are some things you mustn't think about. God help me.

A flash of disgust went through me. I never wanted to do any more calculations. I wanted to lie down with some pretty girl and make love to her and have her soothe me. I was too long alone. Help me! Then I squeezed those thoughts away.

I pushed away the thick silvery tin with the remains of the pizza. Delicious, too. Their cook was improving. Or maybe he could get real Mexican spices, not the stuff I used to settle for in Woolworths.

I looked at Mandel across the table. His face was beginning to cave in a little, and his eyes looked tired. Anyway, we had to talk about something else. I decided to

find out some things about my new assignment. And that was thing number three. That afternoon I'd be transferred to the psychology attack team-programming again, the Urbont matrices of neurological maps.

"How's the job, Harry?" I asked him. "How's the dancing lessons coming?"

Mandel looked up. He hadn't mentioned his work in a couple of weeks, not since we'd taken his little lecture on Kant and the tango as a rib.

"What about it?" he asked crisply. "I don't know very much, I just do whatever they tell me."

They—his buddy-buddy psychologist buddies? Mmmmm.

"Well, whatever they've been telling you, they'll soon be telling me," I said, nudging him in the shoulder. "I'll be figuring out your brain maps for you."

"Oh, yeah. They ought to start programming in two weeks, and then installation—"

"Hey, installation? Whooa? What are you talking about?"

Mandel's slumped body seemed to collapse some more. He was so far forward I could hardly see his face. Just a dark form against the well lit rest of the bar. Cigarette smoke hung in the air, and a dozen technicians were seated on the high stools. Over in another corner, two disgruntled physicians were playing NIM. A couple of the girls from the clerical pool were

having heroes and Cokes at another table, blond and brunette in brief desert costumes.

"Sensory enervation," said Mandel in a dead voice. "What else did you think?"

He blinked mildly and slugged down the rest of his Horse's Neck. "Rum and Coke!" he shouted to the barman. "I really hate to drink," he confided sullenly. "But at least I can do it alone, without my psychology major buddy-buddies." Richard Colby gave me a funny look and we both leaned forward and really began to listen.

In the 1950s, the psychologists of McGill University had commenced an interesting sequence of experiments in connection with the U.S. manned space flight program—an early phase of the "Space Flight Bubble". A space traveler confined to his space capsule would be in a state of extreme "sensory deprivation"—with so little to see, hear and feel, the psychologists theorized, the astronaut might go insane. The McGill University experiments were designed to investigate this thesis, and even more extreme cases of sensory deprivation.

The perfection of brain circuit mapping had suggested the obverse experiment to the scientists of Project Round-Square. If sensory deprivation could debase a man, weaken him and drive him out of his mind—why not attempt

"sensory enhancement." Enriching a man's senses by requiring his reticular formations to accept data detected by machines—the total memory storage of a computer, the complete electromagnetic spectrum, the sorting out of patterns and wave forms which was possible to oscilloscopes.

Volunteers weren't too hard to find—the McGill men had found volunteers, promising not much more than money and a chance at madness.

A man's concepts of the world vary according to the data he receives. For thousands of years, men had been building up systems and structures of describing the universe, without trying to improve the methods used to accept the data. Scientific instruments were not enough—could light and color have meaning, be *real*, to a blind man? The scientists of Project Round-Square hoped that the contradictions and impossibilities of Reality might disappear for a man with enhanced senses. The system philosophy was illustrated in the poem; "The Blind Man and the Elephant."

"Could a dolphin discover Relativity?" said Mandel, almost angrily. "Of course not—plenty of brains, just never was even able to sense much beyond the other dolphins. Likewise, there may be enormous fields of knowledge we've never noticed, because of our sensory lacks."

"More than that, it's a *positive* approach!" cried Mandel. "the first in seventy years. Before this, all of psychology was concerned with debasing man, turning him into a super rat, a little black box which was fed a stimulus and kicked back a response. Automations!"

"What about psychoanalysis and the Freudians?"

"Blough!" cried Mandel, enervated himself for once. "They're the worst of all. The Id, Ego, and Super-Ego, are just mental mechanisms, things beyond our control, which interact to produce behavior."

It was nice to see Mandel cheerful. There's nothing better for these neurotic types than to let them talk and talk and talk, it helps reassure them. Maybe they think no one will threaten them or kick them in the belly as long as they are blabbing. A false notion produced by too much well-written t.v. drama.

"But still," I said slowly, wagging a finger at him (or was I wagging and the finger standing still. I must drink less.)

"But, Harry," I continued. "All the colors of the rainbow won't alter this picture," and I flipped one of the White Sands Bar's napkins at him. It has a nice colored picture of a Valkyrie missile on it, from the days when White Sands was a proving grounds, before the "Space Flight Bubble" burst.

"Maybe not," he mumbled. "But that's only the neurological part of the idea. We're building compulsions to succeed into it, too. The kids will *have* to work out a world without impossibilities."

"Kids?" asked Colby dimly. "Keep talking, Harry."

Mandel blinked and then continued. A lot of the rest was whined and mumbled, but I thought I got most of it.

The subjects of the brain wiring were youngsters between twelve and sixteen. The psychologists had settled on those as the optimum age limits: young enough to be typified by directness, immediacy, wholeness, spontaneity and integral fantasy. Teenage hotshots, in other words. Old enough to want to make sense of all the data, and young enough so their world view wasn't rigid.

You can look up all the psychology words except the last. "Integral fantasy" was the most important. Studies had shown this quality is most typical of real genius, and the kids had been specially selected for it. What it means is this. Most people have fantasies, but the fantasy is "disassociated"—it is unreal to them, like sex magazines and comic books. Children, especially geniuses, have "integral fantasies"—they get wild complex ideas about the real world. Ordinary people call these "strokes of genius", if they happen to work.

"And what's more," muttered

Mandel, head down on the table, "they'll have to make sense out of it. They've had hypnosis and drug compulsions to succeed, so their new sensory picture will have to be free of logical contradictions. It'll have to be!"

I was about to ask him how they'd be able to communicate with them after the kids had "made contact"—but before I could, Harry dropped out of the game. He lay unconscious across the table. "Kids!" he murmured, hatefully.

So I was doing mathematics again, setting up Urbont matrices, the curious descendents of time-variable, multi-port switching and communications math. Far more subtle than any of these, however—the Urbont equations didn't analyze radars or satellite radio links, they symbolized the neuron patterns of the human brain.

It was tedious, subtle, absolutely-right-the-first-time work. The basic units are discrete—on-off switching conditions apply, rather than continuity. In other words, there was no margin for error.

I was getting more of those flashings of hatred and self-hatred. In my little air-conditioned cubicle in the Computer Center, I would get daymares where I would be a bug in a compartment of an ice cube tray—so cool and comfortable and . . . dead. Every so often my friends would stop by—Dick Colby, bemused and apolo-

getic; Harry Mandel, confused and sullen.

More than once, I thought of informing the medical staff of Mandel's problems but I was afraid to. In the world of science, each man has a "paper shadow" that follows him around—dossiers, transcripts, evaluations by supervisors. Get something bad in among those papers—instability, erratic work habits, even extravagant praise, and you're in trouble. The big corporations like their scientists *a little* peculiar—just for identification. Anything serious can really ruin a man's career. I thought it might be best for Harry to take his chances—when I thought about him at all. I tried to stay away from emotional subjects.

Fortunately, about this time, the Virgin Research Corporation brought in some new entertainment, so I could relax without raising the alcohol content of my blood.

These were the moebius movies, the new cyclic films. I'd seen the first one; *The Endless War*, previewed in New York City, a few years before. Since then, their sophistication had increased manyfold.

The basic notion was simple. The films were written in such a way that there was no beginning and no end. But this was more than a simple splicing of the two ends. Literally, it was nearly impossible to know where the story com-

menced. In "The Endless War," there were at least a dozen places where you could enter, stay the two hours, and leave, coming away with the impression of a complete drama. In fact, depending on where you came in, the film might have been a comedy, a tragedy, a documentary or most anything else.

"To the Nth Generation" (or "Incest on It!") was a typical improvement. It dealt with the romantic affairs of several families over (I think) three generations. After forty years, with the amatory relations of the members incredibly tangled, the snarl was twisted back on itself as the original characters were brought fourth in and out of wedlock. It was pretty ghastly in a way, but also quite amusing. I hear the French are preparing a film which will do the same thing in two generations, and there's going to be a science fiction picture that does it in one.

I had also heard rumors of the most recent development. Cyclic films had closed the old notion of time, the first "true" moebius would eliminate time as an orienter. With pure dissonant sound, with only the most limited and ingenuous movements, a complete showing would have the film run both backward and forward, right-to-right and right-to-left. Enthusiasts predicted it would make "Last Year at Marienbad" look like "Looney-tunes."

I got precious little pleasure out of "To the Nth Generation", however. Mandel was moaning and groaning about his buddy-buddies and how much he hated kids through the whole thing. I didn't stay past the second time around—and these things are cumulative—ten revolutions of "The Endless War" had made me practically a pacifist.

The trouble was that half an hour into "Incest on It!" I fell off the edge of a cliff. On the screen the Most Beautiful Girl at Queens College was giving birth on the steps of the New York Public Library to the Nobel physicist who would father the owner of the biggest brothel in the Bronx, who in turn might (there were subtle hints) be the parent of the beautiful blond in labor on the dirty white steps.

I would always have teenage competitors! I would get older, and older, and older ("Never produced anything after twenty seven! "Burned out at twenty-five, I'd say!" "We keep him around for laughs, and to teach the remedial courses. Never did anything worthwhile after his thesis!") but they would always be coming; young, bright, arrogant, brilliant. I could barely keep from screaming and screaming and screaming. Instead, I made as tight a fist as I could, squeezing, the way I would press the foot rest in the dentist's chair, because it hurts and hurts,

and you've got to do *something* when it hurts so much.

I had been wrong about Mandel, or partly. He, like I, would not be shamed. And he saw Project Round-Square as a betrayal by his friends, of the creation by his "buddy-buddies" of new competitors to torment him. I could understand this, though his woe was not mine. His complaints had stimulated me to see my own doom in the endless procreation of the film.

And now I recalled the "Kubie Report" in the *American Scientist*: "Some Unsolved Problems of the Scientific Career." The high incidence of nervous breakdown in the middle years, as the creative energy wore thin. Directness, immediacy, diversity, wholeness, spontaneity, integral fantasy! For these I had denied myself everything, sweating out my advanced degrees before age could touch me. And now I was old, I could feel myself rotting as I sat there. I could feel my brains inside my body: ropy, red, pulsing, tinged with age, hot and glowing inside a pile of grey, fatty, fibrous tissue—my unexercised body. Somehow I managed to get up and stumble out of the theatre. Behind me, on the screen, someone was talking on his deathbed to his grandchildren and grandparents, who would turn out to be exactly the same people.

Part of the time I worked in-

tensely at my tapes and card-decks. not daring to pause, afraid to close my machine-language manuals. Other days, sometimes for hours, I could not work closely. I cut free of the job, drifted beyond the "grid" of the scientific attitude. What difference did it make, my mind giped, if men landed on Mars, or discovered element 1304? Particle, wave, wavicle, round-square—who cares? Science was just another "institution", like anything else. Would a man a thousand years from now laugh at me, the way my seminal engineer friends would chuckle at a scribe in 1000 A.D., who spent his little life endlessly recopying scroles in a monastery?

It took all my tricks to get through the final weeks. The best was French sleep therapy, which I once read about in a book called "Force Yourself to Relax!" If your troubles are unbearable, knock yourself out until your subconscious has time to patch you up. I tried reading for a while, but I couldn't seem to understand C. P. Snow's two cultures. All I could recall was a passage about someone dying. Snow said that on the point of death, most people care not a whit about their intellectual failures or social lacks. But they cry out endlessly about their missed sensual interludes.

Richard Colby still visited me, but Mandel had stopped coming. In a moment of weakness I'd told

him about his "paper shadow." He'd slammed out in a huff. The next day he came back, calm and chipper.

"You look better than I do."

"Of course. All my problems are solved."

"What about your psychology buddies?"

"Oh, I knew none of them were *really* my friends. But I'm set to take care of them, all right, all right."

"Yeah? How?"

"Well, you remember what you told me about my personal file. About how if they decide I'm unstable and borderline, it'll be very hard for me to get any sort of job, and I couldn't be a psychologist any more."

"The situation is something like that, at least with any large organization."

"But as long as I seem all right, all those rats will leave me alone, and even seem to be friendly."

"Well, you don't put it very well—"

"So it's all very simple. I've fixed them all right all right. I went over to chemical stores and got the components for a large bomb. Then I assembled it in the bottom drawer of my desk, in the middle of the Psychology Section of the project. And rigged it with a button detonator."

"Go on, go on!"

"Well, don't you see."

"No! Go on!"

"It's perfectly plain what I—" "Mandel, explain!"

"Well, as long as I'm feeling all right, I go on in a perfectly normal way. When I feel a little sick, I go into my office. But if, some day, I think I'm going really nuts, I think I'm really going to go crazy so it all will go down on my personal file and ruin me with the big organization—"

"Yes?"

"Why, then it's as if all my friends are suddenly about to become my enemies, to turn on me, to think I'm crazy and fire me and laugh at me and pity me behind my back." His eyes were mad, though his voice was perfectly level. "They won't be able to do that to Harry Mandel. They won't do it. I'll blow them all to bits first!"

It was enough for me, friend or no. I got word to Personnel, anonymously, and that night they called for Mandel. The poor guy hadn't thought to install one of his "White Collar Kamikazees" in his quarters, so they took him out on the G.E.M. *Topaz* that very night, under heavy sedation.

Was I in much better shape than Harry Mandel had been? A cheerful, hopelessly-neurotic robot. I had come up through the sequence without much real thought about stuff like that. It was enough to do my work. Once, when I was drunk, I had the idea that if you had a perfect baby, you could set up the perfect program for his life, sports

and studies and sex and social life, split-second timed, an ideal existence. But it was already twenty years too late for that for me.

Or was that the easy way out, to flunk yourself and roll with the tide. Was I simply 'hiding out' in science because it was socially sanctioned and I had a talent for Math?

But on the other side it gave me a pattern for my days, the stability I needed and craved. For this I might do work that I even despised. There must be some way to decide, to choose the optimum path, the really best way, before all your time's run through?

But how do you do it, how could I, of all people, do it?

It was my own brand of impossible.

Project Round-Square finished out fast.

Dick Colby and I sat in one of the electronics labs and watched as the countdown dropped to zero. Closed circuit television brought us a view of the MT-Section, a big room holding more than a dozen aleph-sub-sixes. Dr. Wilbur, the head of the machine translation group, sat at the console of an aleph-sub-nine, the most advanced computer International Business Machines has ever turned out. (*Nobody* really understands it. It was designed by an aleph-sub-eight and the main purpose of the sixes was that collectively they kept the sub-nine from going crazy.)

Mathematical linguistics is the new "in" branch of math, like differential topology used to be, and category theory after that. Wilbur was playing it to the hilt, with ski boots, no tie, and a crappy old sports jacket. But he had a feel for the communications process that amounted to empathy. It was this rare talent that was needed, to help the nine through the clutches.

Above him on the lintel of the machine, was the proud motto of the National Programmer's Union, originally a remark by Queen Juliana of the Netherlands;

"I can't understand it. I can't even understand the people who can understand it."

"Project Round-Square," said a disgusted technician. "Still seems crazy to me."

"Perhaps it was a bad choice of name," said Colby next to me. The Michigan electronics expert was tanned and calm, and cheerful as ever. "Did you ever read that poem, 'The Blind Men and the Elephant'? It's the same principle. With new senses or a new orientation, apparent contradictions in reality might disappear. It's what some people call 'thinking in other categories.'"

"Like the wavicle," said someone else.

"Yes," said Richard Colby, his face taunting as he smiled. "When

physicists were studying certain particles, they found that in some situations they could be thought of as waves, and the equations worked out. In other sorts of reactions, you could think of them as particles, and the numbers and theories checked out under *that* hypothesis. So the physics men just shrugged and called 'em wavicles."

"But what does a wavicle look like—"

"I don't know. Nobody knows—but nobody knows what a round-square looks like either."

The lab grew quiet, as if Colby had said something profound. On the television screen the computers clicked and roared, the tape drives jerking abruptly in their vacuum columns.

"What about military applications—" I croaked at Colby. He seemed to be up to date. I hadn't paid much attention to all the interoffice junk we got on the project—including the "Virgin Tease" newsletter that told the lab assistant in Subsection Nine of Track Four of Approach Nineteen what progress had been made towards the noble goal of Project Sixty Nine, of which he sometimes recalled he was a member.

"The guy that hired me told me this thing had military applications—I didn't know if he was kidding or I was in a nightmare."

Colby looked at me wide-eyed for a moment. "Well—I don't know. Of course, there doesn't

seem to any *direct* application. But neither did Einstein's equations, or "game theory" when it was developed. Any sort of insight into the world is likely to be militarily useful these days. It doesn't even have to be technical—remember the old German staff armies that were so successful. A simple thing like the chain of command could lick the best general who had to boss his own whole show."

"Just thinking is dangerous these days—often deadly."

"Maybe they ought to classify it," joked Colby.

"But then, I guess it always has been."

On the screen the computers continued to run. Coverage would be confined to the machine-translation lab; the psychologists on the staff had decided to have no reports from the real center of activity.

Outside, in a surface lab were a dozen adolescents. They had been trained to their peak as scientists, well beyond Ph.D.-level. Now they were being sensitized, exposed to the flood of phenomenon that ordinary people never know about, because our wonderful minds are deaf and dumb to nearly everything in the universe. And hidden deep down below their sensitivities, there was a biting, burning, clawing, raving drive to master this new universe they would meet, and to see in it the death of the old human notion of opposites, con-

tradictions, limitations. Nothing, their minds raved as they scanned new skies, nothing must be impossible.

The computers ran for ten hours on the screens, while Wilbur studied and fumed and paced and drank coffee. The subjects would now all have come out of anesthesia, and would now be studying and observing the multitude of apparatus in the lab. Within it, I had been told, there was operating a demonstration of almost every major scientific phenomenon. The sensitized ones had been briefed to the limit, short of data which it was thought might stultify their world view. We could only wait now.

A red light glowed on the aleph-sub-nine, and data began pouring in. Wilbur threw himself into the operators' chair, and began chiding the immense computer, intuitively helping it arrange the data into some sort of language which might mean something to man. His face burned with concentration.

Near the end of the four hour shift he looked at the machine oddly and tried another system of organization. He looked at it hard again. Then he triggered his secretary. The machine, which had responded to his winking-blinking notes, fed back the information in binary code in his earphones.

He sat back and closed his eyes for a few moments. Then he

opened them and took up the microphone. "Communications established. They're intelligible," he said. And then, in a lower voice, "I've seen that structure somewhere before. . . ."

The cheers in the room blotted out anything further. Contact established, and the response was not gibberish! Well, never mind what it meant! We'd get that soon enough.

Premature congratulations? Well, perhaps. Remember the satellite shots, with a rocket roaring up on it's own fire, swimming right into the calculated orbit, ejecting its satellite, and the little moon's radios bursting into life. *That* was when everyone cheered! Not six months later, when the miles of telemeter tape had been studied and re-studied and been given meaning by sweat and genius. Nor did most people feel very bad when the scientists figured out that someone had forgotten to pull the safety tabs from the quick-releases, so all the instruments were shielded and their data meaningless. . . .

The actual results of Project Round-Square took eleven months to evaluate and declassify. They came out, nicely distorted, in a copy of the "Virgin Tease" the V.R.C. mailed to me. . . .

Biologically, it was an unqualified success. The sensitized subjects had broken through to a whole new world of feeling. In physical terms, they were quasi-

Gods, for they could sense things we would never know. It was more than a widening; new colors and smells. They could sense forces and radiations and bodies all forms of which are ignored by men.

By as to the actual purpose of the project. . . .

The sensitives had been given what seemed to be an insoluble problem—eliminating contradiction in a world that required it in any rational description. The ingenuity of the human mind, the directors of Virgin Research had thought, might solve the problem, where the pure logic of machines had failed.

Well, they had solved it, in a way.

Wilbur had been right. The Hopi Indians, independently, had evolved a crude version of the sensitives' solution. The Hopi language did not allow for the complex tenses of the Indo-European tongues. All time and space to them was a single frozen matrix of vents, in which the word "perhaps" had no equivalent, and the notion of "possible" and "impossible" was meaningless.

To ask, in Hopi, if it might rain tomorrow, was as meaningless as to ask if it was possible it had rained yesterday.

To the sensitives, that thing had "roundness" and this one had "squareness." Could there be such a thing as a round-square?

Perhaps, in the forever-fixed fu-

ture. When it made its appearance, they would tell you. Meanwhile, it's meaningless to think about such things.

The semanticists were the only satisfied ones.

But this was only announced a year later. Not soon enough to save Harry Mandel, who was relieved of a multi-linear annihilator, fifty yards from the sensitives lab. He'd slugged a guard and escaped from the *Topaz*. I understand he's in a security ward somewhere, still talking about his buddies while they watch him very carefully.

Dick Colby shrugged and grinned and had a drink or four with me at the celebration, then caught the evening ramjet back to Michigan Multi.

I collected my pay, scooter, and recommendations. Then, on the evening of the last day, I took a long look out across the desert. The sun was smouldering down into a pile of rust, the earth a great flat plum. By coincidence the girl that had assigned us our quarters was out on the desert too, but quite a ways away. I could see she was pregnant, and that was interesting to think about, and so I thought about it. I get a nice feeling when I see a woman with a child, if I have time for it—warmth, continuity for the race, the safe days of my very young childhood, though I can hardly remember any of them. There certainly were enough signs of it; she was well along.

I got a funny cold feeling. It was a tangential association, a silly one: what the boys used to call a "brassiere curve" in the rapids. You know what an ordinary bell curve looks like? Well, a lot of teachers use it for marking—most of the grades falling at C. Well, in the advanced sections some guys said the professors used a modified bell curve for figuring out grades—what they called a "brassiere curve". It looked like this;



—and jammed up inside the little hump, good and tight near the B plus, A minus grades, was the little gang of teenage hotshots—and me.

The cold expanded into my chest, numbing. I could look at the sunset, and the blond and her baby, and the labs and drafting boys and offices and all of it, and not feel anything at all. Everything was impersonal, like a diagram in a text.

An hour later I caught the G.E.M. *Emerald* back to my own multiversity. Classes wouldn't be starting for a while, but I'd figured out from the summer session catalogue that I could fit in a three week intensive reading course in Chinese in the meantime. Chinese is the new "in" language for Ph.D.s, like the way Russian used to be twenty years ago. It was pretty certain we'd be fighting them soon.

I figured I could fit in at least two "military application" courses into my fall program. Under the Rickover Plan I could get them tuition-exempt. What else could I do? I could use the money to pay for more programming. Computer operators are in short supply, and I would be sure of a fat income. I could be safe, nothing to worry about. Maybe I could get Virgin Research, or even the D.O.D. itself, to pay for more math and science courses. I could plan it all out, interesting problems to work on the rest of my life, and get the government to pay for them. Wouldn't that be clever?

Shut up, shut up, shut up.



Mr. Becker's first entry appeared in our May 1964 issue. Another will be along soon.

THE NEW ENCYCLOPAEDIST-II

Entries for the Great Book of History, First Edition, 2100 A.D.

by Stephen Becker

Porphyry, Jasper (1935-2014). Enunciator of Porphyry's Categories, P's Lament; instigator of P's Literary Schizophrenia. The Categories (1968) were of American literary achievement, and were three. (1) comprised 90% of the writers of the time. Their "talent," as described by P, consisted of a middling facility in the manipulation of a minimal vocabulary; rudimentary perceptions; unsullied ignorance of man's history; disdain of reason; and a violent, probably psychotic, attachment to the sentimental. Writers of this group were barely distinguishable in style or attitude and naturally set great store by publicity, as only the public's automatic responses (→Pavlov, I.P.) maintained them. They accepted without question the prevalent mythos (then known as "reality") and manufactured novel after novel in its support, almost all about hanky-panky (urban, suburban, rural), with animadversions on the "emotional" conflicts of the era, which were not truly emotional, but simple oppositions of childish egos or absurd fears. These writers were es-

entially masochistic and their technique was in the juvenile tradition: an uninterrupted series of insignificant events in the lives of unbelievable characters, reported in conscientiously pedestrian prose. This was called "the writer's obligation to the reader," or "narrative power," the latter a phrase used often by reviewers, seldom by critics. First novels by any of this group were usually said either to have "catapulted him into the first rank of American novelists" or to "show an immense promise."

(2) were the opposition, sometimes called the avant-garde. They protested the mythos angrily but failed to see that by doing so they were investing it with all the power the Yahoos had claimed for it (→Swift, Jonathan). Their protests naturally failed to reform society and were consequently characterized, and vitiated, by a progressively surlier sadism. These men did, however, rouse the public to an imitation of thought. A few had a serious talent for language and some understanding of their culture, and when they resisted absorption by the equestrian

classes they were an influence for awareness and sanity. They were called anti-Puritans, and were said to concentrate on sex. P pointed out that a typewriter was not a woman.

(3) was a woefully small group that looked upon the mythos with generous compassion and therefore transcended it. In a professional sense they were somewhat indifferent to it. They were required for survival to acknowledge it, but in their novels they went about the business of a writer, which was, again in P's words, "to get inside readers by making them feel what they are, and not by piercing them with exclamation points." They derived neither from ➤Richardson and ➤Ronsard nor from ➤Dostoevski and ➤Zola, but from ➤Rabelais, ➤Cervantes, and ➤Fielding. Each had an individual and arresting style. They all knew how to laugh. They enlarged their readers. This third force of novelists (not to be lightly confused with the political third force of the time) did, as we know, endure. (➤Bellow, Saul; Cheever, John)

P's Lament and P's Literary Schizophrenia rose out of the debasement of language. The extravagantly publicised new edition of an authoritative American dictionary sanctioned the use of "infer" for "imply," which the average man found convenient; in no time at all "humble" meant

"proud" (➤Theology), etc., and the number of words in use dropped sharply, making all men intellectual equals (➤Orwell, George). A logical result was "speed-reading." If meaning had no importance, and the act of communicating was all, then writing could be evaluated only quantitatively. (This was a great comfort to Category (1), above.) The fad was much exalted by a Chief Executive, probably in understandable reaction to the even more debatable linguistic achievements of the preceding administration. "Five thousand words per minute" replaced automobiles and tax-evasion as symbols of status, and when a United States Senator dropped the phrase "ten thousand words per minute" P responded with his famous Lament: "I write slow," he said. "I hate the four eyed son of a bitch." He had just spent a year on a novel of one hundred thousand words that would occupy the Senator for only ten minutes, and there was always a chance that the Senator would review it. P then introduced a new technique that made speed-reading virtually impossible: he spaced his words so irregularly. He was aware that certain mental disorders could be brought on by flashing lights, repeated sounds, etc. (➤Advertising Industry), and was gratified when a new malady, deliberately induced by young writers who

joined him, and characterized by stammering, blood-shot eyes, and partial amnesia, was named P's Literary Schizophrenia. Shortly the fads ended; words like "disinterested," "presently," and "hopefully" were restored to proper use;

intelligibility in prose composition was required of all university professors except, of course, in metaphysics. There is a statue of P adjacent to the Jefferson Monument (→Jefferson, Thomas; also Style) in Washington, D.C.



THEORETICAL PROGRESS

My math requires, when mesons pair,
A particle that isn't there.
It isn't there again today—
Please, Fermi, make it go away.

—KAREN ANDERSON

INVESTIGATION OF GALACTIC ETHNOLOGY

The laws of Wolf 50 require
Under threat of a punishment dire
That the few females born
Must marry King Zorn
And the commomers all call him "Sire."

—KAREN ANDERSON

BOOKS



PARAPSYCHOLOGY, FRONTIER SCIENCE OF THE MIND, J. B. Rhine & J. G. Pratt, Charles C. Thomas. No price listed. PARAPSYCHOLOGY, AN INSIDER'S VIEW OF ESP, J. Gaither Pratt, Doubleday, \$4.95

As parapsychology is so closely linked with the name of J. B. Rhine of Duke University, it is pertinent and ought to be interesting to see what he and his chief assistant have had to say about it in these two books. However, the Rhine-Pratt volume is really a textbook (and its cover really does not list a price; publisher's address is 301 E. Lawrence Ave, Springfield, Ill., if you want to inquire) and we really are not equipped to review textbooks here. But allow me to quote a few lines. *It should from the very beginning be made clear that the phenomena with which parapsychology deals are all, without exception, events of nature. In other words, the field of problems belongs entirely to natural science. [. . .] Accordingly, whatever comes out of the investigations of this field belongs, just as in any other branch*

of science, to the body of organized knowledge known as natural law. If this view ultimately prevails it will be due in no small measure to the tireless labors of the Rhine laboratory, with its dice-cages, its cards with the funny squiggles, and its scrupulously-kept records.

Dr. Pratt's book is of more of a popular nature, although all those years among the test-cards seem to have subdued a style perhaps originally not very brilliant. Parapsychology is the science of mind as physics is the science of matter, he says. Parapsychologists are bringing about a revolution, and he quotes Professor Hart on this *"revolution which demonstrates by laboratory methods that mind can contact mind without the aid of its senses and regardless of time and space, and that mind can control matter without physical contacts. . . ."* The attempt to investigate this on the laboratory level has perhaps produced as many problems as it has solved. Is the successful psi-sensitive, for instance, influencing the phenomena by telekinesis—or is he, instead, aware of the ulti-

mate results by prerecognition? Why does sodium amytal depress this skill and caffeine restore it? Why do those tested and shown to be successful generally sooner-or-later "grow stale . . . [and] . . . lose their ability . . ."? How does hypnosis apparently increase this ability? The book is full of fascinating bits—there is now no reason to attribute the communication by bees of certain kinds of knowledge to ESP; it has been shown that the communication is done by bodily motions. On the other hand, all attempts to provide a purely physical explanation for the homing of pigeons have failed. And, inevitably, so very far from bees, pigeons, poltergeists, dice and score-cards, is the question of the *survival of the personality*—a much more cautious term than *immortality*.

Any horse can be beaten to death, or close to it. There has been a widespread feeling that psionics—the practical application of parapsychology—has received too much attention in Science Fiction. Be that as it may, the theory and practice can hardly have received too much attention outside of SF, and these two books should be examined before they are dismissed—if dismissed they are. The Rhine-Pratt text contains copious bibliographies, a list of "Significant Events in the Development of Parapsychology", and quite an interesting glossary.

THE TALES OF HOFFMANN, E. TA. Hoffmann, trans. by Michael Bullock, Frederick Ungar.

It is not quite true, boys and girls, that when I was young there was no television. That was true only when I was *very* young. But TV existed in New York City by the mid-Thirties, and there were a few stations (not yet called *channels*)—all called X342397 or, at any rate, X-something-like-that. Former President Hoover had a set, Cardinal Spellman had a set, and we didn't have any set. We had what was known as "radio", and on Sunday afternoons our radio was devoted to the University of Chicago Roundtable, a colloquium which went round and round and on and on; my father finding the droning voices of those learned doctors both digestive and pleasantly soporific. One Sunday afternoon of blessed memory these deadly dialogues were allowed to be interrupted—I know not how—by a flow of pleasant music. "*The Tales of Hoffmann*," my mother said . . . And I have honored this pleasant opera ever since.

As this is not a musical column, however, let us on to the stories which inspired Offenbach's pretty music. Here is a new translation of five of the East Prussian judicial councillor's romantic fantasies (or fantastic romances) written at the early part of the 19th Century. I don't know if Poe ever read them,

or Fitz-James O'Brien; but there are, or seem to be, affinities. The stories here are unequal in quality and in their capacity to command our respect. *The Sandman* is a tale of an alchemist's son who falls in love with an android—if this is not the first, it must be among the very first, uses of such a theme. *Made-moiselle de Scudéry* did not allow itself to be read by me . . . after the first 20 pages it began to have the same effect as the U. of Chi. Roundtable. *Datura Fatuosa* tells about a magic garden used by a Spanish count to seduce one Eugenius, a real nut of a botanist. The count turns out to be a crypto-Jesuit, and hence capable of anything—including a magic garden. *The King's Bride* is a perfectly charming diversion in which the daughter of a cabbalist finds herself affianced to a gnome of the Paracelsus sort. The final section, *Gambler's Luck*, is not our sort of fantasy, and is really less credible than the ones which are. All in all, this selection from the *Tales* is a rather mixed bag, but one worthy of attention nonetheless.

1964 YEARBOOK OF ASTRONOMY, ed by J. G. Porter and Patrick Moore, W. W. Norton, \$3.95

These neat little volumes reach us late, are reviewed later, and in any event are not calculated for degrees of north latitude to the south of Canada. This is not too impor-

tant, for American amateur astronomers will have obtained information suitable to their particular needs from other sources. Useful for all, wherever located, are the very interesting articles: this year they comprise *The Distance of the Sun, With Mariner 2 to Venus, Selenology—or Geology Applied to the Moon, The Great Red Spot on Jupiter, Telescope Mounting, Astronomy and Navigation, The Surface of Saturn, Planetary Nebulae: Harrison, Maskelyne and the Longitude Problem, The Short-period Comets, and Recent Advances in Astronomy*. There is also a glossary.

OUTER SPACE HUMOR, compiled by Charles Winick, Peter Pauper.

"An unemployed astronaut went to collect his unemployment insurance. He was asked if he'd been fired from his previous job. 'No,' he said, 'I was fired into the job.'" This book's got a million of 'm. It's an otherwise attractive little volume like most Peter Pauper Press books, and has cute pictures by James Schwering. "An Indian and his son were standing on a hill overlooking the valley. The father said, 'Someday, we Indians shall get this land back. The palefaces will go to the moon.'" It's got a *million* of 'm!

SWORDS AND SORCERY, L. Sprague de Camp, ed., Pyramid, 50¢

These columns do not usually

review paperback anthologies (or collections) compiled from SF magazines; however, as a Cockney of our acquaintance once put it: "Stand stryde—but not rigid." This volume is an exception, deservedly, and not just because only some of the stories are SF magazine reprints. "Sword and sorcery," as a genre, is capable of rousing emotions only a little less hot than those engendered by the repeal of the Missouri Compromise. We are not among the hot-heads, however, being neither for it nor agin it, but insisting upon the same standards by which other fiction is judged. This volume is fortunate in its editor, and not less so in its illustrator, the illustrious Virgil Finlay. Congrattoes to Pyramid for providing not only illustrations, but such an Illustrator.

The contents consist in an outstanding octave—even though I'm sorry to have to regard Clark Ashton Smith's *The Testament of Athammaus* as outstandingly bad—plus a good, short introduction ("Heroic Fantasy") by de Camp. Poul Anderson's *The Valor of Cap-pen Varra* has its sources in old Danish Legend, thankfully has a minimum of mead-horn thumping, is rich in Andersonian invention.

The Distressing Tale Of Thango-brind The Jeweller is Lord Dunsany at his best: no more need be said. Robert E. Howard is represented by *Shadows In The Moonlight*, a diversion of that other Tarzan, Conan the capital-b Barbarian; and has got just about the whole works—deserts, islands, pirates, cruel oriental monarchs, pretty swooning maidens, ruined cities, great apes, duels to the death, and the indispensable bloodstained athletic supporter which the hero never takes off. No one could claim that *The Citadel of Darkness* is one of Henry Kuttner's best, but, then, his best was among the best there is. This one has its own seven-Sign Zodiac, and lots of swords and lots of sorcery. *When The Sea King's Away* is one of Fritz Leiber's stories about Fafhrd and Grey Mouser in the not-quite-lost Land of Lankhmar—intriguing, and not a little puzzling. And for those that like Lovecraft, *The Doom That Came To Sarnath* is probably the kind of story they like. And C. L. Moore's Jirel of Joiry (a swordswoman, for a change) tale, *Hellsgarde*, is a lot better than it ought to be. All in all, a good four-bits' worth, this.

—AVRAM DAVIDSON



Laurence M. Janifer we have already described and discussed and have no intention of doing so again right here; Michael Kurland barely paused long enough on his return from Army service in Europe a short while ago to bespeak at his tailor's a suit with cuffless trousers—and immediately plunged into a successful writing career. Both men are at any rate quite familiar with the ways of literary agents . . . in fact, Janifer is himself an agent . . . as well as those of the writers (poor devils) who sell through them. Here, then, is an intimate glimpse which Reveals All that really goes on behind those frosted glass windows. Like the one about the Giant Rat of Sumatra, this may be a story for which the world is not prepared . . .

ELEMENTARY

by Laurence M. Janifer and Michael Kurland

"Excellent!" I cried.

"Elementary," said he.

—*The Crooked Man*, by John
H. Watson, M. D.

THE TWO MEN STOOD SIDE BY side, each holding a small revolver. Both revolvers were smoking slightly. One of the men was named Blake, the other Ewing. Blake had a beard, as befit a successful author. Ewing, a comparative novice, was thinking about starting a small moustache. Behind the desk, Hamish Seul'homme stared blankly back, the two bullet-holes hardly bleeding at all, his seated figure barely disarranged.

"You know," Ewing said in a quiet tone, "he looks peaceful."

"As still as death," Blake said. "He never liked cliches."

"He used to cut them from my manuscripts," Ewing said.

"And mine," Blake said softly. "Sometimes he called up to complain."

"Well, that's all over with now," Ewing said.

"Done with, you mean," Blake said. "All done with."

Ewing accepted the correction in silence. Another second passed while both gazed in a satisfied fashion on the body of Hamish Seul'homme.

"Literary agents," Ewing said at last, "will learn a lesson from this."

"Not to mention," Blake added, "detective-story writers. Perhaps we ought to get busy."

"By all means," Ewing said. Carefully, both men checked the office for traces of their habitation, but there were few. Ewing picked up a small shred of lint which had fallen on the cork-tiled floor from the pocket of his suede jacket. Blake retrieved a stray beard-hair which had caught somehow in the desk-blotter.

"We'll need a new agent," Ewing said.

"I suppose so," Blake said sadly. "But perhaps the next one will be different. They can't all be like *Seul'homme*, can they?"

"They all seem to be," Ewing said. "I've heard a lot of writers talking about their agents—"

"I know," Blake said. "It's a terrible world." He sighed. "But perhaps this death will teach them. Perhaps they will learn to reform."

"Stop returning our best stories," Ewing said.

"Stealing our plots for other writers," Blake added.

"Refusing us advances," Ewing said.

"Taking two-hour lunches," Blake finished, "*on our ten per cents.*"

Now, carefully, they went to the door of the suite of offices. All

the lights were turned out and, as Ewing knelt to begin work on the cork tiling, Blake swung open the door soundlessly. In the dim corridor lighting the letters shone:

HAMISH SEUL'HOMME

LITERARY REPRESENTATIVE

OFFICES IN NEW YORK,

LONDON, PARIS, ROME,

SAN FRANCISCO, HONO-

LULU, MUNICH, TOKIO,

RIO DE JANEIRO AND

ATHENS

"THE FRIENDLY AGENCY"

BY APPOINTMENT ONLY

Blake barely gave them a glance. His steely eyes roved the corridor for a second in silence. Then he whispered: "There's nobody around."

"Good," Ewing said. He had pryed up a small section of flooring, and was panting slightly. "Got the key?"

Blake searched in his pockets. "Right here," he said at last. "It got stuck in my notebook." He produced it. Ewing took it with a gloved hand and inserted it in the lock from the inside. From another pocket, Blake produced a pencil, which Ewing put through the hole at the top of the key.

"You're sure they won't miss the key?" Ewing said.

"They don't even know it exists," Blake said. "I took a wax impression of *his* key six months ago. This is the result. Even then, I could see this moment coming."

"Far-sighted of you," Ewing commented admiringly.

"Nothing at all," Blake said. "After a while you develop a sense for these matters."

Ewing now attached a long string to the key, leading it round the door to the outside. In the corridor, he too looked round for a second.

"No one at all," he said. "You'd think there would be people working late."

"America's going downhill," Blake said regretfully. "They don't take pride in their jobs any more."

"True," Ewing said. "Sad, but true."

The door was closed. From the outside, Ewing now inserted a long metal ruler which just fit under the bottom of the door. Working by touch, he slid the ruler under the cork tiling and then lifted the tiling up by angling the ruler. At last he held the ruler steady.

"Got it?" Blake asked curtly.

"Got it," Ewing replied.

Blake began work on the string—first turning the key inside to lock the door, then jerking the key out so that it fell to the empty floor, while Ewing pushed the cork tiling still farther out of its way. With the tiling gone, the key fit easily under the door as Blake led it out on its string, and the pencil came along after only a short struggle.

Ewing let the cork tiling drop, and both men heard the thunk as

it fell back into place and adhered, thanks to the quick-drying cement with which he had spread its underside.

Blake pocketed key and pencil: Ewing took as his share the string and the ruler. A second of silence went by.

"You know," Ewing said, "I want to say that I'm proud to be associated with you in an enterprise like this."

"You've been a great help," Blake said. "I could never have done it alone."

"I'm grateful you think so," Ewing said.

"I wonder," Blake began after a few seconds. "Who do you think will find him?"

"His secretary, probably," Ewing said. "She never liked me."

"Nor me," Blake said. "Used to tell me *Seul'homme* was out when I wanted an advance."

"Me too."

Quite suddenly, they heard footsteps around a corner of the hall.

"Well," Blake said, "we'd better be going."

"Right-oh," Ewing replied. They headed for the automatic elevators.

"You know," Ewing said as they stepped aboard, "I can't think that anyone will miss him."

"A literary agent?" Blake said with a little laugh. "Don't be silly, young man. Of course nobody will miss him. The office will be closed—that's all. And that snip of a

secretary will have to find a new job." He paused. "Perhaps we ought to stop by tomorrow and express suitable surprise," he said, "but hardly regret. No one could expect us to show regret."

"Quite," Ewing said. He had recently had some success with a series of mysteries set in New Scotland Yard.

At three o'clock the following afternoon, Blake stepped out of the automatic elevator and started down the corridor, Ewing the obligatory few feet behind. At the door of the Hamish Seul'homme offices, both stopped.

"There's no one inside," Ewing said, shocked.

"Don't be silly," Blake said. "Probably they're all in Seul'homme's private offices, trying to figure out what happened."

"A locked room," Ewing murmured. "A perfect locked room."

Blake turned the door-handle. The door opened.

"You see?" he said as he stepped inside.

The secretary looked up from her desk inside the outer door. "Oh," she said. "You." She noticed Ewing behind Blake after a second, but said nothing more.

"Is he in, Ursula?" Blake asked.

The secretary sniffed audibly. "I'll check, if you really need to see him," she said.

"Please do," Ewing said, with a slight frown.

The secretary did a few clicking things with her switchboard, and then turned back to the two authors. "He's in," she said. "And he'll see you, though I'm sure I don't know why."

Now frankly puzzled, Blake and Ewing made their way across the familiar tiled floor to the interior office, and pushed open the door.

"Well, boys," Hamish Seul'homme said cheerfully, "always glad to see a few of my hard-working authors. Lucky you caught me—I'm just back from lunch and I have an appointment with some movie starlets. What's new?"

Phillips, a rotund man who seemed to take up enough room for any two average human beings, stirred in his chair. "Normal enough," he wheezed fatly. "I suppose every writer's had the experience. I know I did, once, with my agent."

Blake and Ewing leaned forward eagerly. "But this is different—" Ewing began.

"Yes," Blake cut in. "We called you over here because we can't understand what happened. Both of us remember the murder—the actual murder—so it can't have been a dream."

"But it was," Phillips said. "It always is. I remember when I murdered my agent—a most convincing dream. And going to see him the next afternoon was a shock, believe me. To sleep, perchance to

dream . . .” He sighed. Phillips had the unfortunate habit of lapsing into quotation on almost no provocation, which gave him an air at once learned and unoriginal. “But you get over it, boys,” he said. “Believe me, you get over it.”

“I tell you—” Ewing began.

“Of course, all this is in confidence?” Blake asked suddenly.

“Of course,” Phillips said massively. “I shall be as silent as the grave—ha-ha—the grave into which you put your agent.”

“Because we intend to try again,” Blake said. “Do you know what he’s done? He’s agreed to let Spanish rights to my books go for twenty-eight dollars each!”

“And he didn’t even bother to argue with the publishers who returned my latest book!” Ewing added.

“Don’t blame you in the least,” Phillips said. “Murder most foul . . . the only thing for an agent. But don’t worry about that dream.”

“But it couldn’t have been—” Ewing began.

“Whatever you say,” Blake added smoothly. “And—if you ever need help in any little job of your own—”

“Oh, I gave that all up years ago,” Phillips said. “Love thy fellow man, you know, and all that.”

Blake and Ewing shook their heads. “Surely,” Blake said, “you’re carrying love a little too far?”

“I mean, after all,” Ewing added. “An agent.”

At eleven o’clock the next evening, the floor which held the Hamish Seul’homme offices was deserted, except for the dead body of Hamish Seul’homme, and the fairly lively ones of Blake and Ewing.

“It’s lucky you could convince him to stay late,” Ewing said. “Yesterday and now today.”

“I told him I wanted to discuss a new agency contract,” Blake said wearily. “That always gets them.”

“But was yesterday a dream?” Ewing asked. “Or what?”

“You got me,” Blake said inelegantly. “But today—this time we know for sure.”

“Right,” Ewing said.

“And it’s a good thing, at that,” Blake said. “That locked-room idea was fancy, but it would never work. Suppose the tiling fell back a little off center—first thing the cops would notice. Or scratches in the lock from the way we pulled the key out. Even our gloves must have left smudges here and there. They’d realize it was two of us—and then they’d have us. We’re the only two who came up there together.”

“But this time—” Ewing began.

“This time they won’t know how many there were,” Blake said. “Seul’homme has three shots in him, from three different guns—and then there’s all this.”

His gesture covered the contents of the open valise, which were spread out on the floor of the suite.

Several grimy caps from the city's second-hand-clothing stores, a pile of old and muddy shoes from various places, some crumpled copies of tabloid newspapers, a length of iron pipe and other such items lay scattered before them.

"A gang murder," Ewing said. "It's a great idea."

"Right," Blake said. Rapidly, the two men began making footprints with the muddy shoes, footprints toward the body and away from it, back to the front door. There the shoes were wiped clean with the tabloid sheets, which were left crumpled in a corner.

"Gee, boss," Ewing said, "this gimmick works swell."

"Sure does, kid," Blake said. "A h— of a lot better than the other notion."

"This is the real stuff," Ewing said admiringly.

Blake tracked one more pair of shoes dizzily to the door. "That oughta wrap it up, kid," he said. "Let's blow."

"Sure-mike," Ewing said. "You're the boss."

"You're d— tootin' I am," Blake said with satisfaction. The valise was repacked, leaving the caps, the iron pipe, and suchlike clues scattered in the office. Both men stepped silently out into the empty hallway.

Suddenly there was the sound of footsteps.

"Cheese it, the cops," Ewing muttered hoarsely.

"We'll scram," Blake said. "We'll take it on the lam."

In the elevator, he turned to his younger partner. "Do you know," he said, "that Seul'homme once told me I had no grasp of criminal lingo?"

"Shocking," Ewing said sadly. "But that's all over with now."

Afternoon rolled round, correctly on schedule, and at three o'clock Blake and Ewing stood once more before the Hamish Seul'homme offices. "Again?" Ewing murmured.

"They're all inside, that's all," Blake returned, but without real conviction.

The sight of Seul'homme's secretary, when he opened the door, was hardly even a shock.

"Well?" she said nastily. "What do you want this time?"

"Is—" Blake began. "Is—"

"Yes, he's in," the secretary said. "Why don't you go home and write, instead of bothering him all the time?"

Ewing said: "But—" and stopped.

There didn't seem anything else to say.

That night, in Blake's apartment, both men sat, morose, confused and determined.

"Something's gone wrong," Blake said.

"There's something awfully strange here," Ewing said.

"We killed him," Blake said. "Twice. I remember it distinctly."

"And I," Ewing said.

A locked-room murder, and a gang murder," Blake said.

Ewing frowned. "Didn't the gang murder come first?" he asked.

"The locked room first," Blake said. "Classic tradition. Then the romantic."

"What's next?" Ewing asked.

"We can't go on murdering him forever," Blake said. "We've got to figure out what's gone wrong."

Ewing nodded sadly. "You know," he said, "I wouldn't even mind being caught, not as much as I mind this."

"It is sort of eerie," Blake said.

"Let's have one more try, though," Ewing said. "Maybe we'll be able to figure the whole thing out this time."

"Another gang murder?"

Ewing shrugged. "Well, why not?" he asked.

"Repetitious," Blake said. "Besides, it's so complicated. And tiring. And I'm sure the police would have traced back our clues to the second-hand shops and such."

"Come to think of it," Ewing said slowly, "what happened to the clues? Someone must have taken them away . . ."

"It's a plot," Blake said.

Ewing nodded. "It's supposed to be a plot," he said. "But it's supposed to be *our* plot."

"Someone," Blake said, "is revising us."

"Seul'homme," Ewing said instantly.

"But we killed him," Blake said.

"Maybe he's wearing a bullet-proof vest," Ewing said. "Maybe he's playing with us."

"That could be it," Blake said. "Still . . ."

A silence fell. Both authors sat thinking deeply. After a time Blake looked up. Ewing gazed at him attentively.

"Yes?" the younger man said at last.

"Even a bullet-proof vest," Blake said, "would do little good after a fall from Seul'homme's office window."

"On the thirty-second floor," Ewing said. "Wonderful! Amazing!"

Blake shrugged, stroking his beard. "Elementary," he said casually.

Coming up in the elevator, somewhat boredly, the next night, the two authors carried no tools. Only a small sheet of paper, folded over, rested in Blake's inside jacket pocket.

"Of course, you'll copy it over on Seul'homme's typewriter," Ewing said.

"Of course," Blake said. "But it doesn't do to run these things out first-draft. A really good suicide note requires careful revision." He patted his pocket. "If I say so myself, I came up with some fine touches here and there," he added.

"Oh, very fine indeed," Ewing said. "That bit about not being able to live with his conscience after all the terrible things he's done to authors—"

"And I must admit you helped with the phrasing here and there," Blake put in.

"Oh, now, really," Ewing said, abashed. "Anyone would have done the same."

The elevator let them off, and they walked quietly down the corridor to the familiar door. Blake opened it with his gloved hand.

"Come in!" Hamish Seul'homme said cheerily. "Come right in."

The two authors took a step forward, then another. "Stand where you are!" Blake commanded, drawing his gun.

Ewing drew his own. Facing them, Hamish Seul'homme smiled.

Then, for both authors, everything went black.

"I'm seeing double," Blake whispered. "Whatever hit me on the head has affected my brain."

"Mine, too," Ewing said. "I see two of them."

Sprawled in chairs, loosely tied, both authors confronted their enemy.

"But we are twins," the two Hamish Seul'hommes said. Each of them was holding one of the revolvers with which Blake and Ewing had planned to back Seul'homme to the window. "In a way," the two added.

"But—" Blake began.

"You can't—" Ewing said.

The two Hamish Seul'hommes sighed. "Authors," they said. "No imagination, no intellect, no power of reason. And we give them ninety per cent of our money. Ridiculous!" They waved the guns negligently and sighed again.

"You're—you're a corporation of identical beings," Blake stammered. "From an alien planet. And you've come to conquer Earth, but you—"

"Silly," the two Seul'hommes chided.

"It's hypnotism," Ewing said. "You've managed to hypnotize us into believing that there are two of you, so that—"

"Inane," the Seul'hommes said.

"All right," Blake conceded after a glance at his despondent partner. "We give up. What are you?"

"We," the two Seul'hommes said, "are an agent. We have been known as ten-per-centers—why should it surprise you that there are ten of us—each in one of our main offices?"

"But—" Blake began. "But—"

"We have a country estate," the two Seul'hommes said. "All agents have country estates. You must have noticed that. Yet they are always in the city. Have you never wondered why we maintain a country place?"

"Well," Ewing began, "I—"

"Crude," the Seul'hommes said. "Lacking in imagination. Brutish

and stupid." They smiled. "It is on our estates, naturally," they said, "that we grow new ones. Just like every other agent. Ten active parts at a time—with ten per cent for each. And a new supply coming up."

"You mean we really did—" Blake said.

"Kill us?" the Seul'hommes said. "Of course. And, to be frank, it's getting to be a bore. We decided to stop it. You two are much more stubborn than most authors. Most of them seem easily enough convinced that they have experienced no more than a particularly vivid dream."

"Like Phillips," Ewing said in a hushed voice.

Blake turned a steely gaze on his companion. "No names!" he hissed.

"Oh, we know about Phillips," the Seul'hommes said blandly. "As a matter of fact, he knows about us as well—though he knows it wouldn't do for him to mention the fact."

"Not even—" Ewing began.

"Not even to another author," the Seul'hommes said. "Exactly so." They chuckled in unison, a horrible sound. "Of course, his agent—all ten of him—has made it worth his while."

Blake took a deep breath. "And now," he said bravely, "you're going to kill us?"

"Good Lord, no!" the Seul'hommes cried. "Kill an author?

My God, man, how would we live?"

"Aha," Blake said cleverly. "Then you need us, too."

"Can't get along without us," Ewing said.

The Seul'hommes merely nodded. "Of course," they said. "But we're going to swear you to silence. Can't let the word get out, you know."

Blake and Ewing looked at each other. "Writers," Blake said at last, "*deserve* to know."

"It's the least we can do," Ewing added.

The Seul'hommes merely waited. Blake thought of saying: "Aha," again, but a lone "Aha," all by itself, somehow lacked elegance. Or even meaning, he thought.

"It's an impasse," Ewing said at last. "You can't kill us, and you can't let us live."

"Writers," the Seul'hommes said to each other, sadly. "Always that triumphant leap at the obvious." They sighed. "No subtlety," they said. "No intellect. No depth."

"Now, wait a minute—" Blake began.

The Seul'hommes raised one hand each. "Consider," they said. "We will not dispute your feelings toward agents. After all, that's none of our concern." They sniggered. "But your feelings toward other writers—this idiotic *loyalty* . . ."

It was Ewing's turn to say: "Now, wait a minute—"

"What have other writers ever done for you?" the Seul'hommes asked. "Stolen your plots, taken up space in magazines you want to write for, anticipated all your best ideas—why, however you feel about agents, can't you see that it's other writers you really ought to dislike?"

There was a little silence. At last Blake, as senior, spoke. "Well," he said, "if you put it that way—"

"Writers become editors, as well," the Seul'hommes said. "And anthologists. Why, if it weren't for other writers, you could publish anything you liked, anywhere. You'd have no problems at all."

Ewing nodded decisively. "Let them fend for themselves," he said. "I don't see why we should do a thing for them."

"If necessary," Blake added, "we'll even mislead them. They deserve misleading."

The Seul'hommes smiled. "Perfectly proper," they said with satis-

faction. "And now that you've decided to join us—" Blake and Ewing winced slightly, but remained firm—"we really ought to help you out, as well."

"Help us out?" Blake asked.

"Exactly," the Seul'hommes said. "Haven't you ever noticed how a few writers can provide enough material—enough stories and books—to flood even today's markets? A mystery writer or two here, a science-fiction writer there, a humorist, a novelist—all making enormous sums of money on sheer production."

Ewing stared. "What do you mean?" he asked in a whisper.

The Seul'hommes shrugged. "It's very simple," they said. "You've heard critics talk about the way a writer has grown. What did you think they meant?"

"Grown?" Blake said.

"Of course," the Seul'hommes said. "How much work do you think ten of you could do?"

ABOUT THE COVER

This month's cover by Mel Hunter depicts a ship descending through the cloud layers on the day side of Venus. Molten and glowing red surface of planet are visible beneath the gale-torn lower cloud deck. This painting is one of a group of murals done by Mel Hunter for the restaurant at the Transportation and Travel Pavilion of the Worlds Fair.



THE HASTE-MAKERS

by Isaac Asimov

WHEN I FIRST BEGAN WRITING about science for the general public—far back in medieval times—I coined a neat phrase about the activity of a “light-fingered magical catalyst.”

My editor stiffened as he came across that phrase, but not with admiration (as had been my modestly confident expectation). He turned on me severely and said, “Nothing in science is magical. It may be puzzling, mysterious, inexplicable—but it is *never magical*.”

It pained me, as you can well imagine, to have to learn a lesson from an *editor*, of all people, but the lesson seemed too good to miss and, with many a wry grimace, I learned it.

That left me, however, with the problem of describing the workings of a catalyst, without calling upon magical power for an explanation.

Thus, one of the first experiments conducted by any beginner in a high-school chemistry laboratory is to prepare oxygen by heating potassium chlorate. If it were only potassium chlorate he were heating, oxygen would be evolved, but slowly and only at comparatively high temperatures. So he is instructed to add some manganese dioxide first. When he heats the mixture, oxygen comes off rapidly at comparatively low temperatures.

What does the manganese dioxide do? It contributes no oxygen. At the conclusion of the reaction it is all still there, unchanged. Its mere presence seems sufficient to hasten the evolution of oxygen. It is a haste-maker or, more properly, a catalyst.

And how can one explain influence by mere presence? Is it a kind of molecular psi force, an extrasensory perception on the part of potassium chlorate that the influential aura of manganese dioxide is present?

Is it telekinesis, a para-natural action at a distance on the part of the manganese dioxide? Is it, in short, magic?

Well, let's see—

To begin at the beginning, as I almost invariably do, the first and most famous catalyst in scientific history never existed.

The alchemists of old sought methods for turning base metals into gold. They failed and so it seemed to them that some essential ingredient was missing in their recipes. The more imaginative among them conceived of a substance which, if added to the mixture they were heating (or whatever), would bring about the production of gold. A small quantity would suffice to produce a great deal of gold and it could be recovered and used again, no doubt.

No one had ever seen this substance but it was described, for some reason, as a dry, earthy material. The ancient alchemists therefore called it "xerion" from a Greek word meaning "dry."

In the 8th Century, the Arabs took over alchemy and called this gold-making catalyst "the xerion" or, in Arabic, "al-iksir." When west Europeans finally learned Arabic alchemy in the 13th Century, "al-iksir" became "elixir."

As a further tribute to its supposed dry earthy properties, it was commonly called, in Europe, the "philosopher's stone." (Remember that as late as 1800, a "natural philosopher" was what we would now call a "scientist.")

The amazing elixir was bound to have other marvelous properties as well and the notion arose that it was a cure for all diseases and might very well confer immortality. Hence, alchemists began to speak of the "elixir of life."

For centuries, the philosopher's stone and/or the elixir of life was searched for but not found. Then, when finally a catalyst was found, it brought about the formation not of lovely shiny gold, but messy, dangerous sulfuric acid.* Wouldn't you know?

Before 1740, sulfuric acid was hard to prepare. In theory, it was easy. You burn sulfur, combining it with oxygen to form sulfur dioxide (SO_2). You burn sulfur dioxide further to make sulfur trioxide (SO_3). You dissolve sulfur trioxide in water to make sulfuric acid (H_2SO_4). The trick, though, was to make sulfur dioxide combine with oxygen. That could only be done slowly and with difficulty.

* *That's all right, though. Sulfuric acid may not be as costly as gold, but it is—conservatively speaking—a trillion times as useful.*

In the 1740's, however, an English sulfuric acid manufacturer named Joshua Ward must have reasoned that saltpeter (potassium nitrate), although non-inflammable itself, caused carbon and sulfur to burn with great avidity. (In fact, carbon plus sulfur plus saltpeter is gunpowder.) Consequently, he added saltpeter to his burning sulfur and found that he now obtained sulfur trioxide without much trouble and could make sulfuric acid easily and cheaply.

The most wonderful thing about the process was that, at the end, the saltpeter was still present, unchanged. It could be used over and over again. Ward patented the process and the price of sulfuric acid dropped to 5 percent of what it was before.

Magic?—Well, no.

In 1806, two French chemists, Charles Bernard Desormes and Nicholas Clement, advanced an explanation that contained a principle which is accepted to this day.

It seems, you see, that when sulfur and saltpeter burn together, sulfur dioxide combines with a portion of the saltpeter molecule to form a complex. The oxygen of the saltpeter portion of the complex transfers to the sulfur dioxide portion, which now breaks away as sulfur trioxide.

What's left, (the saltpeter fragment minus an oxygen) proceeds to pick up that missing oxygen, very readily, from the atmosphere. The saltpeter fragment, restored again, is ready to combine with an additional molecule of sulfur dioxide and pass along another oxygen. It is the saltpeter's task simply to pass oxygen from air to sulfur dioxide as fast as it can. It is a middleman, and *of course* it remains unchanged at the end of the reaction.

In fact, the wonder is not that a catalyst hastens a reaction while remaining apparently unchanged; but that anyone should suspect even for a moment that anything "magical" is involved. If we were to come across the same phenomenon in the more ordinary affairs of life, we would certainly not make that mistake of assuming magic.

For instance—Consider a half-finished brick wall and, five feet from it, a heap of bricks and some mortar. If that were all, then you would expect no change in the situation between 9 A.M. and 5 P.M., except that the mortar would dry out.

Suppose, however, that at 9 A.M. you observed one factor in addition; a man, in overalls, standing quietly between the wall and the heap of bricks with his hands empty. You observed matters again at 5 P.M. and the same man is standing there, his hands still empty. He had not changed. However, the brick wall is now completed and the heap of bricks is gone.

The man clearly fulfills the role of catalyst. A reaction has taken place as a result, apparently, of his mere presence and without any visible change or diminution in him.

Yet would we dream for a moment of saying "Magic!"? We would, instead, take it for granted that had we observed the man in detail all day, we would have caught him transferring the bricks from the heap to the wall one at a time. And what's not magic for the bricklayer is not magic for the saltpeter, either.

With the birth and progress of the 19th Century, more examples of this sort of thing were discovered. In 1812, for instance the, Russian chemist, Gottlieb Sigismund Kirchhoff—

And here I break off and begin a longish digression for no other reason than that I want to; relying, as I always do, on the infinite patience and good humor of the Gentle Readers.

It may strike you that in saying "The Russian chemist, Gottlieb Sigismund Kirchhoff" I have made a humorous error. Surely no one with a name like Gottlieb Sigismund Kirchhoff can be a Russian! It depends, however, on whether you mean a Russian in an ethnic or in a geographic sense.

To explain what I mean, let's go back to the beginning of the 13th Century. At that time, the regions of Courland and Livonia, along the southeastern shores of the Baltic Sea (the modern Latvia and Esthonia) were inhabited by virtually the last group of pagans in Europe. It was Crusade-time and the Germans to the southeast felt it a pious duty to slaughter the poorly armed and disorganized pagans for the sake of their souls.

The crusading Germans were of the "Order of the Knights of the Sword" (better known by the shorter and more popular name of "Livonian Knights"). They were joined in 1237 by the Teutonic Knights who had first established themselves in the Holy Land. By the end of the 13th Century, the Baltic shores had been conquered with the German expeditionary forces in control.

The Teutonic knights, as a political organization, did not maintain control for more than a couple of centuries. They were defeated by the Poles in the 1460's. The Swedes, under Gustavus Adolphus, took over in the 1620's, and in the 1720's, the Russians, under Peter the Great, replaced the Swedes.

Nevertheless, however the political tides might shift and whatever flag flew and to whatever monarch the loyal inhabitants might drink toasts, the land itself continued to belong to the "Baltic barons" (or

"Balts") who were the German-speaking descendants of the Teutonic Knights.

Peter the Great was an aggressive Westernizer who built a new capital, St. Petersburg* at the very edge of the Livonian area and the Balts were a valued group of subjects indeed.

This remained true all through the 18th and 19th Centuries when the Balts possessed an influence within the Russian Empire out of all proportion to their numbers. Their influence in Russian science was even more lopsided.

The trouble was that public education within Russia lagged far behind its status in western Europe. The Tsars saw no reason to encourage education and make trouble for themselves. No doubt they felt instinctively that a corrupt and stupid government is only really safe in the hands of the uneducated.

This meant that Russians who wanted an education had to go abroad, especially if they wanted a graduate education in science. Going abroad was not easy, either, for it meant learning a new language and new ways. What's more, the Russian Orthodox Church viewed all westerners as heretics and little better than heathen. Contact with heathen ways (such as science) was at best dangerous and at worst damnation. Consequently, for a Russian to travel west for an education meant the overcoming of religious scruples, too.

The Balts, however, were German in culture and Lutheran in religion and had none of these inhibitions. They shared, with the Germans of Germany itself, in the heightening level of education—in particular, of scientific education—through the 18th and 19th Centuries.

So it follows that among the great Russian scientists of the 19th Century, we not only have a man with a name like Gottlieb Sigismund Kirchhoff, but also others with names like Friedrich Konrad Beilstein, Karl Ernst von Baer, and Wilhelm Ostwald.

This is not to say that there weren't Russian scientists, in this period, with Russian names also. Examples are Mikhail Vasilievich Lomonosov, Alexander Onufrievich Kovalevski, and Dmitri Ivanovich Mendeleev.

However, Russian officialdom actually preferred the Balts (who supported the Tsarist government under which they flourished) to the Russian intelligentsia itself (which frequently made trouble and had vague notions of reform).

In addition, the Germans were the 19th Century scientists par excellence and to speak Russian with a German accent probably lent dis-

* The city was named for his name-saint and not for himself. Whatever Tsar Peter was, a saint he was not.

tingtion to a scientist. (And before you sneer at this point of view, just think of the American stereotype of a rocket scientist. He has a thick German accent, *nicht wahr?*—And this, despite the fact that the first rocket-man, and the one whose experiments started the Germans on the proper track, spoke with a New England twang.)

So it happened that the Imperial Academy of Sciences of the Russian Empire (the most prestigious scientific organization in the land) was divided into a "German party" and a "Russian party", with the former dominant.

In 1880, there was a vacancy in the chair of chemical technology at the Academy, and two names were proposed. The German party proposed Beilstein, and the Russian party proposed Mendeleev. There was no comparison really. Beilstein spent years of his life preparing an encyclopedia of the properties and methods of preparation of many thousands of organic compounds, which, with numerous supplements and additions, is still a chemical bible. This is a colossal monument to his thorough, hard-working competence—but it is no more. Mendeleev, who worked out the periodic table of the elements, was, on the other hand, a chemist of the first magnitude; an undoubted genius in the field.

Nevertheless, government officials threw their weight behind Beilstein, who was elected by a vote of ten to nine.

It is no wonder, then, that in recent years, when the Russians have finally won a respected place in the scientific sun, they tend to overdo things a bit. They've got a great deal of humiliation to make up for.

That ends the digression, so I'll start over—

As the 19th Century wore on, more examples of haste-making were discovered. In 1812, for instance, the Russian chemist, Gottlieb Sigismund Kirchhoff, found that if he boiled starch in water to which a small amount of sulfuric acid had been added, the starch broke down to a simple form of sugar, one that is now called glucose. This would not happen in the absence of acid. When it did happen in the presence of acid, that acid was not consumed but was still present at the end.

Then, in 1816, the English chemist, Humphry Davy, found that certain organic vapors, such as those of alcohol, combined with oxygen more easily in the presence of metals such as platinum. Hydrogen combined more easily with oxygen in the presence of platinum also.

Fun and games with platinum started at once. In 1823, a German chemist, Johann Wolfgang Dobereiner, set up a hydrogen generator which, on turning an appropriate stopcock, would allow a jet of hydrogen to shoot out against a strip of platinum foil. The hydrogen promptly

burst into flame and "Dobereiner's lamp" was therefore the first cigarette lighter. Unfortunately, impurities in the hydrogen gas quickly "poisoned" the expensive bit of platinum and rendered it useless.

In 1831, an English chemist, Peregrine Phillips, reasoned that if platinum could bring about the combination of hydrogen and of alcohol with oxygen, why should it not do the same for sulfur dioxide? Phillips found it would and patented the process. It was not for years afterward, however, that methods were discovered for delaying the poisoning of the metal and it was only after that that a platinum catalyst could be profitably used in sulfuric acid manufacture to replace Ward's saltpeter.

In 1836, such phenomena were brought to the attention of the Swedish chemist, Jons Jakob Berzelius who, during the first half of the 19th Century, was the uncrowned king of chemistry. It was he who suggested the words "catalyst" and "catalysis" from Greek words meaning "to break down" or "to decompose." Berzelius had in mind such examples of catalytic action as the decomposition of the large starch molecule into smaller sugar molecules by the action of acid.

But platinum introduced a new glamor to the concept of catalysis. For one thing, it was a rare and precious metal. For another thing, it enabled people to begin suspecting magic again.

Can platinum be expected to behave as a middleman as saltpeter does?

At first blush, the answer to that would seem to be in the negative. Of all substances, platinum is one of the most inert. It doesn't combine with oxygen or hydrogen under any normal circumstances. How, then, can it cause the two to combine?

If our metaphorical catalyst is a bricklayer, then platinum can only be a bricklayer tightly bound in a strait-jacket.

Well, then, are we reduced to magic? To molecular psi?

Chemists searched for something more prosaic. The suspicion grew during the 19th Century that the inertness of platinum is, in one sense at least, an illusion. In the body of the metal, platinum atoms are attached to each other in all directions and are satisfied to remain so. In bulk, then, platinum will not react with oxygen or hydrogen (or most other chemicals, either).

On the surface of the platinum, however, atoms on the metal boundary and immediately adjacent to the air have no other platinum atoms, in the air-direction at least, to attach themselves to. Instead, then, they attach themselves to whatever atoms or molecules they find handy; oxygen atoms, for instance. This forms a thin film over the surface; a film one molecule thick. It is completely invisible, of course and all we see is a smooth, shiny platinum surface, which seems completely inert.

As parts of a surface film, oxygen and hydrogen react more readily than they do when making up bulk gas. Suppose, then, that when a water molecule is formed by the combination of hydrogen and oxygen on the platinum surface, it is held more weakly than an oxygen molecule would be. The moment an oxygen molecule struck that portion of the surface it would replace the water molecule in the film. Now there would be the chance for the formation of another water molecule and so on.

The platinum does act as a middleman after all, through its formation of the monomolecular gaseous film.

Furthermore, it is also easy to see how a platinum catalyst can be poisoned. Suppose there are molecules to which the platinum atoms will cling to even more tightly than to oxygen. Such molecules will replace oxygen wherever it is found on the film and will not themselves be replaced by any gas in the atmosphere. They are on the platinum surface to stay and any catalytic action involving hydrogen or oxygen is killed.

Since it takes very little substance to form a layer merely one molecule thick over any reasonable stretch of surface, a catalyst can be quickly poisoned by impurities that are present in the working mixture of gases, even when those impurities are present only in trace amounts.

If this is all so, then anything which increases the amount of surface in a given weight of metal, will also increase the catalytic efficiency. Thus, powdered platinum, with a great deal of surface, is a much more effective catalytic agent than the same weight of bulk platinum. It is perfectly fair, therefore, to speak of "surface catalysis."

But what is there about a surface film that hastens the process of, let us say, hydrogen-oxygen combination? We still want to remove the suspicion of magic.

To do so, it helps to recognize what catalysts *can't* do.

For instance, in the 1870's, the American physicist, Josiah Willard Gibbs, painstakingly worked out the application of the laws of thermodynamics (see ORDER! ORDER!, F & SF, February 1961) to chemical reactions. He showed that there is a quantity called "free energy" which always decreases in any chemical reaction that is spontaneous; that is, that proceeds without any input of energy.

Thus, once hydrogen and oxygen start reacting, they keep on reacting for as long as neither gas is completely used up, and as a result of the reaction water is formed. We explain this by saying that the free energy of the water is less than the free energy of the hydrogen-oxygen mixture. The reaction of hydrogen and oxygen to form water is analogous to sliding down an "energy slope."

But if that is so, why don't hydrogen and oxygen molecules combine with each other as soon as they are mixed? Why do they linger for indefinite periods at the top of the energy slope after being mixed; and react and slide downward only after being heated.

Apparently, before hydrogen and oxygen molecules (each composed of a pair of atoms) can react, one or the other must be pulled apart into individual atoms. That requires an energy input. It represents an upward energy slope, before the downward slope can be entered. It is an "energy hump" so to speak. The amount of energy that must be put into a reacting system to get it over that energy hump is called the "energy of activation", and the concept was first advanced in 1889 by the Swedish chemist, Svante August Arrhenius.

When hydrogen and oxygen molecules are colliding at ordinary temperature, only the tiniest fraction happen to possess enough energy of motion to break up on collision. That tiniest fraction, which does break up and does react, then liberates enough energy, as it slides down the energy slope to break up additional molecules. However, so little energy is produced at any one time that it is radiated away before it can do any good. The net result is that hydrogen and oxygen mixed at room temperature do not react.

If the temperature is raised, molecules move more rapidly and a larger proportion of them possess the necessary energy to break up on collision. (More, in other words, can slide over the energy hump.) More and more energy is released and there comes a particular temperature, when more energy is released than can be radiated away. The temperature is therefore further raised, which produces more energetic collisions, which raises the temperature still further—and hydrogen and oxygen proceed to react with an explosion.

In 1894, the Russian chemist, Wilhelm Ostwald, pointed out that a catalyst could not alter the free energy relationships. It cannot really make a reaction go, that would not go without it. It can make a reaction go rapidly that in its absence would proceed with imperceptible speed.

In other words, hydrogen and oxygen combine in the absence of platinum but at an imperceptible rate, and the platinum haste-maker accelerates that combination. For water to decompose to hydrogen and oxygen at room temperature (without the input of energy in the form of an electric current, for instance) is impossible, for that would mean spontaneously moving up an energy slope. Neither platinum nor any other catalyst could make a chemical reaction move up an energy slope. If we found one that did do so, then *that* would be magic.*

* Or else, we would have to modify the laws of thermodynamics.

But *how* does platinum hasten the reaction it does hasten? What does it do to the molecules in the film?

Ostwald's suggestion (accepted ever since) is that catalysts hasten reactions by lowering the energy of activation of the reaction; flattening out the hump. At any given temperature, then, more molecules can cross over the hump and slide downward, and the rate of the reaction increases, sometimes enormously.

For instance, the two oxygen atoms in an oxygen molecule hold together with a certain, rather strong, attachment, and it is not easy to split them apart. Yet such splitting is necessary if a water molecule is to be formed.

When an oxygen atom is attached to a platinum atom and forms part of a surface film, however, the situation changes. Some of the bond-forming capabilities of the oxygen molecule are used up in forming the attachment to the platinum, and less is available for holding the two oxygen atoms together. The oxygen atom might be said to be "strained."

If a hydrogen atom happens to strike such an oxygen atom, strained in the film, it is more likely to knock it apart into individual oxygen atoms (and react with one of them) than would be the case if it collided with an oxygen atom free in the body of a gas. The fact that the oxygen molecule is strained, means that it is easier to break apart, and that the energy of activation for the hydrogen/oxygen combination has been lowered. (The same argument holds if it is oxygen striking a strained hydrogen molecule.)

Or we can try a metaphor again. Imagine a brick resting on the upper reaches of a cement incline. The brick should, ideally, slide down the incline. To do so, however, it must overcome frictional forces which hold it in place against the pull of gravity. The frictional forces are here analogous to the forces holding the oxygen molecule together.

To overcome the frictional force one must give the brick an initial push (the energy of activation); and then it slides down.

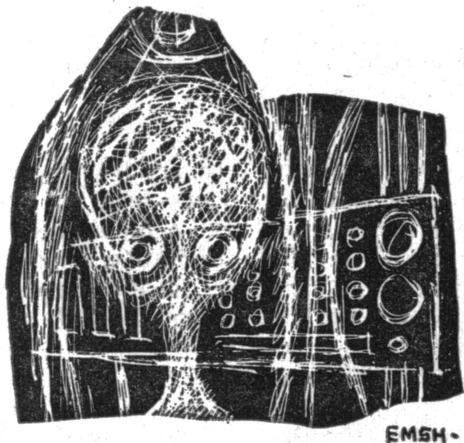
Now, however, we will try a little "surface catalysis." We will coat the slide with wax. If we place the brick on top of such an incline, the merest touch will start it moving downward. It may move downward without any help from us at all.

In waxing the cement incline, we haven't increased the force of gravity, or added energy to the system. We have merely decreased the frictional forces (that is, the energy hump) and bricks can be delivered down such a waxed incline much more easily and much more rapidly than down an unwaxed incline.

So you see that on inspection, the magical clouds of glory fade into

the light of common day, and the wonderful word "catalyst" loses all its glamor. In fact, nothing is left to it but to serve as the foundation for virtually all of chemical industry and, as I hope to explain eventually, the foundation of all of life, too.

And, come to think of it, that ought to be glory enough for any reasonable catalyst.



R. BRETNOR'S "LITTLE ANTON"—a hilarious account of the mysterious "Schimmelhorn effect," which renders the British battleship H. M. S. Impressive invisible! Coming next month in our October All-Star Anniversary issue.

Utterly different from the previous S. Dorman story (WINGED VICTORY F&SF, Nov. 1963) in everything but quality, is this one about a young girl living when the Age of Space has become a Fact of Life—and a rather ugly one, too.

THE DEEPEST BLUE IN THE WORLD

by S. Dorman

IT WAS A SMALL, BOWL-SHAPED vase of a deep blue. The feminine curves fitted between the palms of her hands as she carried it. She wore old shoes, an old but neat skirt, a ragged blouse. All that she carried with her was the vase, between her palms. The vase was perfectly empty.

"Here we are, darling," the Matron said to her, pushing the girl into the long, high-roofed dormitory. Bands of sunlight from the tall windows in the old fashioned building slid across the child's shoulders, illuminating her braids with streaks of honey and auburn. Two girls at the far end of the room were seated together on one bed, playing some game. The Matron guided the new child to an unoccupied bed, covered with a worn but spotless chalk-white spread. There was a small wooden stand with two drawers beside the

bed, and hovering over it, the girl's hands held the vase, moved it into a beam of sunshine to burn deeply blue, and then into shadow. Finally, she put the vase down, sat on the bed, and clasped her empty hands in her lap.

"Girls," the Matron called to the other two. "Here is Anna."

They turned to look at Anna, neither hostile nor friendly, nor yet neutral. Anna remained looking at her own hands, which were slim with dark skin at the knuckles and yellow callous on the palms.

"Girls," the Matron repeated, with a warning note. They got up and came over, with bland, in-curious faces.

"Hello, Anna," they said.

At this moment, there was a tremendous roar outside and the two girls, and Anna also, turned to look between the heavy frames

of the windows at the rocket that sprang up from the space field beyond a far wall. The sky was a pure color like the flame from burning alcohol, and the rocket bored upward and disappeared leaving behind it the torn air, the stunned ears of the listeners, and three young faces broken open with longing and loss.

"Yes, you can see them go up all the time," the Matron said with false cheerfulness. "I'll leave you to get acquainted. The others will be in soon from the school."

When she had left the long room and closed the heavy door behind her without a sound, Anna looked up at the other two. The faces had closed, all three of them, but the standing girl who had slanted brown eyes in a small, sweet face, leaned down to the new girl, and asked, "Where?"

"Mars," Anna said. "Last week on Mars."

Gangly and blonde, the other girl was balanced on the edge of beauty, but not ready to move into it completely. She turned her face away. "My Daddy's still in orbit," she said. She was proud; the pride was like a knife edge in her voice which she couldn't discipline yet as she did her features.

The brown-eyed girl said, "I'm Lupe. How old are you?"

"Fourteen," Anna said, and looked at the empty blue vase.

"Then you won't be here more than a year," the blonde one as-

sured her. "I'm almost ready to go. I'll be fifteen in another month. Lupe's your age."

"Where are you going?" Anna asked.

The blonde girl smiled and at once her face matured into real beauty, cool and proud; a woman's face. "To the marriage bench."

"Right away?" Anna gasped.

"No, silly," Lupe said, sitting down beside her. "Conny has to go to the other school for a year first. Don't you know?"

"I don't know anything," Anna admitted.

Conny shrugged. She went to the window and leaned, one palm against the shatterproof plastic pane. Nothing was to be seen out there but the walls of huge buildings, and above, the sky into which their fathers had vanished. In the distance there was suddenly the sound of younger voices.

"The little ones will be in soon," Lupe said. "We're the oldest."

Conny had turned back, and was looking curiously at the blue vase. She moved one hand, as though to touch it, and Anna leaped from the bed crying some word of defence and fear. "All right," Conny said to her, "all right. I didn't mean anything."

Lupe pointed toward it. "From Mars?" she asked.

Anna bent her head. "No," she whispered. "No, he brought it back for my mother from the Plains."

"She married again?" Conny asked.

Anna's head bent further, the brown braids hanging forward over her shoulders. "No."

"She has to," Conny said, in a hard voice.

Anna answered, "I know. But she hasn't."

Lupe said, "If she's under thirty-five, she has to. Or she'll go to prison."

"She went," Anna said. "She went this morning, when they came for me."

"It isn't fair," Conny said, lifting Anna's face with one hand and looking angrily at her. "Our mothers had to marry again right away, why shouldn't she? The wars eat up our men, we have to make more men. What right has she got?"

"She chose," Anna shouted, slapping Conny's arm away from her. "She had the right to choose."

Again there came the tremendous and stunning explosion of sound from the space field, and the three girls turned to the windows. In profound silence they watched the warship rise into the fierce blue sky and disappear toward battle. Lupe swallowed. Conny pushed her blonde hair back from her cheek. Anna put her palms softly cupped on each side of the vase, and warmed it.

The heavy dormitory door swung open and a crowd of younger children entered the room,

talking and laughing together. One was crying, her face dirty and wet, and the others jostled her, pushed and pulled, swarmed like puppies in a pen. The Matron came in and sorted them out briskly, sending the tearful child to the infirmary, the others to a rest and quiet play time on their beds.

When she had them settled, she came to the older girls. "All friends, now?" she asked happily. "I'm sure you are. Lupe, you'll help Anna to find her way around today, please. Conny, they want you in the upstairs Office."

"Me?" she cried, bursting into light. "Am I ready? Now?"

"I don't know anything about it, darling," the Matron said. "I don't suppose you're ready yet, you haven't had your birthday. But they want to see you."

Without a backward look Conny walked rapidly down the room, through the open doorway, and then they could hear her galloping up the stairs toward the Office.

Lupe looked frightened. "They won't take her yet?" she begged the Matron.

"I don't think so, darling." The Matron shook her head. She went out of the quiet room and when she closed the door the silence became deep and resonant, as though each child were holding her breath. Those who had been playing put down their games. The ones who had been lying down to rest, sat up. They waited intently

on their beds, in two rows; all sizes, shapes, colors, from five to fifteen. Twenty girls stared out the western windows where the lowering sun blazed through and almost blinded them. The ground, building, windows, children, the air, shook in the blast. The ship leaped past their vision upward, and disappeared.

Gradually, they went back to their play. Lupe was still sitting on Anna's bed, and when Anna finally sat down, too, Lupe touched her arm with gentle fingers. "We'll be friends," she said. "We're the same age. Maybe we'll go in the same group to the marriage bench."

Anna turned her face away to look at the dark blue vase. "Maybe," she said.

A girl of ten, with a chunky body, came slowly over to them, and walking down the narrow space between Anna's bed and the next one, she thrust her head forward on a long neck and stared at the vase. "Hey," she said. "That's a nice color."

"Yes," Anna agreed.

"Can I touch it?"

"No."

The younger girl looked at Anna with an expression of mockery and sadness mixed. "Special, huh?" she asked.

"It's mine," Anna said.

The child asked, "Where?"

"Mars."

"Mine got his right here. The ship blew up while they were fuel-

ing. Never even blasted off. Right here, you can see from the window."

Anna closed her eyes. "How can you look?" she whispered.

"I'm supposed to look, you know. Why do you think they put us right here? We're conditioned. I've been here four years, I'm used to looking. You will be, too. You count fifteen men for every ship that goes up, one ship every half hour between dawn and dusk, you count the sons your mother has, and the sons you'll have after you go to the marriage bench a couple of times. That's the conditioning."

"You better go back to your bed," Lupe said to the child. "I don't think you wanted to talk about it, your first day here."

"Oh, I don't even remember the first day, any more," the child said. She gave a backward glance at the vase. "It is a nice color," she said. "I think it's the deepest blue in the world." After a pause, she said, "I have four brothers. I'm going to have four sons."

"Go on, now," Lupe said, giving her a gentle push.

The child lingered, looking from the vase to Anna, and back to the vase. The wooden stand had nothing on it but the vase, no toys or pictures, no war medals, like the other stands. "Don't you have anything?" the child asked in a shrill voice. "No books or clothes or medals? Just the vase?"

"Just the vase," Anna said.

Turned instantly into a savage little creature, the child backed away. "Then your mother's in prison," she shouted. "She wouldn't go to the marriage bench again, she's in prison, she chose to go, you haven't got anything."

A rustling went around the room as the other girls turned to look, to listen, to appraise Anna. "Prison." "She chose," they hissed. "Prison." "Anna hasn't got anything." "Who let her keep the vase?"

Anna grabbed the vase, even in desperation taking care to handle it gently, and holding it between her small breasts she doubled up protectively and hid from them. She was so bent over that she had to breathe into the vase, and with her eyes closed she breathed very gently, filling up the empty dark blue space with her breath which immediately overflowed the bowl-shape and poured out again through the narrow neck. She could feel the round shape warming with her hands but was too frightened to move, and remained bent over, breathing endlessly into the dark opening and feeling her own breath rise up and flow back over her face.

A gong suddenly began to vibrate through the long room and the children got off the beds as the Matron opened the door. "It's supper time," Lupe said to Anna.

Anna raised her head, and sat back on her heels.

"Come on," Lupe said. "You don't want to miss supper. I'll take you downstairs with me, I'll show you."

Anna shook her head.

In a more business-like voice, an imitation of the Matron's briskness, Lupe said, "Now come on. You have to eat, you aren't allowed to miss meals unless you're sick. You'll feel better, too."

"No," Anna said, "I don't want anything."

Kindly, gently, Lupe coaxed her, pulling at her arms, and her wrists, which were crooked round to hold the vase against her body. "Anna, please, come on, they've all gone down to supper. There won't be any more ships going up from this field until morning, there's nothing to watch until six o'clock. Anna, please. We're the same age, we can be friends, I'll speak to the Matron and we can go to the marriage bench together."

Anna opened her eyes and sat up straight, her mouth hard, and white at the corners. "I choose," she said distinctly. "I choose prison." She raised her voice and shouted it. "I choose prison. I won't go to the marriage bench, I won't have any sons, I won't watch the ships go up, I choose prison underground for the rest of my life like my mother."

Lupe had been sliding gradually away from her in revulsion, trembling, frightened. She walked backward several steps, unable to

take her eyes off Anna, off the vase that Anna held against herself, almost colorless in the deepened gloom.

The Matron came in quickly through the still open door and said, "Girls, you're late for supper—" she broke off. "What is it?"

"I choose prison," Anna said, quietly putting the vase down on the wooden stand and turning her back on it.

"My God," the Matron said. "Oh child, you don't know what you're talking about."

"Yes I do. Underground, working fourteen hours a day, and I can never come up again, but that's what I choose. I'll go now."

"You can't go now," the Matron said. Completely flustered, she kept making pushing motions with her hands, and then pulling motions, as if to draw Anna toward her. "Silly child, you don't know what you're talking about," she approached Anna as she spoke. "Poor child," she said. Then she turned, and said, "Lupe, go right down to the dining hall, please."

Lupe went away. The Matron walked to Anna, still making the disturbed motions with her hands. "Anna, you can't choose now."

"I have a right to choose," Anna said between her teeth.

"Indeed you don't, silly girl," the Matron said. "And when you may choose, you certainly won't want that, you don't know what you're talking about. Don't you

know you can't make such a choice until you have been to the marriage bench?"

Anna's lips moved but she couldn't make the words into a sound. The lights automatically came on, in a row overhead, and Anna and the Matron both blinked to accustom their eyes to the change. "Not now?" Anna asked at last. "I can't even choose? I don't have any choice?"

"No. Not until you've been once to the marriage bench. It's a good thing, really. The law protects you. You'll find out it's a good thing, later on."

Anna rushed away from her, bumping into a bed, and ran down the aisle between the rows of narrow white cots. She ran through the hall, down the broad stairways, one flight, two flights, past the noisy dining hall, past the nursery, past the barred gates of the infirmary, down another flight to the great entrance lobby, to the main doors. Anna pounded against them in her panic, and, finding them secure, she crumpled down on the floor.

Behind her, the elevator doors opened and the Matron stepped out and came to her. She bent over with a little grunt, and lifted Anna to her feet. "Silly child," she said, "we don't get many like you." The girl's body was almost limp in her arms.

"Up we go," Matron said, supporting her in the elevator. The

doors closed soundlessly and they began to rise up the long shaft. "We'll get you to bed, and you'll have a good sleep. You don't know what you're talking about, to want to go down into the factories and foundries, and perhaps even to one of the fueling stations, for the rest of your life. You'll grow up and go to the marriage bench like all the good girls. It's what a nice girl wants to do."

She firmly trundled Anna down the aisle between the white beds. When Anna sat down, unresisting, the Matron went for a cup of water, and coming back with it she took out of her pocket a pill

bottle. "Two," she said cheerfully. "Just swallow them down, and you'll forget your worries."

Anna swallowed them, with a little water. "Now you'll get a good sleep," the Matron said, pulling up the small pillow and giving it a punch or two to soften it. "The first day here is not easy for everyone," the Matron said. "But I know you want to be a good girl."

When she had gone, Anna lay down, her head turned to one side, and stared at the vase. It was a deep blue, and seemed to be filled with an endless deep space, but it was perfectly empty. Anna closed her eyes.



We are pleased and proud to announce that "The Best From Fantasy and Science Fiction" 9th Series, 10th Series, and 11th Series are being transcribed into Braille by the Library of Congress, Division for the Blind.

In addition, "A Decade of Fantasy and Science Fiction," the anthology published on our tenth anniversary, is being put on discs by the Library of Congress.

THE MAGAZINE OF

Fantasy and Science Fiction

One of the happier events of this past year's editing has been The Return of Willard Marsh. It was all a mistake about his having been pushed over Niagara Falls that time, but he took advantage of the situation to visit Mecca and drop in on the Dalai Lama (he still hasn't explained what the Dalai Lama was doing in Mecca, but this may be a story for which the world is not ready) and one or two other things. Anyway, back he is, and has provided us—including you—with several tip-top tales, of which this is one. This story of amorous Vic Wexler, conniving Priscilla Pendleton, available Linda Bates, the incomparable Matsu, and a curious oriental object is not a very moral story, we're afraid. But it's a very entertaining one.

Inconceivably Yours

by Willard Marsh

WHEN VIC WANDERED IN, YAWNING, to sit at the kitchen counter, Matsu poured him coffee with a grin.

"Heavy night?"

Vic shook his head. "Had some worries on my mind. Business worries," he lied, to give his insomnia some respectability.

"How do you want your eggs?"

"Oh, I don't know. How you having yours?"

"I already had them," Matsu said. "Shirred."

"Then scrambled, I guess. Just a couple, I haven't got much appetite."

Deftly beating the eggs with a

fork (he claimed the mixer aerated them too much), Matsu said, "Missy Bates stop alongside this pad for chow tonight?"

"That's right. Give us about an hour's worth of martinis, then dish it up at eight." He'd almost forgotten that tonight was scheduled as Campaign Night with Linda Bates.

The eggs hissed into the skillet and Matsu's features brooded above them with the concern of Buddha watching a falling sparrow. A Nisei Buddha with a well-trained waistline and a crew cut.

"Missy Bates stay for breakfast?" he asked.

Vic sipped at his coffee and un-

folded the *Chronicle*. "Good coffee," he said. "Nice and fresh. Just like the conversation."

"I was only thinking of Miss Bates's providing you with some diversion from your business worries." Matsu's voice was rich with injury.

"Miss Bates is the least of my worries at the moment. By the way, can you make that Chow Mein thing of yours for tonight?"

"*Thing?* That Chow Mein *thing* of mine? I can make Chow Mein Matsumuri, if that is the delicacy to which you are alluding." Matsu set the eggs down sullenly. "You'll have to pick up some water chestnuts for me."

"Pick them up yourself."

"Can't. I got a Chaucer exam."

"Oh hell, use canned ones."

"I quit."

"All right! I'll go all the way to Chinatown and get your god-damned water chestnuts."

"And a pound of snails."

"Now listen, there's a limit to —"

"For me, not for *you*. Though they're excellent for virility," Matsu added. "Ask for them in Wang Sai Gai's. And be sure they give you fresh ones." He glanced at his watch. "Got to split now, I'm late for my car pool." And grabbing up a book bag, he dashed for the elevator.

Actually, the Chinatown detour was more of a nuisance than a

sacrifice, since the doctor's office was in walking distance of Grant Avenue. Finding an improbable parking space on the cobbled slope of Sacramento Street, Vic hiked down the spicy, jostling thoroughfares where freshly-butchered ducks and timeless vases, violence and serenity, composed themselves for the tourist's camera. The first grocery shop he passed (or was it a drug store?) had water chestnuts, and a little farther on he found some snails. He'd forgotten the name of Matsu's snail factory, but these at hand seemed oozing with vitality, and he didn't ask if they were fresh. He probably would have got a sample urged on him.

The doctor's receptionist remembered him from yesterday.

"He's with a patient now, Mr. Wexler," she told him. "He won't be free for at least a half hour."

"That long?" Uncertainly, Vic hefted the cardboard container. "Do you have a refrigerator? I don't know if these'll keep."

"What are they?"

"Oh, just a few snails."

"I see," she said.

"They're *fresh* snails," he explained.

"I see," she said.

"So if you could put them someplace cool, they'd probably be safe enough. I mean, I'm pretty sure they can't get out."

Without a word, she took the container from him and disappeared. After awhile she returned

and said, "It seems that the doctor can see you immediately, Mr. Wexler."

He was waiting warily behind his desk when Vic entered. When he said nothing, Vic blurted, "Have you got the frog test back on my fian—my wife, I mean?" He laughed weakly. "We've been married such a short time I still think of her as my fiancée."

"Yes, it came back from the lab," the doctor said.

Vic waited nervously. "Well, what's the verdict?"

"Congratulations."

"In what way? Oh, I see what you mean." Vic underwent a sinking sensation. "You're pretty sure?"

The doctor nodded.

"How far along is she, you figure?"

"Well, from what Mrs. Wexler, your wife, told me," the doctor said, "I'd estimate that you have about a seven-month wait."

Vic wet his lips. "No chance, I suppose, of arranging a therapeutic, uh, a therapeutic—" He stopped at the expression on the doctor's face. "No, I don't suppose there would be."

"No, that wouldn't be the therapy indicated in this case," the doctor said.

"What I guess I meant was, is there any possibility of, uh, miscarriage?"

"Yes, there's a possibility of miscarriage," the doctor said thoughtfully, and Vic began

brightening. "However, Mrs. Wexler, your wife, seems quite healthy, and while there is a possibility, there isn't a probability, because nature has arranged it so that once conceived, babies have a strong probability of being born. That's how we all got here, you see."

In desperation, Vic asked, "Do you think it could just be a hysterical pregnancy?"

"Not unless it was a hysterical conception. Are there any other questions?"

Numbed, Vic shook his head. The doctor stepped out of his office a moment, returned to hand him the snails.

"Tell me, Mr. Wexler," he said, "has Mrs. Wexler, your wife, developed any unusual cravings in the way of food lately?"

When Vic got back to the car, he discovered something caught beneath his left front tire. It looked like a miniature ferryboat paddle wheel, with minutely carved slats, balanced so that it turned with the slightest breath or motion. He dropped it in his pocket and gave the tire a vicious kick.

Porthole Powercraft: A New Vista On Leisure was the way the ads plugged the boats for which Vic had the Sausalito franchise. But the immediate porthole that he found his head thrust through was beginning to resemble a noose, and the vistas it gave him were so

macabre that by early afternoon he decided to call it a day and go home to open a few veins, or at least a few bottles. The phone was ringing as he fished Matsu's snails from his bar refrigerator, and he let it ring.

But the drive back over Golden Gate Bridge, extending like a median line between all the sky and water in the world, so worked its old relaxation that by the time he let himself in the door of his apartment his bitterness had softened into mere depression. From his third-floor window he could see Yacht Harbor, whose riding lights on foggy evenings operated like an aphrodisiac on certain women. He sank back in the resilient couch from which, on successful Campaign Nights, a dozen steps led to the master bedroom. And it was his last campaign, with petite Priscilla Pendleton, which had been his Waterloo. Unless natural laws repealed themselves, he looked booked for pipe and slippers, the uniform of the old campaigners home.

Matsu came in whistling, strode through to dump his books in the kitchen. "You pick up on my snails?"

"They're in the vegetable crisper." Vic went in to watch him examine them.

"Oh boy, they knew they had a live one when they saw you coming."

"What's wrong with them?"

"Why, these are practically all bull snails. It's the cows that have that nice fat back meat," Matsu told him condescendingly. "Oh well, maybe I can stuff them."

"Do that," Vic suggested.

Matsu grinned. "Get the water chestnuts?"

Vic reached in his coat pocket, pulled out the little paddle wheel in surprise. "Wrong pocket." He tossed the wheel down on the counter, found the bag of water chestnuts and tossed them beside it. "Here, I hope *they're* the right sex."

But Matsu was turning the wheel over in his hands in fascination. "How'd you come by this?"

"Picked it up on the street. Any idea what it is?"

"It's a prayer wheel. At least I think it is. See this writing?" Matsu pointed to the tiny slats, and for the first time Vic noted the calligraphy inscribed on them.

"What's it say?"

"Sorry. My vocabulary is limited to Japanese, Middle English, and standard jive. But that's the prayer, whatever it is," Matsu said. "Each time the wheel turns, it says your prayer for you. You can hang it in the wind or in running water, go on home and get the yak butter in, and all the time you're being prayed for. Pretty efficient, no?"

Just then the phone rang, and Matsu took it.

"You in to Missy Pendleton?" he called.

"I'll have to be, sooner or later." Vic crossed to the phone. "Yes, Pris."

"Victor, where *have* you been?" she demanded. "I've been ringing and ringing, everywhere I could think of, and either the phone's been deliberately unanswered or people claim they haven't seen you."

"But I was—"

"Never mind your explanations now. Dr. Hyde told me you stopped by his office to hear the result of the test. What do you proposed to do about it?"

Her ominous tone drove Vic into a panic of ingenuity.

"The test? Oh, yes, well, it was inconclusive," he stammered, "because, uh, the frog was suffering from a respiratory ailment. It seems the lab assistant left the thermostat off overnight. There's a new frog due in any day by air express, so I guess we'll have to wait until—"

"Until I'm *bulging* from your lack of any decency or restraint? I know what condition I'm in, Victor Wexler," she said grimly, "and so does Dr. Hyde. I'm still waiting for your answer."

For the twenty-seventh time Vic asked the question, this time aloud. "I still can't see how it happened."

There was a silence. "Well, if you *must* know," the voice at the other end of the phone admitted stiffly, "I happened to forget to take my pill one time."

Vic nodded in final, bitter awareness of how his shy fiancée had so neatly cold-decked him.

"You just happened to forget," he said. She had no remote idea, of course, of the rebound effect of a missed pill that zooms the chances of fertility.

"Are you insinuating that I did it deliberately?" Vic's future help-mate's voice rose a familiar, ugly octave.

He sighed a doomed sigh. "No, dear, that was the furthest thing from my mind. Well, I suppose we'll have to set the date. How long will it take you and your mother to pick out a trousseau?"

"We'll need at least a week, if we've going to be at all presentable."

"Does your mother need a trousseau too? Never mind, I'll check with you tomorrow. So long." He hung up, then began dialing a new number. "Matsu!" he called. "Bring me a pitcher of martinis."

Matsu's head appeared in the doorway. "This early?"

"This early," Vic agreed, then into the phone: "Can you get me Miss Bates, please? . . . Linda, this is Vic. Listen, fudge loaf, it's like gulping ground glass, but we'll have to call it off for tonight. I've undergone a personal tragedy. . . . No, I can't talk about it. It's too gruesome. . . . Thanks, Linda, I'll check with you later."

Then he slumped at the table until Matsu brought the pitcher in.

"Miss Bates no stop alongside tonight?"

"No. No Chow Mein. No chow, period. Anything would gag me." Vic took a massive, melancholy sip of his martini. Its warmth began to reach him immediately. "Well, maybe something light, to keep up my strength. We got anything around like canned tamales?"

"I quit."

"All right! Roast a bison if you like! And bring me that damned wheel," Vic added. He tossed down the martini and poured another while they were still chilled.

Matsu set the little wheel beside him.

Sometime after his fifth martini, Vic discovered that the wheel turned rather briskly if he skewered it with his pencil and kept a steady breath against it.

A convocation of little men had been having at him enthusiastically, using sawed-off lengths of pipe. After awhile even they got tired of the shellacking and went away, and Vic woke. Matsu was holding a tray containing aspirin, vitamins, and black coffee. He set the tray on the bed-table with merciful soundlessness. Propping himself up, Vic began washing down tablets and capsules. When he finished, Matsu said:

"Come into the kitchen, if you can navigate, and see what the elves left us."

In a stupor, Vic threw on a robe and padded after him. The base of the blender was squatting on the counter, humming away at all those r.p.m., with the little wheel attached to its rotor.

"May we turn it off now?" Matsu asked. "That is, if you think it's had time to do its work."

Vic nodded sheepishly, beginning to remember parts of last night.

"Before we do," Matsu said patiently, "observe the direction that it's turning in." Then he snapped off the blender.

There was sudden silence in the kitchen, and the smell of burnt machine oil.

"Clockwise," Vic said. "What's wrong with clockwise?"

"Nothing—in the Occident. That's the direction in which the western world runs. But you may have heard that things are the reverse in the Orient," Matsu continued blandly. "Consider the anatomy of oriental women, for example. And then newspapers are read backwards, meals often begin with desserts, and so on. I suspect that prayer wheels are meant to operate counterclockwise."

"I didn't think of that," Vic murmured.

"Do you realize the consequences of running a prayer wheel backwards?"

Vic could only shake his head.

"Why, you'd get an anti-prayer,

wouldn't you? A sort of oriental Black Mass. In other words," Matsu told him cheerfully, "what you've had working all night long for you is a curse. By the way, Dr. Hyde wants you to call him."

Oh no, Vic moaned to himself, that means it's quints for sure. At least.

Then he reminded himself that Matsu was probably indulging in his favorite pastime, Putting The Boss On—and besides, prayer wheels were inoperative in the present century. But such blithe logic failed to still his hands as he dialed the doctor's office.

"Ah yes, Mr. Wexler," came the familiar, urbane tones, "do you know what time Mrs. Wexler, your wife, called me this morning from her residence? And do you know what I found when I got there?"

Vic shook his head.

"I found a perfectly normal young lady who, at the moment, is no closer to pregnancy than I am."

"You don't mean—she had a miscarriage, then?"

"If she did, there's no evidence of it. Whatever she was carrying simply disappeared. Now, I've put Mrs. Wexler, your wife, under sedation. Along with her mother. And I'm about to do the same to myself, hoping that when I wake I'll have recovered my sanity. But right now, may I trouble you with a trifling request?"

"Sure," Vic said dizzily.

"It's merely this. If you or your wives ever require the services of a physician in the future, will you please keep the hell away from me?"

Vic walked back to the kitchen completely independent of the law of gravity. Matsu took one look at his face and said,

"How about a raise?"

Vic nodded.

"Thanks, boss!"

Vic kept on nodding, and after awhile he said dreamily, "Matsu, what do people in the orient usually wish for more than anything else?"

"Descendants, I imagine."

"So the ideal curse would be . . . ?"

"Nothing simpler," Matsu grinned. "Curser wishes no offspring on the cursee."

They had adjourned to the couch for their coffee and brandy, and after Matsu had cleared the dishes and, in turn, adjourned to his own room, Linda Bates said, "I don't know when I've had more heavenly Chow Mein."

"He's not a bad cook with a little coaching," Vic said complacently. "I laid out the basics for him, and he took it from there."

"How long have you had him?"

"Much too long, Linda," Vic said gravely. "I lead a comfortable life here, but it has no future. I need to settle down, with someone who understands me." He reached

for her, but she slipped free of his arms with a smile.

"I understand you perfectly, darling, and I understand the future you have in mind for me," she said. "But I can tell you now, you haven't got a prayer."

Vic got up, went into the kitchen and put the blender on. When he returned to the couch, there was a contrite expression on Linda's flawless features.

"That was terribly abrupt of me, wasn't it? I'm sorry, Vic." She

kissed his cheek. "But if you only knew the kind of men that I've been seeing lately. All with just one thing on their minds."

"We'll see that you get steady attention from a more imaginative variety," Vic told her, as he drew her to him, listening to the distant little wheel which, with all its clockwise fury, wished him most earnestly to have the kind of union that would make no contribution whatsoever to the population explosion.

PACIFICON II, THE 1964 WORLD SCIENCE FICTION CONVENTION

Pacificon II, the 22nd World Science Fiction Convention, will be held September 4-5-6-7 at the Hotel Leamington in Oakland, California. Membership is \$1.00 for overseas fans; \$2.00, plus \$1.00 if you attend for all others. Make checks payable to Bill Donaho, Treas., Pacificon II, P.O. Box 261, Fairmont Sta., El Cerrito, California. Toastmaster will be Anthony Boucher and guests of honor are Edmond Hamilton and Leigh Brackett.*

**F&SF is pleased to report that both Edmond Hamilton and Leigh Brackett will be featured in next month's October ALL-STAR ANNIVERSARY ISSUE. Mr. Hamilton gives us THE PRO, a poignant and utterly believable story which links the Science Fiction past with its already-beginning-to-be-realized present. Leigh Brackett's PURPLE PRIESTESS OF THE MAD MOON is a fascinating story with a fascinating background. You'll find both stories in F&SF's 15th Anniversary ALL-STAR issue, on sale September 1.*

Not everyone, of course, enjoys every party he and/or she feels socially obliged to attend, and George and lovely, lovely, lovey Vicki had perhaps better reasons than most for not enjoying Hadley's. As for Isvara—well, like Sisera, "the stars in their courses fought against him." Here is a new twist on an old theme; we think you'll agree with us that it's a quite successful one, too.

THE STAR PARTY

by Robert Lory

I FEEL BAD ABOUT THE KILLING, especially since it wouldn't have happened if I'd listened to Vicki. We should stay away from Hadley's party, she said. She had reasons—none of them the right one, but she had reasons.

"These things are always such bores," she complained as she put up her long blonde hair.

"I can't stand your Madison Avenue beetle-brains playing their character roles," was her reason as I started the car.

"They're all a bunch of mashers," she said as we entered the elevator in Hadley's building.

"And Hadley's a lush," she snapped when the elevator arrived at the ninth floor.

I was pressing Hadley's buzzer when Vicki sounded her last, pouting argument. "His breath is repulsive too."

I nodded agreement, just as I had nodded agreement with everything else she had said. I pointed out in rebuttal that to get established on the Avenue such things were necessary—the parties, the mashers and Hadley's bad breath. I didn't say anything about Isvara. Though Vicki didn't know him, Isvara was why we were showing at this particular party.

The door opened and sounds of loud good fellowship flooded the hallway. A fat and drooling Hadley blocked the view of the goings-on inside.

"George, old man! And lovely, lovely, lovey Vicki!" We stepped in and Hadley stumbled his way to the closet, dropping Vicki's coat before making it. He was loaded already.

"My, and how beautiful you certainly do look," he said, return-

ing to Vicki's side. The slob was right, of course. He had one lone talent, but it was enough to make him a high-salaried art director. He could judge beauty. And Vicki—tall, blonde and shapely in her silver gown—was female beauty itself tonight.

"Hey kids, look who's here—it's Georgie Bond. Ho there, wonder boy!" These words bubbled forth from the most loud-mouthed account executive in New York. How Breem ever got along with clients was beyond my understanding. He did have a way with words, though—so I grimaced, waiting for the sequel to the "wonder boy" he'd just tagged me with.

It came, with a sickening guffaw: "Yes sir, we all *wonder, boy*, how you ever got yourself a woman like that. Haw ha ha."

We haw-ha-ha'd our way through Hadley's living room and dining room, receiving greetings ranging from half-hearted smiles to stinging slaps on the back. Every woman in the place seemed bent on seeing how close to me they could thrust their breasts.

I don't know what most men think, but it's my opinion that breasts are great—in their place. Which is *not* trussed up so far that they look like deformed shoulders. The whole human race disgusts me sometimes. Vicki gets disgusted too, especially at parties.

"Enjoying yourself?" she asked sourly.

I was preparing a flip answer when an ugly copywriter named Pitcorn grabbed my arm and shoved a potato chip into my face. "Try one, George? The dip is excellent. Marcia made it."

The dip he referred to was a vile shade of cream. I swallowed hard and managed a smile. "No thanks, Pit. Diet, you know," I told him and gave his back a hearty thump. It was as hearty as I could make it. Pitcorn coughed up at least three potato chips.

My sadistic joy was interrupted by a tug on the sleeve from Vicki. When we were out of Pitcorn's hearing, she said, "I'm glad you did that. I think he had designs on me."

"Never fear," I said. "You'd be the death of him and he knows it. Let's get something to drink."

As we headed for the mahogany bar in Hadley's large living room, my eyes wandered across the giggling and frothing faces that were jabbering, singing and leering round us. The party had reached the stage where men's jackets were off, ties were loose, and the women's gowns were showing effects of that unmentionable subject, perspiration.

My mind took all this in matter-of-factly while I tried to spot the person whose presence at this orgy was the only reason for mine.

"Who is it?" Vicki said as I poured her a martini. "The one you're looking for—who is it?"

I smiled. It was a smile of pride. How superior Vicki was to the clownish creatures here. What other woman in the place could know, instinctively, exactly what her man was thinking? "Who?" she repeated.

"Him," I said, relieved that I'd found the tall, lean man who was now coming through the frosted glass door separating the room from a balcony outside. "The one in the turban. Name is Isvara."

"Interesting name. Is it really his?"

Someone who has studied deeply in man's religious beliefs would recognize—as Vicki did—Isvara as one of the titles of the Hindu's boss god. Whether our Isvara was born with that name or had substituted it for Ali Baba or Sam O'Rourke I didn't know, and I told Vicki that.

We watched as a plump redhead I didn't recognize offered Isvara a drink of some kind. He declined with the slightest nod of his head and, leaving the redhead staring in indignation, he squatted on the backs of his heels in an isolated corner of the room.

"He plays the mystic very well," Vicki observed. "Where did Hadley latch onto him?"

"The agency. Isvara is posing for some cigaret ads. He's also probably here to entertain us tonight. He reads people's characters."

Vicki sipped her martini. "A

crystal baller, or does he use tea leaves?" she asked sourly.

"Neither. Stars—a kind of astrology. Pitcorn told me about it. Isvara watches somebody's actions closely and from these he determines the person's ruling planet or the stars that influenced his birth. The rest of his deductions are supposed to follow logically."

"And you believe it?"

"Pitcorn does. Isvara told him that his big problem in life was never adjusting to his step-mother's death, and that if he ever marries it better be to an elderly librarian."

Vicki laughed at the image of Pitcorn's future bride, but her face abruptly became serious. "Did you see that? He was looking in our direction. At me."

A heavy clap on the shoulder stopped whatever comment I might have made. "Have fun, Georgie—hey!" Hadley roared and lunged for Vicki. She side-stepped his poised-for-pinch talons and our host staggered off to the divan where he flopped into the lap of a blue-haired matron who had been wildly defending her personal theory of great literature.

"I think I'm afraid of that man," Vicki said.

"He's harmless. Just fancies himself a great lover, that's all."

"I'm not talking about Hadley. Him." She was looking at Isvara. "He makes me feel creepy. I'm certain he's been watching me."

"Sure," I said, mocking her anxious tone. "He's probably quite smitten with you. After all, he has a great affinity toward stars, and to any discerning man you're the star of this party."

Vicki murmured something about not liking it just the same, when I realized to my horror that my glass was empty. I learned at my first agency party that the only way to get through them with your sanity intact was to get completely smashed. "'Nuther?" I asked Vicki.

She said no, so I had to wade alone through the weaving bodies that danced—if you could call it that—to the rhythms of some bad jazz.

At the bar I traded my regulation-size martini glass for an eight-ounce water tumbler. Gin and vermouth tumbled around the ice and had reached the top of the glass when I noticed that an agency artist named Goddard had cornered Vicki near a potted palm.

Goddard the Dullard, I called him. A dunce. Whenever I reflected that the reason for my wanting to work in advertising was to be near people like Goddard, Pitcorn and the rest, I had to question my intelligence. Intelligence was at the heart of the matter. Artists and writers—creative men—I figured would be more intelligent than other men, would be closer to understanding the meaning of life. I was wrong.

Yet, there was Isvara, now standing in a corner of the room. Maybe he . . . I decided to put him to the test.

He answered my hello with, "Your wife is a most charming person."

I agreed, thinking that I could discuss my wife's attributes with anybody at any time and that right now I wanted to talk astrology with somebody who claimed to know something about it.

"Most charming," he repeated, "but odd."

My conscious mind swam through the gin and vermouth and snapped to attention. "Odd?"

Yes, he said. "You know of my abilities, Mr.—?"

"Bond—George Bond."

"Mr. Bond—you have heard, I think, of my ability to analyse people's characters from their actions. You have, have you not, been waiting all evening for an opportunity to discuss this subject with me?"

"The deduction was not hard, Mr. Bond—based on mere surface observations. It's your wife I've been concentrating on, as she has told you already."

Vicki was right, then. He had been watching her. "I'll be interested in your analysis," I said.

Isvara shook his head. "There is no analysis. Your wife is . . . unfathomable, and I do not say that lightly. Because, Mr. Bond, when my talents cannot take me inside a person's very soul, that person

is—unfathomable. Do you understand?"

"No, I don't," I admitted.

"I do." The voice was Vicki's. She evidently had managed to brush Goddard aside. "I understand perfectly. Mr.—Isvara?—Mr. Isvara is telling you, George, that when his infallible system fails, it cannot be that the failure lies with his system or with himself. The fault, obviously, must lie with the subject." Vicki winked at me and smiled. "In other words, I'm a very naughty girl."

If I was the sort who blushes easily, I would have then. Isvara—the one person in the place I was beginning to have some respect for—and Vicki acting her nastiest. I started to apologize, but I was cut off short.

"Mrs. Bond is quite right, even though she spoke in jest. The fault does indeed lie with her." He said it calmly, like a teacher explaining to a grade school class that hydrogen and oxygen combine to make water. I laughed. It served Vicki right. I would have laughed more, but Isvara continued.

"It's true. Whether or not you realize it, Mr. Bond, your wife is trying very hard to be something she's not. She's putting on a very special act."

"Act?" I stared at Vicki.

"Act," he said. "A variety of characteristics tell me she is a Capricorn. Her charm, her type of sensual attraction, certain marks left

by experience—they all point to that sign ruled by Saturn. But she lacks the dignity and reservation found in Capricorns. She smiles too eagerly, and even an amateur psychologist can spot a . . . a phony smile. Notice, Mr. Bond, that she is not smiling now."

He couldn't have been more correct there. Vicki's face was placid, but inside she was a volcano about two seconds before eruption time. I was her husband and I could tell. And so could Isvara.

She had followed my thoughts, I knew. I'll handle this, her eyes said. She began to try.

"Mr. Isvara, perhaps you have me dead to rights. Maybe I do put on some kind of front to be sociable at these gatherings which I cannot stand. So what? Many people put on the same kind of front. You say I'm a Capricorn, under the influence of—Saturn, was it? Well, why not let it go at that?"

Isvara smiled. It wasn't a pleasant smile. "Because you defy analysis under Saturn's sign. You dress like a Taurus, behave publicly like an Aries, and think like a Libra. While I have nothing but contempt for popular astrology, any practitioner will tell you that both Aries and Libra are incompatible with Capricorn."

"Which means?" Vicki said icily.

"Which means that either you have a multiple-personality neurosis—which you do not—or you

are consciously living a very large lie."

"I beg your pardon!" I said, making an effort to sound gruff. The effort failed miserably, but I had to try.

"That was *not* meant as an insult, Mr. Bond." Isvara now was looking square into my eyes. "What I say is fact. The stars are fact. Their positions, although capable of a variety of influences, are nonetheless fact. And these influences are observable to those who know how to read them."

"And he sure can read them," a new voice chimed in. Of all the times when Pitcorn's face seemed repulsive, it was now. "Is he doing you, George?"

I smiled weakly. "Not me, Vicki."

Pitcorn said oh and pointed to the glass in my hand. "About ready for a refill? I'll stroll over with you."

"Yes, George—do go," Vicki said, handing me her glass. "And go easy on the vermouth." Her laugh sounded sincere, but it wasn't.

"Relax, man," Pitcorn told me as we crossed to the bar. "You look as jumpy as a—a pole-vaulter." He chuckled at his joke.

"Too much to drink," I grumbled and latched onto a full gin bottle.

I downed a glass of the stuff straight before filling our glasses with semi-respectable martinis.

When I looked across the room to where I'd left Vicki and Isvara, my pulse quickened.

They were gone.

"Hey, where you going?" Pitcorn asked as I brushed by him in panic. In the kitchen and dining room, several low-cut gowns winked at me, but no Vicki. Back in the living room, I spotted her. She was closing the frosted glass door to the balcony.

"Quick, Isvara's outside," she whispered. Her panic was greater than mine.

I followed her to where Isvara stood, cold as stone, near the edge of the balcony. His eyes were blank, his heart was still. He was dead. Vicki had iced him.

"Did he know?" I asked.

"He was beginning to guess." She looked in nervously at the party. "We've got to hurry."

I made Isvara's body limp and lifted it up on the balcony ledge. "Get ready to scream," I told Vicki.

Nine floors above concrete, I pushed the body into the air. Vicki screamed.

"He said that . . . that he was trying to defy gravity," Vicki sobbed when Hadley and the others questioned us. We repeated the story when the police arrived.

"He just stepped off and . . . and—" Vicki cried hysterically.

"He was kind of a nut, and I guess he was loaded like the rest of us," I added.

Everybody accepted our expla-

nation. A character like Isvara—a mystic screwball, the police sergeant called him—would be very likely to test his powers by walking off a balcony. “We see a lot of this kind of thing,” the sergeant assured Vicki, who shuddered convincingly. Nobody suspected us. We had no motive.

Of course, nobody knew what Isvara had told Vicki before she suggested they get a breath of fresh air. “But,” he’d said, “The stars

would be in different patterns if . . . they were viewed from . . . from somewhere else.”

He was on to us—or he would have been soon. War is war, but I still feel bad about his death. The man’s intelligence, and the fact that he was so right about Vicki! She is a Capricorn—at least, Saturn is her ruling planet. It’ll be everybody’s, after our troops arrive.



ROBERT F. YOUNG’S “IN WHAT CAVERN OF THE DEEP”—a story of love transmuted by a terrible yet glorious change. Coming next month in our October All-Star Anniversary issue.

Four years ago, when Vance Aandahl was seventeen, he sold us COGI DROVE HIS CAR THROUGH HELL (F & SF, August 1961). He has kept on writing and selling to us as well as to others—PLAYBOY, for example—and he has kept on studying as well. By the time this appears he may have his M.A. from the University of Colorado. Just as COGI may have reflected something of auto-loving adolescence, so this his latest may reflect something of his current, serious studies. It might have been titled, THE MAN WHO LOVED LEAR. You might think that Mr. A.P. Oliver was in general too far removed from humankind to feel much for that infinitely human, almost unbearably poignant tragedy. But perhaps before the peace of his palace was so rudely breached, Lear himself never saw nor felt so keenly.

A CROWN OF RANK FUMITER

by Vance Aandahl

ALSTON PIEDMONT OLIVER III was one of the few that lived, although he was to bear the deep orange and blue scars of disease to his grave. He had always been mild mannered before the outbreak. ("That fellow must be a bank teller," they said; or, "A clergyman, I imagine.") He was thin, almost emaciated; hid behind wire-framed octagonal glasses and a toothbrush mustache; enveloped in a huge seal-skin coat with timeworn narwhal buttons. Those who knew him somewhat (none knew him well) would chuckle briefly at the mention of his name, touch their noses,

and dismiss him as a recluse and bookhead. The ways of his life were completely involuted; and if he had any job other than reading and strolling, he never revealed its nature in word or action.

Perhaps it was the very seclusiveness of his existence that saved him from death. While others were spinning in agony through the streets of the city, Alston Piedmont Oliver III was sitting in the safety of an unpolluted armchair, browsing through a vintage edition of Lovecraft and nibbling bits of cheese and cracker. Occasionally, no doubt, he strolled to the single

window of his room and watched a scene or two of the drama of death in the other world, blinking his heavy enigmatic eyes and pursing his lips about a good old briar. At other times, one can imagine, his security was momentarily jarred by a rattle and scrape at the locked door; but, of course, he never embarked on any fond errands of mercy, never opened the shelter of his room to the diseased breath of the dying.

"Who are they to me?" he must have said. "And who am I to them?" He had always enjoyed the pleasures of solitude, not caring to be a part of the human mob. Others never had shown interest in him, nor the intelligence and sensitivity necessary to his particular concerns. He had no desire, certainly no need, to reach out and touch them.

During the third week, he was touched by a fever, and spent five restless nights of physical and mental anguish, tossing about in a hot damp bed and wondering whether or not he would succumb to the ravages of the plague. But, like himself, his sickness was mild; and on the morning of the fifth day the fever had departed to find a more likely victim. The left half of his face was streaked with the characteristic neon stains of the disease, and his mustache had gone completely white; but otherwise he was still the Alston Piedmont Oliver III of past years. He gorged himself on

a salad of purple cabbage and lunchmeats julienne, bathed himself in a luxurious tub of hot suds, donned his favorite rose-tinted bathrobe, and settled into the arm-chair with *King Lear* and a snack of celery stalks.

The outbreak of illness had interrupted him in the midst of his fortieth perusal of the play. Throughout the years, he had annually followed Lear from his abdication of a golden crown, through his unbonneted purgation in the storm, into his spiritual salvation along the beaches of Dover, crowned anew with wildflowers. Alston Piedmont Oliver III read again those sweetest words of angelic Cordelia's concern:

"Alack, 'tis he: why, he was met
even now
As mad as the vex'd sea; singing
aloud;
Crown'd with rank fumiter and
furrow-weeds,
With bur-docks, hemlock, nettles,
cuckoo-flowers,
Darnel, and all the idle weeds
that grow
In our sustaining corn. A century
sent forth;
Search every acre in the high-
grown field,
And bring him to our eye."

It was then that strange thoughts came floating through his mind. Looking up from his book, he gazed at the familiar Goya on the far wall; but the print was no longer familiar, and his mind buzzed with surprise and astonishment. And then

the old throw rug at his feet: it was as though he had never seen that friend before. So too his baroque lamp, the untenanted birdcage (Lear the parakeet had died many years before, and never been replaced), the pewter statue of Apollo, the dusty teak cabinet full of little acquisitions. Everything strange, amazing. His eyes fell to his own hands: he had never seen those hands, not until this very moment. They were scarcely his. Nothing was his. He was nothing.

But then, as suddenly as it had come, shock was unseated by excitement. He had to get out, had to discover the world anew, had to see, hear, smell, taste, touch an utterly alien universe. He had to fill himself with it, revel in its newness, grow in its rich virgin soil.

It was a world of madness. Overhead, the clouds thundered in tandem and emptied their bile on the land. Lightning crackled and splintered through the trees. A cold wind lashed against the heavy folds of Alston Piedmont Oliver III's seal-skin coat, freezing his thin legs. He leaned against a battered trash can, half blinded by the storm, trying to scrape the ice from his glasses. Beads of sleet stung his face and clung to his mustache and hair.

Stumbling across the slushy street, he fumbled with the collar of his coat and tried to pull it over his head. Stooping next to the shelter of a telephone pole, he rubbed

his hands together furiously and blew his running nose on one icy sleeve. Then he looked down. Huddled against the gutter, so gray and blue that he seemed to be a mere extension of the concrete, was a half naked old man, smiling insanely at him.

"Who are you, who are you?" cried Oliver, his mind spinning with excitement. The old man giggled and ran one knotted hand across the running sores that covered his chest. Then he croaked back, "Who are *you*, who are *you*?" A thin thread of saliva drivelled from the corner of his mouth, bounced like a yoyo, touched the cement and froze there. His eyes gazed with unblinking certainty, first at Oliver, then at nothing, as he rolled slowly over, face down, into the filth of the gutter.

Alston Piedmont Oliver III stumbled to his feet and dashed away, splashing his coat and face with slush. One clumsy shoe caught itself against the ankle of a frozen corpse and sent Oliver skidding up to a fire hydrant. "My glasses, I've lost my glasses!" His hands muttered through the slop in a hopeless search, finally settling on one shattered lens. He held the useless fragment in front of one eye, snarled a curse, and pushed himself to his feet. "Now what can I do? I'm blind! Blind!" He wheeled around on one foot and tried to see the way back. Nothing but a gray haze, nothing but nothingness.

He shuffled along the sidewalk for what seemed an interminable time, trying to see something familiar, something known. But the world was a cold, undreamed mystery: a storming, unknown chaos, and he was lost in its madness. Finally, far ahead, strange voices, but human voices, crying out in the bleak empty night. He ran toward the voices, gasping for breath, wiping away the frost that crusted his face.

"Who are you? What is this? Where am I, where am I?" No answer but moans and shrieks, groaning cracked whispers, vague movements of tongue and lip, surrounding him like spirits, half-seen spirits, spirits of the dying and the dead. "God, answer me, damn you, answer me!" Slow frightened hush, slow settling of human silence, broken only by the roar of thunder and the crash of icy sleet on cement. A circle of hazy bodies darkening into shape around him, grotesque crawlings forward, painful to his tortured eyes, shifting in and out of the storm, finally only a few feet away, on all sides: postures of decay and rot, each set with two flickering eyes. They watched him in silence, like sandstone statues lost for two millenia beneath the sea, dumb and motionless, life without life. "Answer me! Who are you?"

"Who are *you*?" A thin whisper beneath the shriek of the wind. "Who are *you*, who are *you*?" A

low chant, a joining of sick voices, encircling him. "Who are *you*, who are *you*, who are *you*?" A growth, a swell, a last anguished scream, last moan, last question, beating against his mind like the angry storm itself: "Who are *you*?"

Again he ran into the mad nothingness; away from the voices that hammered at him, into the screeching oblivion. Nothing but nothing, pounding, striking, shouting in his ears. He skidded up to a fence, grasped it until his hands bled, shook his head, screamed at the heavens above.

"Night, night, night! I'm blind. Blind as can be. I'm blind, you see. Blind night blind! God save the blind! I'm blind and lost and nobody knows, nobody knows! Who are they? Who are you? Tell me, tell me, tell me! I'm blind, blind, blind! Who am I? Who am I?"

When he awoke, the morning sun was hot on his face. The numb chill of the storm was fading away, and his limbs were beginning to tingle with warmth. Overhead the sky was a clear turquoise blue. Rising up on his elbows, he discovered that he could see well enough, even without his glasses, now that the storm had passed and the sun had risen. He looked down the length of his body: his torn and soiled clothes were covered with flowers and weeds, bunches of grass, garden reeds. Loops of sunflowers hung from the buttons of his coat,

and daisies seemed to be growing from the cracks of his shoes. He lifted one hand and touched his hairline: he was crowned with foliage, with leaves and buds and blossoms, all entwined in the tangle of his hair.

Then he saw. Squatting next to him, staring intently into his eyes, was a little girl, not more than seven or eight. In one hand she held a bunch of unused stems, in the other half a dozen blossoms. Behind her was a garden. She smiled when his eyes met hers, but did not speak. He could see that she was covered with the sores of the plague, half starved, not far from death.

"Who are you?" he asked, trying to smile.

"I'm a girl, silly. Do you like the flowers?" She stared at him with very serious eyes.

"Yes, I like them. But where am I?"

"You're in the city! Where people live!" Her eyes chided him for his stupidity.

He coughed and cocked his head in perplexed sorrow. He didn't know what to say. Then his lips

spoke for him:

"Who am I?"

"You're a man, silly. Don't you know that?"

"A man?"

"Yes!" She shrilled with child laughter. Then her eyes grew serious again. "But why don't you like the flowers?"

"But I do. I do like your flowers."

"They're not *my* flowers! They're *your* flowers! I gave them to you!"

"I like them very much."

For a long while they sat in silence, staring at each other. Then the little girl smiled and rolled over to sleep. After awhile, he covered her with the warmth of his coat. He sat beside her all day until she died. Then he reached out to touch her; picked her up and carried her into the middle of the garden. Down on his knees, he scooped a shallow grave out of the moist earth with his hands; covered her body, first with soil, then with flowers. He sat there for a long while, sometimes touching the crown of foliage on his own head, sometimes placing his hand on the soil above hers.



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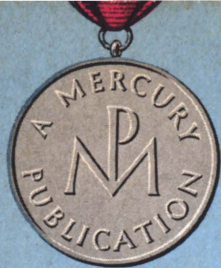
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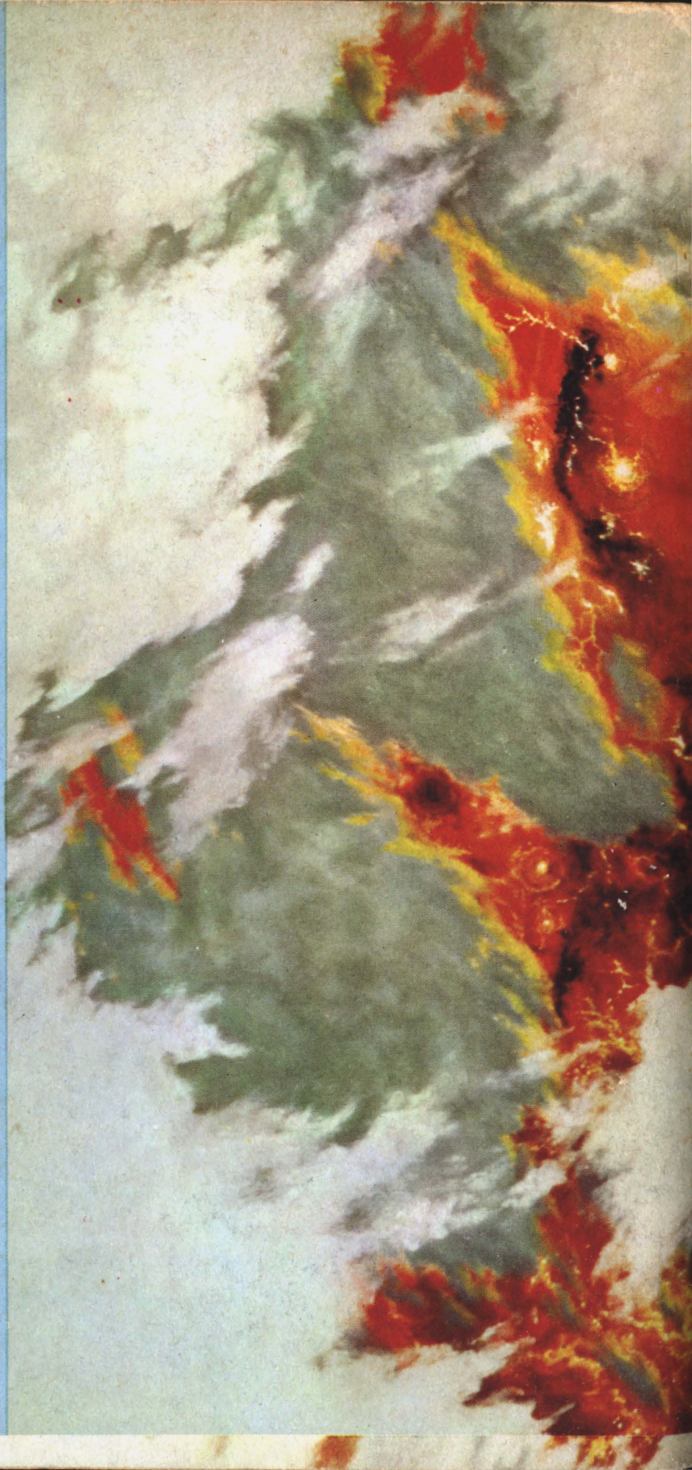
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FANTASY AND SCIENCE FICTION

SEPTEMBER 1964

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