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# THRILLING WONDER STORIES

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FEATURING

DOUBLE JEOPARDY
By FLETCHER PRATT

•

MOMENT WITHOUT TIME
By JOEL TOWNSLEY ROGERS

•

THE PLANET MENDER
By GEORGE O. SMITH

A THRILLING PUBLICATION

# LOOSE FALSE TEETH?

**The makers of POLIDENT offer you Double Your Money Back unless this**

## *Amazing New CREAM Holds Plates Tighter, Longer THAN ANYTHING YOU EVER TRIED*

# POLI·GRIP

**Double Your Money Back Unless it Gives You**

## MORE COMFORT, MORE SECURITY THAN YOU EVER HAD BEFORE

Yes, the people who make Polident, the world's largest selling denture cleanser, are standing right behind their new adhesive cream, Poli-Grip, with an ironclad guarantee. You get double your money back, if Poli-Grip doesn't hold your plates tighter, longer than anything you've ever tried.

And that's not all. See if you don't find that Poli-Grip does all these wonderful things for you, too:

1. . . . form a cushion between your plate and gums to eliminate the friction that makes gums sore and raw.
2. . . . hold shallow lowers, despite lack of suction.
3. . . . seal the edges of plates so food particles can't get underneath to cause irritation.
4. . . . enable you to eat hard-to-chew foods in comfort, like steak, apples, celery, even corn-on-the-cob.
5. . . . give you full confidence to laugh, talk, sing without fear of embarrassment due to slipping plates.
6. hold plates tight even during strenuous sessions of coughing or sneezing.

Won't life be wonderful with all these torments behind you? Be sure to be among the first to learn the glorious comfort of holding loose false teeth tight and snug with Poli-Grip! Buy a tube at your drugstore as soon as possible.

**Many tried powders, found they failed!**

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"For ten years my teeth wouldn't stay tight for more than two hours a day. I tried powders, but nothing worked till your new *cream*, Poli-Grip, came along."
Mrs. T. W., Medfield, Mass.

"I like the cool taste of Poli-Grip and the smooth way it holds my teeth. It is easy to apply and holds tight for so long."
Mrs. L. W. N., Ottumwa, Iowa

"I found your new cream, Poli-Grip, very pleasant and mild-tasting and it held my loose plates very tight, longer than anything I've tried."
Mrs. H. D. M., Beadentown, Florida

"I like the wonderful holding strength of your new *cream* better than anything I've ever used. I like Poli-Grip's refreshing taste, too."
H. B. V., East Canaan, Conn.

"I definitely prefer Poli-Grip to other products I've tried. It holds my plate tighter and feels comfortable longer. Poli-Grip is cooling, soothing, never gritty."
Mrs. K. L., Los Angeles, Calif.


**Made and GUARANTEED by the makers of POLIDENT**


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# THRILLING WONDER STORIES

VOL. XL, NO. 1 A THRILLING PUBLICATION APRIL, 1952

### A Novel



### Three Novelets



### Short Stories



### Features



SAMUEL MINES, *Editor*

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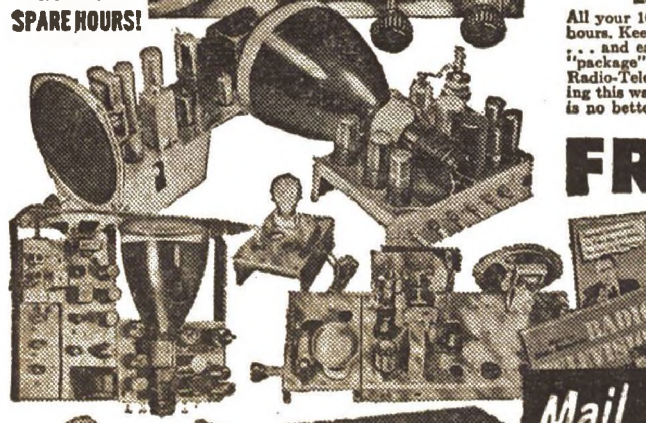
# NOW-Be a Fully Trained, Qualified RADIO TELEVISION TECHNICIAN IN JUST 10 MONTHS OR LESS!

I Send You 18 BIG KITS OF RADIO-TELEVISION EQUIPMENT

TRAIN AT HOME IN SPARE HOURS!



IF YOU ARE EXPERIENCED IN RADIO

Men already in Radio who seek a short intensive 100% TELEVISION Training with FULL EQUIPMENT INCLUDED are invited to check and mail the coupon at the right.

**New "Package" Unit Training Plan—Pay As You Learn—You Set The Pace!—No Monthly Payment Contract to Sign!—Train at Home in Spare Hours!**

Now . . . be ready for Radio-Television's big pay opportunities in a few short MONTHS! Frank L. Sprayberry's completely new "Package" training unit plan prepares you in just 10 MONTHS . . . or even less! There is NO monthly payment contract to sign . . . thus NO RISK to you! This is America's finest, most complete, practical training—gets you ready to handle any practical job in the booming Radio-Television industry. In just 10 months you may start your own profitable Radio-Television shop . . . or accept a good paying job. Mr. Sprayberry has trained hundreds of successful Radio-Television technicians—and stands ready to train you in less than one year, even if you have no previous experience!

## Valuable Equipment Included With Training

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All your 10 months of training is AT YOUR HOME in spare hours. Keep on with your present job and income while learning . . . and earn EXTRA CASH in addition. With each training "package" unit, you receive extra plans and ideas for spare time Radio-Television jobs. Many students pay for their entire training this way. If you expect to be in the armed forces later, there is no better preparation than good Radio-Television training.

## FREE 3 BIG RADIO-TELEVISION BOOKS

I want you to have ALL the facts about my new 10-MONTH Radio-Television Training—without cost! Rush coupon for my three big Radio-Television books: "How to Make Money in Radio-Television," "PLUS my new illustrated Television Bulletin PLUS an actual sample Sprayberry Lesson—all FREE. No obligation and no salesman will call. Mail coupon NOW! I will rush all three books at once!

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Mail Coupon Today!

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Please rush to me all information on your 10-MONTH Radio-Television Training Plan. I understand this does not obligate me and that no salesman will call upon me.

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Please Check Below About Your Experience
☐ Are You Experienced? ☐ No Experience


## A DEPARTMENT FOR SCIENCE FICTION FANS

SOME months ago, Sam Merwin perpetrated an editorial in FSM which pointed out in amusement that Science, striding along head in sky, had stubbed its big toe upon astrology, the lowly and despised.

The actual event was this: the Radio Corporation of America, conducting ceaseless research into the problem of static in AM broadcasting, had discovered that the planets themselves are apparently involved in the crime. The closer a planet swims to Earth, the more static fouls up the radio channels and the more power is needed by the broadcasting station to overcome it. FM is not affected, of course, but AM broadcasting continues and AM sets are still being manufactured. The networks therefore are evidently committed to AM broadcasting for some time to come, and they find themselves in the position of charting the heavens and adjusting their transmitters to meet the influence of the planets. If this is not astrology, what is?

Sam's article aroused comment, as his usually do, and this added immeasurably to The Merwin's Fortean enjoyment of the gag. For, like a good reporter, he was not blowing a horn for astrology, he was merely passing on a news item as it came to him. The resulting uproar, therefore, was balm to his ears, since the whole business had definite aspects of humor.

### Brain Waves

The fact that Mars' or Venus' approach to Earth causes static in our radio sets may be no more astrology than the equal fact that the Sun's closer approach to Earth causes heat upon our skins.

They are direct physical actions, not in the same class with the theory which holds that character and destiny both are influenced by the music of the spheres.

Or so it would seem. But now comes another brick to catch the unwary toe of Science.

At Duke Medical School, Dr. Leonard J. Ravitz has been working with brain waves in an effort to crack the puzzling differences between sane and insane mentalities. Brain wave diagnosis is still in its pre-infancy, but the fact that the brain gives off electrical waves is established and the ability to measure them is being mastered.

### Cyclic Changes

Comparing the "potentials" of sane and insane people, Dr. Ravitz discovered certain cyclic changes which were difficult to explain. Analyzing the day-to-day records, he found there was a direct connection between the sun-moon phases and a measurable change in personality and mood.

Carried over a period of two years, the records showed that moon phases and seasons indicated similar detectable influence upon the mind.

Advanced mental cases became worse during the full- and new-moon periods. And in a general way they were worse in spring and winter than in summer or fall. Records of one patient were kept for five months, and then on the basis of the graph thus worked out, a prediction was made for his behavior during the rest of the year.

It came out quite accurately.

This comes close to, but not quite up to an ability to diagnose insanity. At least emotional disturbance can be plotted and even predicted, and its degree measured.

All disturbed people gave higher readings on the brain-wave machines than normal people, but even normal persons showed the same pattern of disturbance on a smaller scale and the

*(Continued on page 8)*

# THOUGHTS HAVE WINGS

## *You Can* Influence Others With Your Thinking!

TRY IT SOME TIME. Concentrate intently upon another person seated in a room with you, without his noticing it. Observe him gradually become restless and finally turn and look in your direction. Simple—yet it is a *positive demonstration* that thought generates a mental energy which can be projected from your mind to the consciousness of another. Do you realize how much of your success and happiness in life depend upon your influencing others? Is it not important to you to have others understand your point of view—to be receptive to your proposals?

### Demonstrable Facts

How many times have you wished there were some way you could impress another favorably—*get across to him or her your ideas*? That thoughts can be transmitted, received, and understood by others is now scientifically demonstrable. The tales of miraculous accomplishments of mind by the ancients are now known to be fact—not fable. The method whereby these things can be *intentionally*, not accidentally, accomplished has been a secret long cherished by the Rosicrucians—one of the schools of ancient wisdom existing throughout the world. To thousands everywhere, for centuries, the Rosicrucians have privately taught this nearly-lost art of the practical use of mind power.

### This *Free* Book Points Out the Way

The Rosicrucians (not a religious organization) invite you to explore the powers of your mind. Their sensible, simple suggestions have caused intelligent men and women to soar to new heights of accomplishment. *They will show* you how to use your natural forces and talents to do things you now think are beyond your ability. *Use the coupon below* and send for a copy of the fascinating sealed *free* book, "The Mastery of Life," which explains how you may receive this unique wisdom and benefit by its application to your daily affairs.

## *The* ROSICRUCIANS
(AMORC)

Scribe D.S.H., The Rosicrucians, AMORC,
Rosicrucian Park, San Jose, California.

Kindly send me a free copy of the book, "The Mastery of Life." I am interested in learning how I may receive instructions about the full use of my natural powers.

Name.....

Address.....State.....

same cycle in response to seasonal, lunar and solar influences.

This pattern has already been noticed in the wards at Duke's psychiatric division and in the Veteran's Hospital at Roanoke, Virginia. It goes back even further, to 1935, when Dr. Harold S. Burr, in collaboration with Prof. E. K. Hunt and Dr. Northrup of Yale, formulated an "electrodynamic" theory of life. This theory maintains the existence of a "universal" electrical field, which impresses its pattern on all matter, animate or inanimate. All matter, therefore, must respond to it and all living matter must grow and evolve in accordance with the stresses laid upon it.

It strikes us that there is enough material here for two books—one proving this is astrology, the other proving it isn't. There is also probably enough material for a science-fiction novel, which interests us more; if any writers are listening in, they are welcome to it.

Our purpose was not to get into any arguments about astrology but merely to bring you this note on what may be an important discovery of our times. If the cosmos has such a marked effect upon Man, mentally and emotionally, it follows there are very special problems which must be taken into account before space flight can freely be attempted.

## Into the Unknown

Some day we are going to venture into the unknown. And the more we know about the unknown, if you'll pardon an extravagance, the fewer casualties we'll have. Altering the universal electrical pattern, which might happen if we left earth and entered new areas where different conditions prevailed, might even result in a new race of man. Certainly, it would result in our dealing with mutations and changes undreamed of today.

This is not a new idea in science fiction, but dealing with it in fiction and dealing with it in cold fact are two altogether different things.

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# LETTERS FROM OUR READERS

THE question before the house at the moment is this: Would you rather see more letters, even if they have to be abridged, or a selected few printed full length? Or a combination of both? Very interesting letters could be run entire, others cut to their most interesting parts. Only catch there is that you'd have to depend upon me to judge what is interesting and what isn't, so you can't win. Still, abridgement in some degree is going to be necessary unless you'd like a magazine of solid reader squeaks.

## THE LITTLE MONSTER
**by Wilkie Conner**

Dear Sam: I used to call Merwin by his first name, so I might as well be as familiar with you, though I don't know you as well. Merwin used to write me some of the nastiest-nice rejection letters you ever saw. The lad was a wizard at telling one exactly where his yarns stank in a nice sort of way. Often, too, when the smell was exceptionally bad, he could be sarcastic as the devil. He never did buy any of my crud, but I think it was because my stuff always hit him at a time when the magazine was going through a policy change and while the stuff, when it was written, was "right" for the zine, by the time it would have seen print, it would have definitely been wrong. Lady luck and me never seem to lock up.

I especially enjoy both SS and TWS now, better than at any time in the past. In the recent issue, I got quite a bang from Sam Merwin's THE IRON DEER. STAR-BRIDE was a delight, too. Ah, sweet sex! With a gentle dash of sex in science-FICTION our favorite literature will live a long and noble life. As an agent in the pocket book field recently put it: "Sex is the only thing that can compete with television and the comics." I say, keep just as much sex in stf as will keep the post-office disinterested. And we will all profit by better circulation, more magazines and more profit for the publisher.

Humor, too, is a good thing in stf. Far too little science-FICTION humor is being written to-day. Fan magazines seem to attract quite a few funny-boys, but none of these seem to write well enough to crack the bloc set up by the pros. Or, if they do, their stuff isn't as funny. In fact, when the top fan humorist, the wittiest, writes pro stuff, it is usually on the tragic side. I wish, though, some of the belly laughs one finds in the fan zines would blossom forth in pro-print.

May I plug one of the country's most progressive fan organizations, The Little Monsters of America? The club offers many advantages to members and I urge all interested stf fans to contact Master Monster Lynn A. Hickman, 408 West Bell Street, Statesville, N. C., for full details. Also, of interest to North Carolinians in general, and those of Gastonia, Statesville, Charlotte, Kannapolis, Salisbury and near-by towns in particular, a North Carolina chapter, complete with conventions, is being organized and Mr. Hickman would also like to hear from fen in these localities, or anywheres in traveling range, who would enjoy being part of N.C. fandom.

Keep up the good work, Mr. Mines. You are filling Mr. Merwin's shoes most admirably.—*1618 McFarland Avenue, Gastonia, N. C.*

One thing is for sure: if far too little humor is being written in science fiction, these letters

*(Continued on page 126)*

# $100.00 A WEEK in CASH
## PAID DIRECT TO YOU

# FAMILY HOSPITAL PLAN

**SAVE MONEY!**
There's a big advantage to buying this policy by mail. This method of selling is less costly for us—and that's another reason why we are able to offer so much protection for so little money.

**Policy Pays for a Day, a Week, a Month, a Year—*just as long as necessary for you to be hospitalized!***

## JUST LOOK
### The Large Benefit This Low Cost Policy Provides!

The Service Life Family Hospital Plan covers you and your family for about everything—for *every* accident, and for *all* common and rare diseases after the policy has been in force 30 days or more. Very serious disease such as cancer, tuberculosis, heart disease, diseases involving female organs, sickness resulting in a surgical operation, hernia, lumbago and sacroiliac conditions originating after the policy is in force six months are all covered . . . Hospitalization caused by attempted suicide, use of intoxicants or narcotics, insanity, and venereal disease is naturally excluded.

The money is all yours—for any purpose you want to use it. There are no hidden meanings or big words in the policy. We urge you and every family and also individuals to send for this policy on our 10 day free trial offer—and be convinced that no other hospital plan offers you so much for your $1.00 a month!

### TWO SPECIAL FEATURES

**MATERNITY**
**Benefits At Small Extra Cost**
Women who will some day have babies will want to take advantage of a special low cost maternity rider. Pays $50.00 for childbirth confinement either in the hospital or at home, after policy has been in force 10 months. Double the amount on twins.

**POLIO**
**Benefits At No Extra Cost**
In lieu of other regular benefits policy pays these benefits if polio strikes—
For Hospital Bills, up to . . . . . $500.00
For Doctor's Bills while in the hospital, up to $500.00
For Orthopedic Appliances, up to . . . . $500.00
TOTAL OF $1,500.00

# 3c A DAY IS ALL YOU PAY
## for this outstanding new Family Protection

Wonderful news! This new policy covers everyone from infancy to age 70! When sickness or accident sends you or a member of your family to the hospital—this policy PAYS $100.00 PER WEEK for a day, a month, even a year . . . or just as long as you stay in the hospital. What a wonderful feeling to know your savings are protected and you won't have to go into debt. The money is paid DIRECT TO YOU to spend as you wish. This remarkable new Family Hospital Protection costs only 3c a day for each adult 18 to 59 years of age, and for age 60 to 70 only 4½c a day. This policy even covers children up to 18 years of age with cash benefits of $50.00 a week while in the hospital—yet the cost is only 1½c a day for each child! Benefits paid while confined to any recognized hospital, except government hospitals, rest homes and clinics, spas or sanitariums. Pick your own doctor. Naturally this wonderful policy is issued only to individuals and families now in good health; otherwise the cost would be sky high. But once protected, you are covered for about every sickness or accident. Persons covered may return as often as necessary to the hospital within the year.

### This Is What $100.00 a Week Can Mean to You When in the Hospital for Sickness or Accident

Money melts away fast when you or a member of your family has to go to the hospital. You have to pay costly hospital board and room . . . doctor's bills and maybe the surgeon's bill too . . . necessary medicines, operating room fees—a thousand and one things you don't count on. What a Godsend this READY CASH BENEFIT WILL BE TO YOU. Here's cash to go a long way toward paying heavy hospital expenses—and the money left over can help pay you for time lost from your job or business. Remember—all cash benefits are paid directly to you.

### Examine This Policy Without Cost or Obligation—Read It—Talk It Over—Then Decide

### 10 DAYS FREE EXAMINATION

You are invited to inspect this new kind of Family Hospital Plan. We will send the actual policy to you for ten days at no cost or obligation. Talk it over with your banker, doctor, lawyer or spiritual adviser. Then make up your mind. This policy backed by the full resources of the nationally known Service Life Insurance Company of Omaha, Nebraska—organized under the laws of Nebraska and with policyholders in every state. SEND NO MONEY—just your name and address! No obligation, of course!

**REMEMBER—$100.00 A WEEK CASH BENEFIT IS ACTUALLY $14.25 PER DAY!**

**FREE INSPECTION . . . MAIL COUPON**
The Actual Policy Will Come to You at Once Without Cost or Obligation

**The Service Life Insurance Company**
**Hospital Department S-17, Omaha 2, Nebraska**

Please rush the new Family Hospital Protection Plan Policy to me on 10 days Free Inspection. I understand that I am under no obligation.

*Name*.....

*Address*.....

*City or Town*.....*State*.....

THE SERVICE LIFE FAMILY HOSPITAL PLAN

## SERVICE LIFE INSURANCE COMPANY
**Assets of $13,182,604.16 as of January 1, 1951**
**Hospital Department S-17, Omaha 2, Nebraska**

# ROD TRAPPED THE POACHER AND THEN...

WHEN ROD BROWN, DEPUTY GAME WARDEN AND WILDLIFE PHOTOGRAPHER, RIGGED HIS FLASH CAMERA ON A STATE PRESERVE DEER TRAIL, HE LITTLE EXPECTED A POACHER TO SET IT OFF.


HIDING NEARBY, ROD SEES THE FLASH AND COMES TO RESET THE CAMERA, BUT THEN...



LATER AT STATE PARK HEADQUARTERS


THREE HOURS PASS





TEN-BLADE PACKAGE HAS COMPARTMENT FOR USED BLADES

# What's New in Science?

**IF YOU ARE PLANNING a trip to the Hawaiian Islands, don't dilly-dally or they may not be there. The Islands are sinking into the sea and the best guess from the U.S. Navy's Electronics Laboratory fixes the date of their disappearance at sixty million years from now. Which is why we urge you to hurry.**

BOTHERED BY DANDRUFF? Vitamin B is prescribed again. This busy little vitamin which apparently cures more things than old Doc Hotchkiss's Potent Snake Oil goes to work on dandruff or seborrheic dermatitis, a related scalp misery in a hurry. Pyridoxine, the particular B vitamin of a growing family, clears up the condition within 72 hours when applied in an ointment base. If you're interested, beat a path to the door of Drs. A. William Schreiner and Richard W. Vilter of the University of Cincinnati College of Medicine.

**THE SCIENCE OF GERIATRICS takes a setback from the news that too many older people are dying. The Metropolitan Life Insurance Company reports that the U.S. mortality rate for people over 45 is higher than other countries with similar health conditions. Two factors are responsible: a high accident rate, possibly due to our appalling automobile record; and more important, the very high mortality from heart disease. Watch the obituary columns in your newspaper for a few weeks and see how many executives pop off from heart attacks around the age of 50, just when they should be reaching their most productive years. If we do not find a solution for the pressure of modern life we'll have few well people left to enjoy its manifold blessings.**

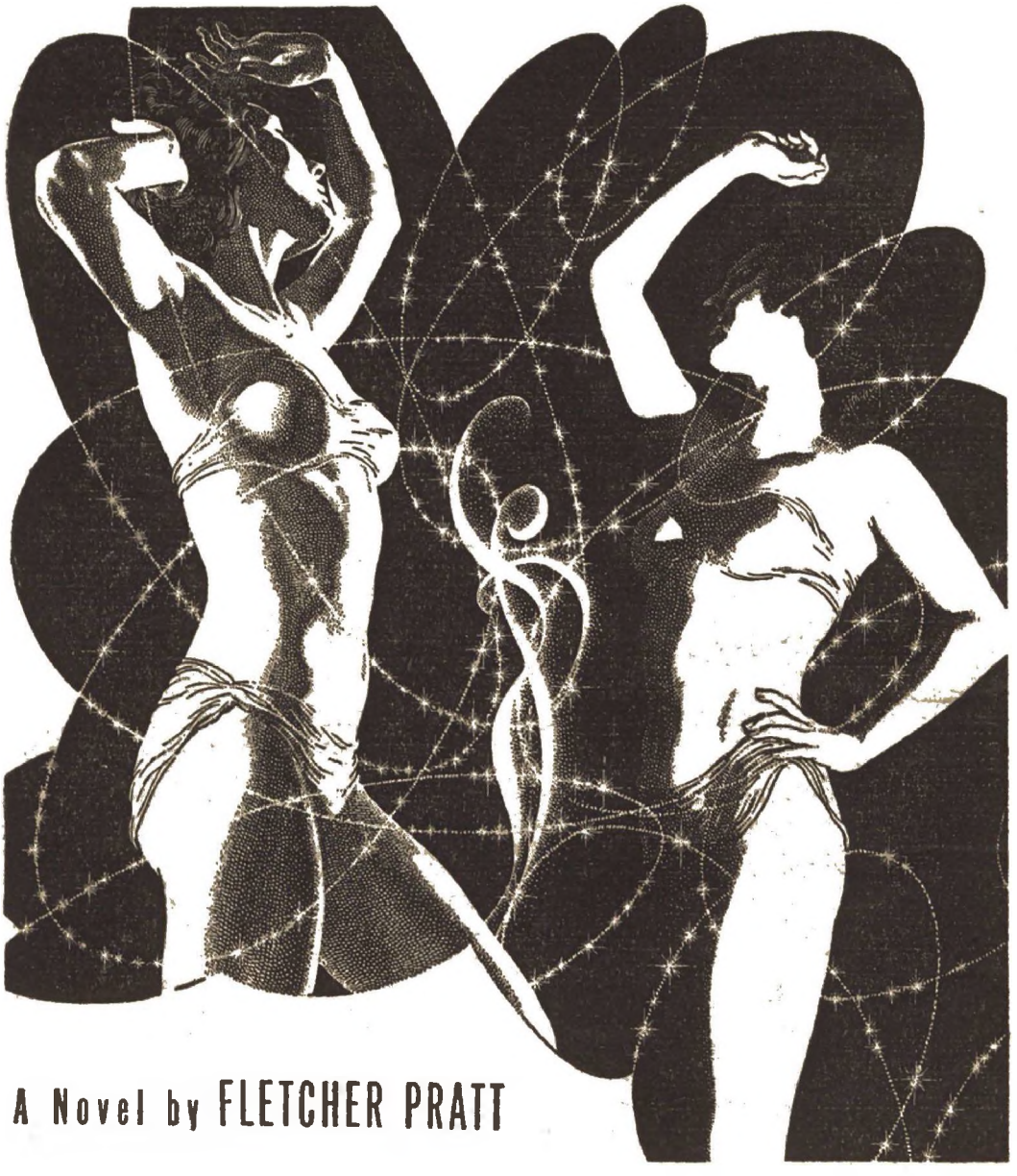
IF YOU WANT TO CONVINCE someone, don't keep hammering away at him without rest. Just as the learning process benefits from rest periods, so propaganda has more effect if some time is allowed to lapse between blasts. The listener may be skeptical at first, but with time the idea becomes familiar and tends to sink in, while the source becomes forgotten or vague. The result is that he has a greater tendency to accept it. In controlled experiments at Yale, students were offered propaganda material with a definite warning that the source was untrustworthy. Yet, after a lapse of time, many students accepted it.

**SIX FOOT SEA SCORPIONS once roamed the long dried sea which is now the state of Ohio. Four hundred million years ago, the eruption of a volcano buried the eurypterids so suddenly and completely as to preserve them intact. They had powerful pincers at the end of their abdomens, an appendage which makes them unique among fossils. Their modern descendents include spiders and scorpions—small ones, none approaching six feet.**

DISCOVERY OF A 12TH MOON of Jupiter has been announced by Dr. Seth Nicholson of the Mt. Wilson and Palomar observatories. The four moons originally credited to Jupiter were first spotted by Galileo Galilei back in 1610. Since then seven more have been added, three of which were discovered by Dr. Nicholson. With this—his fourth, he ties Galileo.

**YOU'RE NOT A GLOOMY CHARACTER because you have ulcers—you have ulcers because you're a gloomy character, according to Dr. Kellock of Central Middlesex Hospital in London. Agreeing in the main with current beliefs as to the origin of many diseases, Dr. Kellock believes there is a definite "ulcer personality." It is described as the hard-working, driving type, which, by hard work, is compensating for unsatisfactory emotional relationships and which actually does not want to be saddled with responsibilities, but wants someone to take care of him. This is only one step in a long line of research and we could predict the eventual isolation of cardiac personalities, tubercular personalities, arthritic personalities and so on indefinitely.**

SCIENTISTS, INCLUDING PHYSICIANS, chemists, engineers, nurses, and technologists generally are in tragically short supply in the U. S. By 1954, estimates the Office of Defense Mobilization, we will need 130,000 technical experts we simply will not have.



A Novel by FLETCHER PRATT

# DOUBLE

*It began with a miracle-drug, a reversed half-dollar, and a girl named Betty-Marie, who preferred math to men. . . .*

I

THE Chief's chair creaked as he leaned back in it and looked out of the window, then turned back to face the young man on the other side of the desk.

"Jones," he said, "your record shows you should know a man named Richard Mansfeld."

Jones smiled. "I ought to," he said. "He played left half when I was playing tackle at Cornell in '84. He hasn't gotten into anything, has he?"

Without answering directly, the Chief said: "Kept in touch with him?"

"Seen him at a couple of class re-

Illustrated by VIRGIL FINLAY


# JEOPARDY

unions, that's all. He went into analytical chemistry when I took up security work, so I wouldn't expect to. Last I heard he was a big number in it."

"He still is," said the Chief. "Maybe too big. That's what we want to find out, and we've picked you for assignment to the case because, on the record, you should be able to approach him in a friendly way."

"I see." Agent George Helmfleet Jones' face fell a trifle. "I don't know that I would be as good as someone who was a stranger."

The Chief lifted a cautionary hand. "It isn't a case of betraying a friendship, and there isn't any charge, as yet, at least. But there's something very queer going on, and more than one government agency would like to know what it is. And Richard Mansfeld may or may not have some clue to it. Do you know what perizone is?"

Jones frowned. "One of those mould-drugs, isn't it? Good for leukemia."

"A cure for it, and for every other type of blood disease. Also for several of the types of cancer. In fact, it marks the culmination of the progress in that direction which began back in the '40s. Hertzberg got the Nobel Prize for it."

JONES looked past him, through the glass wall and across the Potomac to where the afternoon rocket-jet for Europe was slowly tilting into position, waiting. It was the Chief's habit to let each part of an outline sink in slowly and be grasped before going on. He hated repeating.

"Unfortunately," he went on, after a moment, "you don't get something for nothing, even in medicine. Perizone has a peculiar secondary effect. It releases all inhibitions. Anybody under the influence of a dose is totally incapable of refusing to answer any question that is asked them, for instance. Or if they happen to feel annoyed, they're just as likely to pick up a chair and break it over someone's head. Or if they feel cheerful, they'll sing. And they become very subject to suggestion."

He paused again.

Jones said: "In other words, the patient is completely irresponsible—"

The Chief's white head nodded gravely. "That's the point. Perizone is a dangerous drug, in spite of its value. That's why the Federal Bureau of Medicine controls it very carefully. The regulations say that it shall be administered only in a hospital and with maximum precautions. Even the doctors allowed to prescribe it have special licenses from the Bureau, and if someone else wants to use perizone, one of these specialists has to be called in as a consultant. The restrictions aren't generally known, because the Bureau doesn't want people trying to steal the stuff for unauthorized purposes, and the Bureau chemists think they may work out a way to dampen these secondary effects."

The Chief stopped again. Jones wished he wouldn't.

"I should think—" he began, but the hand came up.

"Control is rendered relatively easy by the fact that the production of perizone is a very slow and difficult process. It's a highly selective mould; won't grow on anything but the fermented sap of a tree called the Ben Franklin tree."

"Ornamental," said Jones. "We used to have one in the yard when I was a kid."

"After the mould is grown, it has to be processed," continued the Chief. "That takes a good deal of time and rather elaborate equipment. That gives another check; the Bureau has men watching and controlling all production. In fact, there are only two firms making perizone now—Howard Chemical, out at Evansville, Indiana, and Emmett Industries of Dallas. You needn't note either; they're not important in this case."

Jones put away the notebook he had begun to take out.

The Chief went on: "So you see, the production of perizone has been well below the demand. I say has been, because about four months ago it began to catch

up, and today it's just about an even thing."

"Pardon," said Jones, "but couldn't that be cyclical, or due to the disappearance of the diseases perizone is useful in treating?"

"No," said the Chief. "That's the first thing the people over in the Bureau of Medicine thought of. They submitted the figures to an integrator, including those of incidence of the diseases over the sixty years we have accurate records for perizone. Integrator analysis can't give an absolutely positive result, of course, but the statistical probability is overwhelmingly against anything of the kind. On the other hand, the integrator calculates the probability of an additional source of perizone very highly."

"I should think it would be easy to locate the source, then," said Jones. "The doctors who use it? The retailers? The wholesalers, if there are any in the drug business?"

THE Chief smiled. "Every time the Bureau has tried that, it has run into a stone wall. Everybody who touches the stuff claims he obtains it from a perfectly legitimate source, and even if they didn't, they wouldn't admit it, because it's only a little more valuable than uranium, beside being extremely useful. And you want to remember that the personal privacy laws of '63 won't let the Bureau do too much snooping, and all the damned doctors know it. As soon as anyone starts asking questions, they simply ask what evidence there is of a violation of law, and when none can be produced, they yell 'Personal privacy' and clam up . . . Yes?"

Jones had made a movement and opened his mouth. Now he said: "I can understand how the Bureau would be worried about an extra source of perizone shedding the stuff out into general circulation instead of the controlled channels. But if that were happening, wouldn't the effect show up in general crime statistics somehow? That is, more crimes of one class or in one area?"

The Chief smiled. "Smart lad. The F.B.I. thought of that, too, when the Bureau took up its problem with them. They put that question into an integrator, too. The answer they got was that the only abnormal incidence of crime over the four-month period since perizone supply began to catch up with demand, was a twenty per cent increase in swindling in the Los Angeles area. Now —people may commit crimes under the influence of perizone, but swindling certainly isn't one of them. Besides, that Berghammer fortune-telling group accounts for most of the cases. What the Bureau is worried about is that we'll

## Crime of the Future

**AT LEAST three different people prominent in publishing have told us recently they believe science fiction is taking the place of the detective story and will eventually assume the position of popularity the whodunit once held.**

**This may be prophecy or only opinion. Despite some excellent writing in the detective field the stories tend to stereotypes; whereas science fiction is primarily a literature of ideas. Our able Fletcher Pratt, however, became interested in one angle of this: what would crime of the future be like? Would it not be as full of new ideas as the technology of that civilization could provide?**

**The answer is a science-fiction-detective story. We found it absorbing. Will it replace the detective story, or merely found a new branch of science fiction?**

***—The Editor***

get a sudden, big outburst." Faint worry lines appeared at the corners of the Chief's eyes.

"Which Bureau? Medicine or F.B.I.?"

"Both, for different reasons. Now one more thing, and you'll see why I asked you about Mansfeld." Do you know where he is now?"

"No. As I said, I only see him at class reunions."

"He's at the Braunholzer Research Institute in Geneva, New York. The connection is this: in spite of personal privacy and a general clamming up, the Bureau people believe that if there is an additional source of perizone, it's somewhere in that region. They've graphed it off against a map and fed *that* into the integrator, too, and it seems that the supply began to catch up with the demand in a spreading circle centering somewhere around that region. Although it's fair to admit that there are indications around Evansville, too, where Howard Chemical is."

"But why pick on the Braunholzer place?"

"Because no one knows exactly what goes on there, and it's the only place in the circle indicated by the integrator about which there's any such mystery. I'll fill you in: the place was set up as a foundation by old Sebastian Braunholzer, the brewer. About twenty years ago his only son was desperately ill with some double-jointed infection and the doctors gave him up, all but a chap named Runciman, a pathologist. He saved the kid's life at the price of cutting off one of his legs, and the story is that old Braunholzer was so grateful that he set Runciman up in a research institute of his very own. The Bureau people tell me that since he got in there, Runciman practically pulled the hole in after him. He squeals about personal privacy every time anyone comes near the place and won't let anybody in."

"Can't they learn anything from his past record—I mean, before he got the institute?"

THE Chief shook his head. "What they've learned doesn't mean much. He was interested in regenerative tissue, and wrote a couple of pieces on it for the medical journals. In fact, the Bureau people say that it was by means of something like that that he saved young Braunholzer's life. The integrator rejects a calculation on the probability of his still carrying on the same line of work, on the ground that we don't have enough factors. . . Well, that's the story on the Braunholzer Research Institute, where your classmate Mansfeld works. I want you to go up there—you can be taking a little vacation—foregather with him, just hang around, and find out what you can without violating the personal privacy laws. You see, it's not a regular investigation, just an exploratory tour. The integrator isn't by any means positive that this is the place the perizone is coming from. . . Any questions?"

Jones ran his fingers through the long haircut that was popular that fall. "As a matter of fact, yes," he said. "Isn't there any other place in the circle you speak of where perizone might come from?"

"Two or three, as possibilities."

"Then why so much effort on this one? And above all, what is this office doing in the case? If there's any case at all, aren't we outside it? I thought the law was very strict that Secret Service was confined to counterfeiting and guarding the President."

"It is." The Chief touched the button that opened the drawer of his desk, took out an object, and dropped it in Jones' hand. "We're in it because of this."

It was a coin. Jones turned it over in puzzlement, looking at the Liberty in flowing garments marching to the right, the rising sun with its outburst of rays beneath her extended left arm, and the eagle with half-folded wings on the reverse. "1917" he read. "Looks like one of the old St. Gaudens series of half-dollars, rather worn."

"That's right."

Jones rang it on the desk-top, rubbed it tentatively between his fingers, took out a pocket-knife that contained a variety of tools including a pick-lock and tried to scratch the surface, then looked at the Chief in puzzlement.

"Seems all right to me," he said. "Of course, I'm not a chemist—"

"It wouldn't do you any good if you were. The chemists are agreed that the composition is perfectly right. That's where some of the wear comes from. Also the milling is perfect, and the micro-measurements on the stamping."

"Then what makes you think there's anything wrong with it? Why isn't it genuine?"

For answer the Chief reached into the drawer again, produced a second coin and tossed it over. "Here's another one."

JONES compared the two for a moment, then looked up with an expression of utter amazement. "It's reversed!" he said.

"That's right. On a real coin of that issue, the figure of Liberty is moving toward the left and so is the eagle on the reverse. It's a perfect reproduction, except that everything is turned in the opposite direction. And that coin turned up in Geneva, New York, in the hands of a bank teller who was making a collection of the half-dollar series—you know there are a good many commemoratives—and so happened to notice it. He wrote to Treasury about it, asking whether there was any record of reversed half-dollars of 1917, and of course they called us in."

"How many more of them are there?"

The Chief brought his fist down on the desk. "Not one. We've had every half-dollar in Geneva checked, and in several other places, and as far as we've been able to find out this specimen is absolutely unique. Yet the thing has the right amount of bullion in the right proportions, and it seems perfectly clear that it's not hand work. It was stamped. I've had it for about a year now, trying


The reproduction was flawless

to run down the possibilities. There's no record of any such counterfeit in the files of the Secret Service. There has been no appearance of similar coins, as I said before. The integrator rejects any calculation on it on the basis of an error in data. In other words, the damned thing can't exist—but there it is. I finally put it on the unsolved list for Central Security. I gather that just about the same time Medicine sent in their perizone problem. When Central fed the lot into their integrator, they came up with the rather remote possibility that there might be a connection—I suppose on the grounds of geographical location. So Central Security sent me over to have a conference with Medicine, and I learned about their trouble."

"I see," said Jones. "And as the Bureau of Medicine doesn't have any undercover investigating service, and the F.B.I. can't find anything, they passed the baby to us."

"That's it. When you go up there, you'll be working on three levels. Your cover story is that you're just on a vacation. If anyone gets funny, you're technically trying to trace the nit-wit who counterfeited one single old half-dollar and made a bad job of it. But actually, you're really looking for a source of unauthorized perizone. I suppose you'd better use your own heli, since it technically isn't an official trip. You can get some money from Miss Brashear, and I'll have the records show you on vacation."

Jones ran a hand through his hair again. "Shouldn't I know something about this perizone and how it works?"

"Good idea. I'll phone Medicine and have them give you a briefing. Ask for Dr. Hall. Do you want a visual or a book?"

"Visual with sound, I think. The psychs have me listed as retaining more easily that way."

## II

GEORGE HELMFLEET JONES let his helicopter down on the resilient plastic surface of the Geneva airport, observing with a frown that there weren't any line-service cars. He carried his own bag over to the tower, paid his fee and asked for a taxi. The clerk called for it, snapped off the visiphone, and in answer to Jones' question said that the Braunholzer Institute was on the hill overlooking the lake, out beyond old Hobart College, "but they don't let nobody in there, Mister. They got some kinds of secret experiments going on, about frogs and things. I think it's a gov'ment project about this bacterial war."

Direct assault on the citadel could wait, Jones decided. He'd first have to try to get Dick Mansfeld out and throw a few drinks into him, which wouldn't be too hard unless Dick had changed a lot. He said, "Who runs the place, anyway?"

"I dunno." The clerk's interest evidently did not run along those lines. "Here's your taxi, Mister."

The cab slid smoothly along the rubberoid street through swirls of dead leaves from overhanging elms that were shedding the last of their summer dress, and pulled into the discharge space under the Cushing Hotel, where a neatly-uniformed girl seized his bag and placed it on a conveyor. Upon grave consideration, the clerk did have a room that could be occupied for two weeks. It had a phone with a tap check and recorder.

Jones went up to a room that had a buzz in the air-conditioning machine and a faulty rim-light that flickered for a couple of minutes after it was turned on. The bell-hop accepted his quarter and said she would send someone up to fix the light; he fished out the phone directory and dialed the number of the Braunholzer Institute. A feminine voice answered, saying that she would try to find Dr. Mansfeld and asking who wished to speak to him; the visi-panel, however, remained blank.

It was a long wait, and Jones found by trying it that the switch to turn on the wall-newspaper was just out of reach when the phone cord was stretched to

its fullest extent. Ultimately there was a click, the face of Dick Mansfeld appeared in brilliant color, and his voice bellowed: "George, you hairy old horse, where are you calling from?"

"The Cushing, right here in your own home town. I'm on my vacation, and I thought maybe I could persuade you to play hookey and fly over to Ithaca with me to see the Oregon game."

"I'd love it, but . . . Wait a minute." The face disappeared from the plate, and there was another pause, out of which Mansfeld's voice suddenly spoke without any visual accompaniment. "Look, George, I made a date with one of the technicians here to go over to her place and watch the game on video. I've just been talking to her, and she'd be awfully glad to have you come along and furnish some real expert criticism. How about it? We'll be a lot more comfortable sitting there with glasses in our hands, than up in the stands drinking out of a bottle."

Jones considered rapidly. Two of them, and one a woman; he could probably get in a good preliminary survey. "Okay," he said. "Shall I come around and meet you?"

"Don't bother. We can go right to her place. The address is 318 Schuyler Street, apartment B-B. Got it? Name on the door's Taliaferro. I'll be there about 14:30. What do you think? Are we going to take those web-feet?"

"We ought to if Parker can keep from throwing those passes away. . . Okay, I'll see you."

JONES disconnected, picked up the house phone, ordered lunch, and on second thought, a bottle of whiskey to take along, and sat down to contemplate the newspaper until it was time to go. The Cubans were threatening withdrawal from the Caribbean Union, there had been a jet crash in Nebraska, Harvard was expected to win over Michigan, and the lunch was an excellent lake trout that left him still feeling a sensation of well-being as he climbed into the taxi an hour and a half later.

318 Schuyler was one of those modern buildings with glass sun-bathing bubbles projecting from the walls like so many warts. When he pressed the button under "Taliaferro" and stood close to the visi-plate for identification, it was Dick Mansfeld's voice that answered. "She got held up finishing an experiment, but she'll be home any minute. Come on up."

Mansfeld met him at the door, looking a trifle heavier than when Jones had last seen him, but abundantly cheerful. "How are you, George?" he said. "Come on in, take a load off your feet, and tell me what brings you to our backwater? The glasses are over there. Be careful of that automatic soda gadget; it's got too much power."

Jones pumped the plunger for ice, squirted soda with the desired care, and looked around. The apartment had been decorated with a good deal of taste and care, but it looked more like a man's place than a woman's, except for the pictures. That one there was—

"Why," he said, "I had my vacation due, and I thought for once that instead of taking it in the conventional way, I'd do exactly what I wanted to. So I started by coming up here to look up a man named Leonard Marks, who has his studio over on the other side of the lake. In case you didn't know it, he's just about the best water-colorist since Winslow Homer."

"Still following the arts, eh, George," said Mansfeld. "I can't figure what ever made you take up this sleuth-hound business instead of turning into a painter."

"Not enough money in it," said Jones. "What are you up to here, yourself? I was as surprised as anything when Cook told me you were located here at this institute. I thought you were all fixed up inventing new fabrics for Orgon."

Mansfeld gave Jones a rather peculiar look. "If you really need a good detective in your business some time, get hold of a class secretary," he said. "I didn't know Cook knew about my being here.

In fact, I'm still supposed to be with Orgon."

"What's the idea? Big secret stuff or little secret stuff?"

Mansfeld sipped his drink and said, "You could call it little secret stuff, I guess, though it will be big enough if we ever work it out right. Just at present, we don't want any governmental—"

The announcer buzzed and the red light flashed. "That must be her," said Mansfeld. He stepped over and pushed the door-release button. "Wait till you see our Betty-Marie. She's my secret sorrow."

"I don't get it," said Jones.

"Tell you later. Here she comes—"

THE outer door clicked, opened, and Jones experienced the sensation of being kicked in the pit of the stomach. The girl who came in would have stopped any show from New York to Rio de Janeiro merely by walking across the stage. Her eyes were on a level with his own, but her blonde hair was piled higher. The way she walked and the shape of her legs made him think of a dancer, and her figure made him think of everything. It was in a daze that he heard Mansfeld say, "Miss Taliaferro, this is George Jones I was telling you about, the human thinking-machine of the backfield; George, this is Betty-Marie Taliaferro, the pearl of the Braunholzer Institute, and our best thinking-machine. You two ought to get along together."

Jones murmured something about hoping they would. She said: "I see you two have started guzzling without waiting for me. Why is it that all football players turn into sots in their old age?"

"It's because women won't pay us any attention after we quit being heroes," said Mansfeld and looked at his watch. "Let's get set."

Betty-Marie accepted the drink Mansfeld had made for her. They took their places in chairs facing the video wall, and the field at Ithaca became visible, with the two teams running through practice formations and the stands in movement. Jones said, "Are you a Cornellian or an Oregonian, Miss Taliaferro?"

"Neither. I went to Cal Tech, where they don't have football teams; but I'm interested in it as a scientific study. The variation in the results obtained from approximately the same muscular equipment. Now if it were only really identical—"

Mansfield said, "Shhh," and then pointed at the screen. There didn't seem to be anything particular going on, but before Jones could say anything, the rich, fruity voice of the announcer began to list the lineups as the two teams took their places for the kickoff, and all three gave their attention to the game. Jones glanced from time to time at the lovely profile of the girl. It remained incredibly beautiful, but the more one looked at it, the colder it became, as though she were in fact the thinking-machine Dick Mansfeld had called her. Neither did she show the slightest emotion. When Parker threw a pass straight into the arms of an Oregon defender who galloped away up the field with it, and the men groaned in unison, she merely remarked, "That was that left tackle's fault; he let that man through on the passer and he had to throw it away." When Oregon scored for the second time, and the groans changed to howls of dismay, she only appealed to Jones: "Have you noticed that defensive center moves faster to his left than to his right? I think Oregon has found it out."

At half time the score was 20-0, Oregon. Betty-Marie got up and remarked, "I observe a certain lack of cheerfulness in my guests. Mr. Jones, Dick tells me that you make an avocation of art. Do you like my pictures?"

Jones' eyes swept the room. "Very much. That Bernasco is a remarkable job. Where did you ever—" He stopped suddenly and strode across the room to where a statuette stood on a pedestal. "Why, this is Lober's 'Girl with Doves'!

I thought—" He broke off suddenly.

Did he fancy it, or did he catch out of the corner of his eye a quick glance exchanged by the two? Betty-Marie said, "It's a reproduction, by a new process. A friend gave it to me."

Jones touched the statuette. "Then it's the most wonderful reproduction I've ever seen. I'd swear that was the original bronze."

MANSFELD said, "They can do some good work with those new plastics. Say, George, I wish you'd call Ithaca long distance and tell that idiot of a coach to put in Margetsson. He can't run and he can't tackle, but when he's in there, everybody plays their heads off."

"There are people like that," agreed Betty-Marie. "They have a kind of psycho-chemical effect on others, as though they were releasing inhibitions. I've seen the one you mention on video, and I'll bet a stop-watch timing would show the others at least a perceptible part of a second faster when he's playing. Tell me something, Mr. Jones. Do you Secret Service people find that modern technical processes make it easier for counterfeiters to work or for you to catch them?"

"Catch them, I guess," said Jones. "A queer bill hasn't a chance of getting past since the banks and most of the big stores put them through the automatic scanners. But the old eye is still the best. We had—" He stopped suddenly; there were too many unexplained things going on around here to let loose the story of the reversed half-dollar. Not that he suspected Dick Mansfeld of anything, but experience had taught him that when there is a general atmosphere of secretiveness, it is a good idea to keep one's own secrets.

Fortunately, a blare of band music saved him from having the unfinished sentence noticed, and a moment later the second half began. The desired Margetsson was in this time, and from the kickoff it was evident that he was making a good deal of difference. Cornell got the ball, marched down the field, and lost it on a fumble close to the Oregon goal; got it again, and moved slowly but surely to a touchdown. The Oregon attack picked up where it had left off in the first half, but then ground to a halt, and just as the quarter ended, Cornell worked out another touchdown.

Both men were sitting on the edges of their chairs now, and Betty-Marie's cool comments were an annoyance. She seemed to realize it and fell silent as, with the crowd roaring from the stands, Cornell slowly hammered its way to a third touchdown and a tie score—for the extra point was missed. But when Oregon took the kickoff and started back up the field, the dynamic Margetsson suddenly appeared in the Oregon backfield, leaped through the air and snatched a pass from the fingertips of the passer and fell on it. Two minutes later Cornell had another score, and thirty seconds after that, two wild men were embracing each other in Betty-Marie's living-room. She surveyed the scene calmly.

"The interesting thing about it to me is that he used to be an invalid," she said. "When he was here—"

"To hell with that!" cried Mansfeld. "That was the greatest old play ever made in football. We're going out and tell the town about it. Want to come along, Betty-Marie?"

She shook her head. "It's all over, isn't it? Besides, I have some work to do tonight. That latest issue of 'Wissenschaftliche Zeitung' has an article on Riemann math with some formulas I want to check."

## III

DICK MANSFELD settled back, emitted a totally unashamed belch and said, "I vote that after a dinner like that we start the evening's drinking with a couple of brandies. We'll need 'em if the chorus in this joint is going to look like anything but what they are—a bunch of

babes who couldn't make the grade on the High Air circuit and ended up in a country roadhouse."

Jones wiggled his fingers at the waiter, ordered the brandies, complimented him on the pheasant with truffle stuffing, received the information that the birds were flown in daily by auto-jet from North Dakota and their contents from Paris, and turned to his companion. "I should say so," he said. "After looking at that specimen from your lab, I won't be satisfied with anything less than Miss America. I couldn't keep my eyes off her."

"Nobody can," said Mansfeld. "Don't mention it; it makes me gloomy, and this is an occasion of rejoicing. I can't get to first base with her, and neither can anyone else."

"Betty-Marie Taliaferro," said Jones. "From the name, you'd expect her to be a sweet little southern nothing."

"Instead of which she's a Ph.D. from Cal Tech, and eats the higher mathematics of electrical quanta for breakfast. You'd be surprised at some of the things she's done. Even old Runciman can't compare with her, though his field's mainly pathology. Trouble with her as a person is that she just has so much in the way of looks and intelligence that there just isn't anything she wants except things that she has to work hard to get. Men don't come in that class—for her."

"I suppose not," said Jones. "By the way, didn't she say something about Margetsson having been at your institute at one time?"

"I think he was there," said Mansfeld. "Had some obscure disease that he picked up in the tropics during a summer vacation. Runciman heard of it and offered to take the case on because he was interested, I believe. But it was over in pathology, and I don't know the details. . . Here we go."

The lights in the night club changed to the penetrating shade known as X-ray blue, and a syrupy voice announced that the guests of Reeder's Rest were about to witness that incomparable artist, Laraine Medalie, and her snow-girls, fresh from an engagement in Caracas, Venezuela. The orchestra slid into the strains of "Bonbon"; the incomparable Laraine appeared in the center of the ceiling, in what seemed to be a cellophane wrapper, and was swung slowly to the floor as the snow-girls came pattering out in exiguous costumes of white rabbit fur.

"How do they do it?" asked Jones. "I can never figure it out."

"You mean bringing her in like that?" said Mansfeld. "It's the stuff the wires they swing her on are made of, protapon. Has the quality of bending blue light, so a narrow object made of it is simply invisible. That's what we researchers do—work our heads off on one of the most important discoveries in years so that a night club can have a new effect."

The incomparable Laraine was swaying slowly to and fro in the paces of what was evidently going to end as a strip-tease, while the orchestra worked itself into a fever and the snow-girls tossed balls of cotton at the guests. At a table near that occupied by the two friends, a man caught one of the artificial snowballs neatly, tossed it back at the star dancer and scored a direct hit, which she rewarded by blowing him a kiss. Then the man waved a hand at Mansfeld.

"Seems to know you," observed Jones, "and her, too, for that matter."

"I wouldn't be surprised," said Mansfeld. "That's Everett Benson. He probably knows every unattached female within a hundred miles of the place, and some of the attached ones."

"Did you say Everett Benson?" said Jones, taking his eyes off the strip-teaser for a moment.

"Yes. Why? You know him?"

"No. Only—how do you happen to, if you don't mind a question?"

"Why, he's our accountant and general financial wizard at the institute. Good man, too, I would say. Been with us a

He was subjected to the emanations of what looked like an X-Ray machine

little over a year, and even if he does spend his nights chasing another kind of figures, I gather he does a pretty good job with those he handles in the daytime."

THE incomparable Laraine ended her act to a whoop from the brasses, the audience pattered its applause, and a waiter came hurrying over to take orders for the renewal of drinks, and Mansfeld said, "Two Scotch and sodas."

"Let me skip this one," said Jones.

"Hey, what do you mean? You can't do that! We're celebrating!"

"I know. But the food took the edge off those drinks we had before dinner, and I don't feel quite like building a new foundation. Is your friend Benson giving us the come-on?"

"Huh?" said Mansfeld. "Yes, I guess he is. Let's go over and see what he wants."

Everett Benson proved to be a thin-faced man in his early thirties, who accepted the introduction to Jones with effusive enthusiasm, and invited them to join him. "I'm all alone for the time being," he said, "but I don't expect to be long. In fact, I have a sort of date with a couple of the performers after the next show, and I think I could get hold of another if you want to join us. My heli's outside."

"Come on," said Mansfield; "make the right finish to a big evening."

"No, I don't think I will," said Jones. "Those drinks made me a little bit grog-

gy, and I'm tired anyway. You go ahead, Dick, and I'll slide back to the hotel. I want to get up in time to catch Marks at his studio in the morning. He's an early bird, and he's likely to be out in the field, sketching."

"Okay," said Mansfeld. "Ring me up if you need a guide to our beautiful city." He turned to Benson. "He's just encountered our Betty-Marie, and is taking the shock hard." All three laughed, and Jones threaded his way among the tables to the door.

In his room, the recorder over the phone had its red light on. He cut in the instrument, checked it to see that the message had not been tapped, and listened: "Mr. Jones," it said, metallically, "will you please call Mr. McAllister at once, no matter how late you come in? Mr. Jones, will you—"

JONES cut it off and looked at his watch. 21:37; that was not too late, especially in view of the fact that Mr. McAllister, which was the name the Chief was currently using for communication with agents in the field, had something so urgent that he was willing to be pulled out of bed for it. He dialed the connection with Washington, then the Chief's private home number, and said, "Jones calling Mr. McAllister, from Geneva, New York."

"Put on your visi," said the voice at the other end. "I'm going to give you just a flash and then get off in case anyone should come into the room where you are. Any taps?"

"No, I checked. Let her come."

The Chief's face flashed into momentary definition, a row of books behind it, then winked out. "Okay," said Jones, "I have you. What's the story?"

"Central Security has picked up another item in the complex you're working on. They got some unsolved stuff from the Treasury Department today, and the integrator came up with a fairly high probability that some of it is connected with the case you're working on. The Braunholzer family withdrew its financial support from the institute a little over five months ago, very quietly."

"For God's sake, why?"

"We're trying to find out, specifically. But I don't think it will get us much of anywhere. The old man is dead, you know, and the two sons seem to feel there are better uses for money than supporting a place like that. Treasury wouldn't even have turned it in, except that the sons seemed quite willing to pay the extra income tax."

Jones said, "That would give a reason for the institute to be making perizone, if it is making perizone."

"That's what I thought. But if they are making it, how the devil are they getting it into the buyers' hands without leaving any traces?"

"I think I have a lead on that. Everybody here is very cagey. Mansfeld won't say a word about what he's doing and they won't let anyone into the plant. But I think it's very significant that Everett Benson is their chief accountant."

"Who?"

"Everett Benson. H'm—that's right, you wouldn't know; you were in South America when the Tolschuss case broke. I was working on it because it was suspected that Tolschuss was paying for some of his shipments with Belgian money counterfeited in this country. Look Benson up, will you, Mr.—McAllister. Every time we turned around in that case, we ran into him. Lovely character. Makes a business of industrial espionage and underhand deals of every possible kind. The F.B.I. has a file on him, but he usually stays inside the law or handles things so that nobody can start a prosecution against him without letting loose something on themselves. He's a free-lance, and it might pay to see what his last connection was, if you can find out."

"Do you think it's worth asking for an integrator reading on the probabilities resulting from his connection with this business?"

"I'd rather not just yet. I think I'm going to get enough more to make it

really important. Tell you what I would like, though. I'd like to have you send someone else here and put a tail on Benson. Apparently he spends most of his time chasing women, but that's been used as a cover before, and I think we might get something."

The phone gurked a couple of times, indicating that the Chief was considering the idea. Then: "All right, I'll send you Schneidermann."

"Fine. I'd rather have him than anyone. He's the most invisible person I ever saw. But—warn him that this Benson is a slick article. My room number here is 1221. Tell Schneidermann to leave a record for me if he picks up anything."

"I'll do that. Anything else?"

JONES said, "Yes, there is. I don't know how it fits in any more than the wrong-way half-dollar, but at school they always taught us that when you're working on a case, anything that seems abnormal needs to be followed up."

"What's abnormal this time?"

"I was at a girl's apartment this afternoon, watching the Cornell-Oregon game on the video. She seems to be quite an art connoisseur, and I'll swear I saw Lober's 'Girl with Doves' in her living room."

"You'll have to explain. The only art I know about is boxing."

"It's one of the most famous small bronzes in existence. Worth almost any amount of money. She said it was a reproduction, but I think I know enough about small bronzes to offer a bet that this is the real thing."

The Chief's chuckle came over the phone. "You're getting a little far afield, aren't you, Jones? Suppose this girl is an art-thief or connected with one. What has it got to do with your case?"

"A lot. She's an unusual girl. Her name's Betty-Marie Taliaferro, and aside from a figure that would put your eyes out, she has a Ph.D. from Cal Tech; she's a technician at the institute, specializing in the higher mathematics of electrical reactions."

"Oh." There was a pause. "You want her looked up?"

"Might be worth while. More food for the integrator when we get to that stage. But I don't think we'll get much along that line. What I would like, though, is to have Lober's 'Girl with Doves' looked up. If you can find out what museum it belongs in and whether it's really there, it would give a starting-point. Also, it might be worth while to get a report on recent new methods of reproducing small bronzes, and how accurate they are. I suppose someone over at the Mellon museum could work that up without too much trouble."

"All right, I'll take care of that. Anything else?"

"No, I guess that's the batch. . . I've only begun, and I've got to spend tomorrow morning looking up a painter here, because that's my cover. There were a couple of little incidents of conversation between Mansfeld and this Miss Taliaferro, but nothing I could make a point of. I'll put my view on a record and ship it off to you by auto-jet. You have the record on this conversation, haven't you, sir?"

"Yes, that's taken care of." The Chief was silent a moment. Then: "Well—good night and good luck."

## IV

THERE was a record in the machine. George Helmfleet Jones checked it for tap and learned that Mr. Abe Schneidermann was visiting his cousin Pincus on Madison Street and had some aquatints from France which he would like to show to Mr. Jones, if he could drop in before noon. Jones doubted that there was any cousin Pincus, and had no confidence whatever in the existence of the aquatints, but he obediently called up and canceled his appointment for the morning with Leonard Marks, and while he was about it, ordered a cab for 9:30. After ten days, the cover story of a vacation spent looking up a single artist

was wearing decidedly thin, and it was time to be getting somewhere.

To be sure, he had been around to Chief Moran of the local police force and planted his secondary story, that he was interested in the reversed half-dollar, but it was by no means certain that Moran would leak the news into quarters where it would do good, and of the origin of the half-dollar itself there was no trace. It had appeared as though it dropped out of nowhere. The investigation was stone-walled.

And so, for that matter, was any attempt to obtain knowledge of the inner workings of the Braunholzer Research Institute. Dick Mansfeld was friendly, but uncommunicative as before; he simply would not talk about his work. The Washington end, stirred by Jones' memory that Betty-Marie Taliaferro had mentioned Margetsson's being at the institute, looked that up and came back with a report that made the whole thing more cloudy than ever. The Cornell football star had indeed picked up an infection, mysteriously known as *periasis aurea*, which caused his finger- and toenails to turn yellow and drop off. There were only about six cases of it known previously in medical history. Interviewed at Ithaca by one of the F.B.I. men, Margetsson said simply that after two or three doctors gave up on the case, Dr. Runciman had invited him to the institute for treatment, kept him in a private hospital room, subjected him twice a day to the emanations of what looked like an X-ray machine, and put some stuff on his hands and feet, which promptly healed up. The X-ray machine didn't look quite like any of the pictures shown him by the agent. Margetsson was unable to say precisely what the difference was.

Washington also reported that, in spite of the cutting off of the Braunholzer funds, the bank account of the institute appeared to be in a flourishing condition. Lober's "Girl with Doves" belonged to the Klett Art Museum in New York and, after a trip around the country as part of a traveling exhibit, was back there, on exhibition daily and unquestionably genuine. The Mellon Museum knew of nothing especially new in reproduction methods since the so-called "metal plastics" came in in 1986. Betty-Marie Taliaferro had no suspicion of a police record or connection with art thieves. Nor had she any further connection with George H. Jones. Over the phone she had declined his two attempts to date her, calmly, pleasantly, giving the impression that she held nothing against him personally, but just wasn't interested in dates. When Mansfield heard of it, he merely laughed a comment that this was standard operating procedure with Betty-Marie; the only man she had ever been known to date was old Professor Strybczenin, who worked out the formula for the temperatures and pressures at the interior of cepheid variables.

It was a stone wall; and Jones was still wondering, as he finished his breakfast the next morning and prepared to go meet Schneidermann, whether he ought not to toss up the whole deal and ask that the already ascertained facts be run through the integrator. It would entail the loss of a certain number of the points officially credited for the solution of cases, and by that much, would delay his promotion, but that would be better than having the case taken out of his hands.

HE WAS still thinking along these lines when the taxi pulled up at the address on Madison. It was one of the old semi-dymaxion buildings, in which two panes had been broken and the gaps covered with quick-hardening plastic; the curtains were all drawn. Schneidermann himself came to the door in his shirt-sleeves, accompanied by a wave of heat that reminded Jones of Abe's preference for small rooms and lots of heat, which was probably some kind of compensation on the part of the best shadower in the department, who frequently had to spend twenty-four hours and more outdoors and in the cold.

"Come in, George—come in and don't

stand there letting all the freezing in," said the shadower, and led the way into a rather disreputably-furnished living room. "Yi, yi, what a business you got me into. You want some coffee?"

"Yes, I'll take a cup if you do," said Jones, looking warily at the two doors that led out of the place. "About those aquatints—"

"It's all right, there's nobody home," said Schneidermann, and bustled through one of the doors, to return in a moment with a chipped plastic tray on which reposed self-heating cups of the liquid with cream and sugar. He pushed one across to Jones, took the other himself and sat down.

"You got time?" he said. "On account of that is what this takes."

"Fire away," said Jones. "I haven't got a thing on this case yet."

"Something I got," said the other, "only maybe you have to tell me what it is." He was small and stoop-shouldered, and as he pulled a battered notebook from his pocket, Jones remembered that he preferred that method to putting his observations on record, like any sensible man.

"On the 27th of October, in accordance with directive—" Schneidermann began to read in a stilted voice.

"Lay off it, Abe," said Jones briefly. "You're not in a courtroom now. Just tell me what happened."

Schneidermann grinned. "Okay, so we are going faster. When I get off the heli here, I think maybe the best way with this Benson is pick him up where he lives, and not up and ask for him. So he has an address in the phone-book—it's at 521 Onondaga Street, and I go out there and it looks good; it's one of those little singles, and there's a big double across the street with some hedges that will give me good cover. But this Benson don't come home at all that night, so in the morning I got to pick him up at the institute. You been out there?"

Jones shook his head.

"Okay, then. It's got three or four buildings, all bunched together. The middle one is three stories tall, and has glass walls with balconies, so I figure that's the hospital unit they tell me about in the briefing, only it ain't in use, because there ain't no lights on and nobody moving around inside."

Jones stirred. "That's a point for the integrator, if we have to put this case in."

SCHNEIDERMANN made a mark on his notes, and went on: "The building east of it is smaller, and it's some kind of laboratory."

"How do you know?"

"Because it's got a big transformer station right next to it, and cables going in. Over on the other side of the hospital unit is a building, I don't know what it is, it looks something like the laboratory, only the windows have been filled up to make it solid. I think there's another building behind that, but I couldn't get around to see. The grounds go way back there, and there's a big wall of trees between the outer fence and the buildings. There's a concrete walk between the laboratory and the closed-up building, only it ain't a walk, they use it for those little electric trucks. I saw them make eleven trips the first day I was watching the place, and eighteen trips the second. They were all closed in."

Jones said, "I think maybe that description had better go to the integrator, too."

"Check." Schneidermann again marked his notes. "All around the place they got a wire fence, maybe two meters high. I think it's warning wire, so I ain't touching it, see? And maybe I'm not so dumb about that, because when the people begin to come, they go up to the gate in the fence and shove some kind of a identification in the check-box on the gate and it opens automatic. You want I should crack the box?"

"I don't think things have got that far yet," said Jones. "Besides, they'll probably have the buildings inside the gate covered. But I would like to hear about the people that went in."

Schneidermann fluttered over a couple of pages. "I got it here. There was an old stiff with white hair, five feet eight, B-1 ears, X-5 nose, walk type 32-c."

"That's Dr. Runciman."

"Then there's a big guy, five feet eleven, A-2 ears, Y-1 nose, walk type 21-d; dark complexion."

"Don't know him at all. If we get enough on Benson, you might tail him for a while—long enough to find out who he is."

Schneidermann made a face. "That ain't easy. He knows his potatoes. After I'm there for a couple of hours, he comes out and puts the run on me, and says if I don't cut it out hanging around, he'll turn me in for violation of personal privacy."

"That's the chance we have to take in this business. Go on."

"Okay. Then there's another big guy, medium brown hair, B-3 ears, Y-2 nose—"

"I know him. That's Dick Mansfeld. You can skip him, and also the dazzling blonde. Who else?"

"That was all I caught going in. There must be some others that live there all the time. I noticed some of them going around, but they're so far away I couldn't get a type on them before the big guy I told you about put the run on me. I got Benson going in; I had a picture of him to work from."

"What time did he get there?"

"Early; about 9:30, looking like he just walked out of a tailor shop. The place sits by itself, so after I got shagged, I had to haul off to a fresh-fish stand they got along the road and cover it from there. I hire a car from one of those services and I got it stashed a couple hundred meters down, with the hood up, as though something went wrong and I was away to get help, figuring I'll have time to get in it and tail this bird whenever he comes out, see? It turns out that's a yuld play. I'm inhaling my second bowl of chowder when all of a sudden a heli takes off from inside the grounds, and when I can get my glass on it, I see Benson is inside. So I beat it out to the car, but like I said, it's a hired heap, and the only kind of radar it's got is one of those anti-collision ground service jobs. I tail him enough to find out that he goes just south of Seneca Falls, though, so I put it down on the map this way to see where he comes down."

SCHNEIDERMANN rose and produced a map of New York and New England, with a black line drawn across it. Jones followed it. "It looks as though Syracuse was the only important place on that line until you hit the Atlantic ocean," he said.

"That's the way I figure," said Schneidermann. "And this Benson used to work for Howard Chemical. And Howard Chemical has a warehouse in Syracuse. Nu?"

"Also some of this extra perizone seems to be coming from Howard Chemical," remarked Jones, thoughtfully. "You don't need to be an integrator to figure out that the possibilities of a connection are fairly high. I see what you mean. Go on; when did you pick him up again?"

"I figure I don't get nothing more out of this institute that day, so I come back here and knock off a little sleep, and then go out to where he lives to put him to bed. Only he don't go to bed. He comes home about 16:30, spends maybe an hour in the house and comes out all dolled up. Then he goes downtown to the Old Vienna and hangs around there for a couple of hours. I cased the joint and then made it; he was sitting in the back, drinking beer with this doll that came in. You want her description?"

"I don't think so. Is she important?"

"Chorus stuff. After a while, they have dinner there, then they go on the town. I think the two of them must of made every night club around here between then and three o'clock in the morning, when he takes her home with him. Then I figure I've put him to bed

all right, and go home myself, and that's the second yuld play I make. George, if anybody ever tells you I'm a good tail, hit them on the back of the neck. I stink."

Jones smiled. "I don't think so. What happened?"

"What happens is this," said Schneidermann. "When I go back there in the morning, the place looks empty, and by God it is empty! I cased it. So I get in my car and go out to that fish joint again, and me and the litvak that runs it are buddies by this time, so I ask him if my friend has gone by like every day, and give him a kind of description of Benson. He says he don't think so, this Benson don't come through every day, and then we get to shooting the breeze about the institute, and he comes along with another line that don't figure."

"About Benson, you mean?" asked Jones.

"No, about the institute. He says there are three of those guys that live in, and they're triplets and two of them are nutty."

JONES frowned. "You can mark that for submission to the integrator, all right, but I think I'd put an 'if true' on it. I can't imagine the institute doing serious scientific work with the help of assistants who have some of their buttons missing. Did you follow the matter up?"

"Not then." Schneidermann consulted his notes. "I come back here and get some more sleep, because I can see I'm going to need it. Toward evening I go back to Benson's place. He comes home at 18:05, and it's the same routine as the day before, only this time he meets a dame in the lobby of the Beardstown Hotel, and she ain't chorus stuff at all, but real class. They go into the cocktail bar, and after about an hour they come out and go to a place called Reeder's Rest for dinner. It's a roadhouse—"

"I've been there," said Jones.

"Okay. After dinner he takes her home with him. They come out at 23:42, and he drives her to a big house at 184 Bailey Avenue. We can follow that up, but I don't think it will get us anything, because I been tailing this bird for over a week now, and I see him pull the same with five different women, one of them twice. George, the way I figure it is this: this bird is connected with that perizone racket, and he's slipping mickeys of it to these women to make them willing."

"It could be," said Jones. "Probably is. Nice guy. That's one of the reasons why the Bureau of Medicine wants to keep the stuff under control, dammit. Go on."

"Okay. This night Benson comes right home and goes to bed. Instead of leaving him there, I figure I'll stay with it, so I cover the place all night. But he don't do nothing except come out in the morning and go down to the institute. That night he don't have no date, but the next night he does, and so I cover him again. The dame he's with comes out about three o'clock in the morning. At 6:35 Benson himself comes out, and gets in his heap. There ain't much traffic, so I give him a good lead, and he takes me right along out of town southwest to a place named Benton Center." He indicated the spot on the map. "Then two miles beyond town, he turns off up a side road. I go on past, stash the heap and come back on foot. It ain't so good as tailing in the city where you got plenty of cover, so it takes me time to work up near the place where he goes, but he don't come back, so I take my time. It's a real old house with a lot of business around it, painted green and with low windows. From the hideout I was in I see people moving around inside, but I can't make out who; anyway, one of them has to be Benson because his heap is still out back. George, he spends all day there, not leaving until its 16:20, when it's time for him to get back for his date with some dame. I figure I got enough on that routine, and it's more important to find out what goes on there, so I stay. About 18:20, just when it's beginning to get dark and the lights are on

in the house, someone comes out, walks around it, goes to pick some of them red flowers from the garden in the back and goes back in. And George, you can fry me for a flounder if it ain't that blonde from the institute!"

"What!" said Jones.

"Like I say. I couldn't miss, George. Five feet nine, B-2 ears, X-4 nose, walk type 24-E. You know me, George; I couldn't miss on that."

"But what would she be doing there? She has an apartment in town, and goes to the institute every day."

"You got me. The only way I figure it, maybe this Benson fixed her up with some of this perizone bug-juice and got her out there."

Jones got up and began to pace the floor. "It still doesn't fit," he said. "I've met Miss Taliaferro. She's an extremely capable scientist, and I think it would be next to impossible to dose her with the stuff without her knowledge and consent. And on top of that, if you were briefed on perizone, you remember it makes people susceptible to suggestion. I've called her up twice and asked for dates, and she turned me down. Never mind how good I am, but if she were abnormally open to suggestions, she couldn't have helped taking me up on it."

Schneidermann spread his hands. "So?" he said.

Jones whirled. "Where's Benson today?"

"At the institute."

"Pick him up and don't lose him. I think you'd better hire a heli, so that if he takes any more air trips, we'll know just where he's going. Also you better drop in at the post office and have a stop put on his mail. They won't like it on account of personal privacy, but they'll do it for our branch if you tell them it's a counterfeiting case. Me, I'm going out to that house at Benton Center. Mark it on the map, will you?"

## V

THE HELI tilted gently; with vanes revolving, but without power, it settled amiably into a field filled with the stumps of cornstalks. George Jones swung round in his seat, lifted off the cap of the access block, unscrewed the end of the fuel feed line, thoughtfully inserted a small piece of paper and screwed it up again. He considered his hands, decided it would look better if they showed signs of having toiled and toiled in vain, opened the door and climbed out into mud that squished around his shoes. There were bushes and a ditch at the edge of the road, which was old-fashioned concrete, not rubberoid.

The line of trees to the right and ahead evidently marked the side road, and the house would be over the lip of that rise. Fortunately for the story he meant to offer, there were no other buildings in sight except a structure in temporary plastic at the base of the field, obviously a barn. Jones hesitated for a minute or two, as though in indecision, for the benefit of anyone who just might happen to be watching, and then began to trudge.

The entrance to the side road held a mailbox, on which the letters "P. Hor . . ." alone remained legible. The road itself was not even concreted, and the shrubs which lined its edges under the trees had run wild into bushes from lack of care. The house was just beyond the edge of the hill—one-storey with an attic and projecting wings. There was an extraordinarily complex video aerial; it struck him that it would pick up programs all the way to China.

Around the house the forces of decay had been arrested; the browning grass was neatly clipped and there was a flower-bed holding late zinnias and asters. As he stepped up to the door, Jones noticed that a quite modern visi-plate had been let into the wall above the bell. He stationed himself in front of it and pushed.

"What is it?" said a feminine voice.

"I'd like to borrow the use of your phone if I can," said Jones. "My heli gave out over that field just beyond the

entrance to your road." He held up his hands in confirmation.

"But I haven't . . . Oh."

There was a step inside, the door was flung open, and he was looking at Betty-Marie Taliaferro.

"Why, Miss Taliaferro!" said Jones. "I didn't expect—"

The lovely eyebrows moved up a trifle. "I'm afraid there's some mistake," she said. "My name isn't Taliaferro. But—won't you come in?"

She led the way through a little hall to a long living-room. Jones' trained eyes took in the details rapidly; a video wall, with the necessary dials, and a couple of moulded-shape chairs set to face it; in the rear wall, on both sides of the door, racks and racks of recording tapes; facing it, between the windows, racks and racks of books; magazines on the low table between the chairs that looked at the video wall.

She turned. "I'm afraid I don't have a radio-phone," she said. "I'm only here temporarily. The other kind is over there. Do you know how to operate it?"

The assumption that he might not struck him as a trifle odd. "I think so," he smiled, watching her as he picked up the instrument and began to dial the number of his hotel. She must, she simply must be Betty-Marie; in every detail she corresponded precisely to the systematic type description portrait he had been so carefully trained to memorize—and yet . . . there was something indefinably wrong.

"Hello," he said. "This is George Jones, of Room 1221. I was out for a flight in my heli and it's developed a bellyache I can't seem to fix. Do you suppose you could have someone come out and pick me up? . . . . What? . . . Well, how about having a mechanic come out in a car, then? . . . I'll find out."

He turned toward the girl, who had remained on her feet, and was staring at him with what struck him as a rather peculiar intensity. "Where is this place, anyway?"

"The old Horan place, two miles south of Benton Center," she said.

He repeated the information, adding, "The heli's in a cornfield, near the road that goes up to the place. You can't miss it—an old concrete road. Yes, I'll wait."

HE HUNG up the instrument and turned around. "They say they'll be here in a couple of hours, which probably means three. Those garage jockeys don't like to hurry along roads that aren't rubberoid. Well, thanks."

He turned to leave. The girl said, "Why not wait here instead of going back to your machine? I like you."

Jones experienced a sense of almost physical shock. No, this can't be perizone, he thought; I haven't made any suggestions, at least verbally, and I don't think telepathy could account for it. And that "I like you . . ."

"Thanks," he said; "it might be chilly out in the field at that. I didn't have any power, so I couldn't use the phone in the heli. Have you got a place where I could wash up?"

She indicated the door at the back. "Through there and turn left. There are towels."

The bathroom was filled with the feminine oddments one might expect; no sign of male occupancy, even of the most temporary kind. It occurred to Jones that if Everett Benson was maintaining this place as a love-nest, he was certainly taking pains to conceal his own connection with it—which didn't seem to be much in accord with his usual habits.

When he returned to the living room, she had swung the chairs away from the video wall to look out over the valley, and dropped the magazine she was reading. He noticed it was "Mathematical Abstracts."

The girl said, "I so seldom see anybody here that it's a real pleasure to talk to a live person. But if we're going to like each other, we had better be introduced. I'm Angela Benson."

He noticed simultaneously that she was offering him the cigarette box with her left hand, and that it didn't have any

wedding-ring on it. So that was the explanation—a sister, probably. But . . .

"I'm George Helmfleet Jones, of Washington," he said. "I'm up in this country for a vacation, and to look over some of your local artists. Did you ever hear of Leonard Marks?"

The book sticking out from under "Mathematical Abstracts" was "Modern Practical Etiquette," and that was a little odd, too.

She said, "The water-colorist? I should say so. Wasn't there a video of one of his exhibitions recently?"

"Was there? I didn't see it."

She frowned. "Perhaps it was in one of the recordings. I know I've seen his pictures somewhere recently. There's so much to remember."

Curiouser and curiouser, thought Jones. He said, "You have quite a library of them."

"I have to. And all the books I need! . . . Tell me something—are you married?"

Jones experienced another and more violent shock. "No. Why?"

"I just thought we might be married some day, if you weren't already, and might want to."

THIS CONVERSATION was getting completely out of hand; but—the eyes were wide, candid and innocent, the voice serious. With his head whirling, Jones said, "It's certainly not a proposition I'd reject offhand, but you'll pardon me for saying it's not one I've received very often."

"You mean it isn't customary—oh." Her left hand flew to her mouth, her eyes went startled, and then she said rapidly, "What are you interested in beside pictures, Mr. Jones?"

No. In spite of the physical resemblance amounting almost to identity, this was certainly not the cool, the aloof Betty-Marie Taliaferro. "Oh, lots of things," he said. "Football; I used to play it while I was at Cornell. My work; I labor for the government. Music sometimes, and flying around the country in a heli, and finding queer places to camp."

She said, "I like fotball on the video. It's a fascinating technical performance, and I believe the results of a given game can be mathematically calculated if you put the factors into an integrator."

Jones smiled. "That's been thought of before. About eleven years ago Northwestern got itself a couple of unbeaten seasons that way until the conference authorities got onto it. Then they broadcast what was going on, and the colleges refused to release enough data to each other for the integrators to work on. And they couldn't go prying for themselves because of personal privacy."

"But that's mostly political, isn't it?"

He stared at her. Where in the world had she been? "No. It's everything. But let's talk about you for a minute. Where have you been—and what are you doing now?"

"Oh, everywhere." She made a vague motion with her hand. "And just lately, I've been studying electronics. It's fascinating after you get through the background work."

Again, as with the football question, that puzzling, that impossible resemblance to Betty-Marie Taliaferro. "'Fraid I don't know much about that," said Jones. He looked at her, thinking how lovely she was, and suddenly there wasn't anything more to say, except the one thing he didn't want to say. "Are you a relative of Everett Benson?" he croaked.

Her head moved slowly from side to side. "Not that I know of," she said. "Even though the name is the same. Who is he?"

You beautiful, incredible liar, he thought; now we'll have to put a tail on you, too, but I hope I don't have the job. Why did you have to get mixed up in this? He said: "Oh, a chap who works at the Braunholzer Research Institute, up in Geneva. I thought—"

Suddenly she smiled at him. "I never thought of offering you a drink. Wasn't that stupid of me? What would you like? I have almost everything."

She certainly did, thought Jones. He said: "I think I could do with a Scotch and soda."

WHILE SHE was gone to get it, he prowled around the room, feeling slightly savage. How the hell did someone like her tie in with a yegg like Benson? And what the hell did she mean with that "I thought we might be married" come-on? Even if Benson did suspect he was being watched and had put her up to something, the approach was either too crude or too naive. Doubting that even an integrator could make sense out of this tangle, he glanced idly at the backs of the books: Hargraves' "Differential Variables"; "Quantum Mechanics and Variable Radioactivity"; "Piezo-electricity in Colloids" — one might have expected those. But what was this long row of grade-school readers doing here, and that well-handled Duden, with pictures and parallel texts in German and English?

She came into the room, gracefully balancing two glasses on a tray, handed him one, lifted the other, and said, "Is it 'How' you say? How."

"How," said Jones, and drank. "I think—"

He stopped, as without warning a key grated in the lock; he had a moment of panic that it might be Benson. But it wasn't. It was a tall woman, with a frozen face that might have come out of one of Grant Wood's pictures, and an accumulation of bundles in her arms.

She set the bundles down and contemplated the pair with disapproval. "Well, I must say—" she said.

Angela Benson said, "It's all right, Mrs. Twining. This is George Jones, and his heli broke down in the field across the road, and he's just waiting for a mechanic to come out from Geneva and fix it."

The tall woman was unappeased. "Miss Angela, you know very well that the boss told you not to let anyone in here, ever. Now, like as not, he'll blame me for it when it's your fault entirely. I don't know what he'll do."

"I'm sorry," said Jones. "I didn't mean to intrude—"

"You weren't intruding!" flashed the girl. "I asked you in, and you just came. And I asked you in because I wanted to." She turned on Mrs. Twining. "I'll tell him I did it, too. It just isn't rational for him to expect me to obey all his rules and think at the same time. Now, listen—"

Jones lied, "I see by the time that I'd better go anyway—that mech will be along any minute." He downed the contents of his glass and made for the door as Mrs. Twining, with an outraged sniff, gathered up her packages, and started toward the back of the house.

Angela followed him to the door. As he put out his hand to say good-bye, she said, "I'm sorry for making that mistake, but I've done it now, and there's no more use denying it than denying Dirac's equation." Then she smiled as he turned. "If you want to marry me, I will."

## VI

THE PHONE didn't show any face on its plate, but the voice that came out of it said that the store at 218 Kennedy was for sale and could be inspected any time after twelve o'clock. Jones said the voice must have the wrong number, received an apology, looked at his watch, switched on the light and rolled out of bed. Abe was being super-cautious in using code, but perhaps he was some place where he didn't dare use anything else; and "any time after twelve," which meant two o'clock in the morning, gave him less than an hour in which to get dressed and reach an unknown address in an unfamiliar town where there probably wouldn't be any taxis at such a time of night.

As it turned out, he did have to walk, but Kennedy proved to be one of the waterfront streets at the bottom of the hill, not too far away. A cold rain was falling: Jones turned on the heater of

his plio raincoat and peered for numbers along the inadequately lighted street. 218 had a recessed entrance in which Schneidermann was already shivering, but it was a good spot at that, because in this district and at this hour there was no one else on the street, nor was there likely to be.

"I hope you've got something worth dragging me out in the rain for," he greeted the little shadower.

"Would I be calling you if I didn't have something?" said Schneidermann. "I got more than that, only I don't know yet what it means."

"All right, let's have it." Being waked up added to the events of the day in making Jones' tone a trifle snappish.

"Okay, okay. Listen, it's like this, see? I take my subject home tonight like usual, and I wonder what dame he is going to play this time, but he don't stay in the house no time at all, he comes right out without changing his clothes and drives to the airport. I think it is a good bet that he is going to fly somewhere and I am right. I get the heli I am renting into the air ahead of him, and have my radar on when he comes up, which is all right, as I have it on sweep so he will not know it is for him when it shows on his board, and anyway it is such a rotten evening that every other heli has its radar on also.

"He does not try to shake it off or anything as though he is suspicious of being tailed, but goes straight in the direction that will take him to Rochester if he keeps it up long enough, which I figure is very good, as he will not object if I go to Rochester, too. Now outside Rochester in the south road there is a joint called Governali's, sitting up on a hill, with its own heli field behind. This joint is quite well known—"

"Not to me," said Jones.

"This shows you live a pure life. It is known to me, as I have been there several times, and I can tell you that the place is not frequented by the kind of characters you would introduce to your sister. When this Benson begins to run off line a little bit to the south, I figure that from what we know of him, he is going to Governali's, so I speed up past him, and it turns out that I am perfectly right, so maybe I am not such a ham as a tailer as I thought this morning. Anyway, when he comes in, I am already there and trying to figure out a way to put the lamp on what he does inside without going in myself, as there are altogether too many people around Governali's who will finger me, and that will start the kind of conversation we do not wish this Benson to hear. While I am working on it a car comes up and a couple of guys with dames get out of it. One of the guys has shamus written all over him, so I take a chance on edging him aside, show him my potsy, and ask him if he'll do me a favor. He says he's on vacation—"

"Oh, get on with the story, will you?" said Jones.

"Okay, okay, but remember the manual says you never can tell when a detail will be important. Anyway, he agrees to cover me, and I tip him the office on Benson, and wait around in the rain for about ten minutes, and then he comes out and tells me that Benson is very busy with a character named Socks Madden, who is strictly on the mugg. This business cannot take a great deal of time, as he has hardly given me the office before Benson comes out with someone I figure must be Socks Madden. There is only one place they can be going, I figure, so once more I am in the air before Benson and on my way back to Geneva. This is the second time I am perfectly right, and I am already in a taxi at the airport by time they come out. They drive to an apartment building at 318 Schuyler Street, and then go back to the airport without even stopping. This Madden character gets out there, but Benson turns around and goes home and I put him to bed."

"I see," said Jones. "Looks as though the party's going to get rough. You know who lives at 318 Schuyler, don't you? The blonde from the institute—

Betty-Marie Talliaferro. By the way, I saw that one out at Benton Center today, and it isn't the same girl, just one enough like her to be her twin sister."

"What do we do now?"

"I don't know yet. I think I'll call the Chief. If Socks Madden has gone back to Rochester, there can't be much planned for tonight. Suppose you go home and get some sleep, and pick up Benson again in the morning."

"Okay. I could use some sleep."

Abe Schneidermann yawned, saluted goodnight and slipped away down the street.

BACK AT the Cushing, Jones found himself experiencing a certain curious reluctance about reporting the whole of the events of the day to Washington. It wasn't, he told himself, that he minded seeing people sent to prison or a psych laboratory as a result of his professional actions. He never did; crooks got exactly what was coming to them, even if some of them were very charming people aside from their inability to keep some of the rules society had laid down. But he did not remember having ever met one quite so charming —and attractive—as Angela Benson. For that matter, was she really a crook? Even if she had lied about not knowing Everett Benson. And what criminal act was being committed? There hadn't been a trace of one yet, unless one counted Benson's probable misuse of perizone.

And for that matter also, he couldn't believe that Angela Benson would be in on anything criminal. She knew a lot about technical subjects at least, but in every other way she was straightforward and candid—almost like a child. And she had as good as asked him to marry her on an acquaintance of a few minutes. He could do worse; a wave of something that was almost tenderness swept over him, and he sighed as he picked up the phone.

The Chief's face flashed briefly on the screen, grey hair towseled and eyes blinking with sleep.

"Sorry to bother you so late," said Jones, "but things seem to be working to a climax here, and I'm not quite sure what action to take next." He began by sketching Schneidermann's report on Benson's evening activities and his flight in the direction of Syracuse, and finished with, "I think that makes it fairly clear that perizone is being made at the institute. But I find it hard to associate Dick Mansfeld with that kind of illegal activity, or for that matter, Miss Taliaferro. They're both very high types, and they don't show any of the guilt sense. You know how easy it is to spot the difference between someone who's merely hiding something, and someone who's hiding something damaging."

"Yes, I know. Detective hunch; that's why we have you people in the division. But don't jump to conclusions. The evidence you have doesn't mean they're making perizone at the institute. It might equally well work the other way. I mean Benson may be getting perizone from Howard Chemical and the institute be using it."

"I hadn't thought of that," said Jones. "Anyway, Benson isn't a loveable character, and it seems to me that he's just about to pull a fast one of some kind. Schneidermann followed him over to a place called Governali's, near Rochester, this evening. Benson picked up a thug named Socks Madden, brought him back here, showed him the apartment house where Miss Taliaferro lives, and then sent him off again in a heli."

"What do you make of that?"

"I don't know quite what to make of it," said Jones. "It would seem that Benson's going to try something on Miss Taliaferro."

"I agree. And he probably won't do it first hand, either. I suggest you shift Abe to tailing her, more as a protection than anything else."

"You wouldn't warn her?"

"I think not. She may be in this as deeply as Benson, though in another way. Wait a minute—you're not supposed to know Abe, are you? I'll get in touch with him from here and give him the assignment. But there's another point that occurs to me."

"What?"

"Something or somebody must have crowded Benson. He wouldn't be taking the violent action that the contact with this Socks Madden indicates unless he had been worried. You're sure he hasn't spotted the fact that he is being tailed?"

"With Abe Schneidermann on the job? And he flew to this Rochester place straight as a string. No, I'm convinced he hasn't spotted Abe."

"Yet the pressure has come on him from somewhere."

JONES SUDDENLY remembered the American Gothic woman at the cottage. "I—" he began . . . then: "I don't know what it could be."

The Chief's face suddenly flashed on the visi-plate again, and the keen eyes bored into his own.

"Do you want me to ask for an integrator reading to find out what it is?"

"I don't think so—yet. I'd hate to lose the point credit on this case."

"I'd hate to see you lose it." The face went out. "You've met Benson officially, haven't you?"

"Yes, that was in my first report."

"It might be worth while to follow him up on one of his nocturnal expeditions, and see if you can detect any signs of administering perizone to his companion of the evening. I imagine the local police force will loan you a lady detective as a companion for yourself. Moran's the chief there, isn't he? He's pretty good."

Jones said, "If I'm on that, and Schneidermann is covering Miss Taliaferro, doesn't that leave Socks Madden as a loose end?"

"It does. M-mm. I think I'll take care of him from this end; he'll have a record of some kind, and I'll persuade the New York State Police to run him in for a

while until the rest of this is cleared up. All clear, then?"

"Well, there's just one other thing." Jones found it a little difficult to get the words out.

"What is it?"

"I wonder if you could get some kind of report on Angela Benson, believed to be a relative of Everett Benson, probably sister."

The Chief's chuckle was distinctly audible over the phone. "I knew you were holding something out," he said. "So that's it! You've met her and she's made an impression on you. All right, George, I'll get your report and hope it's a good one. Good night and good luck."

When Jones hung up the phone, his palms were sweating.

## VII

HE DIDN'T sleep much during the rest of the night. The only appointment for the day was one with Leonard Marks to go see the work of a pupil of his, but that wasn't till afternoon; he was downstairs, waking up over his third cup of coffee, when one of the Cushing's girl bell-hops came across the room.

"Mr. Jones? There's someone to see you in the lobby."

Not Dick Mansfeld; he would have called. Not Abe. A wild hope and tremor filled him as he followed the bell-hop.

It was Angela. He saw her from clear across the lobby, and rushed toward her. "How did—"

She was dressed in something with straight, severe lines. "Is there some place where we can talk without anyone watching us?" she asked, and he noticed that her face was tight. "I haven't much time, but I had to see you."

He glanced around the lobby, thinking rapidly. "Here," he said, and guided her round a pillar, past one of the African mimosas that had been arranged to seem to grow from the floor, and to the door of the cocktail bar, deserted at this hour. Luckily, it was unlocked; she preceded him through, and he heard the rustle of her skirts in the dark as she slid behind one of the tables. Her voice was quick and urgent.

"I must hurry," she said. "They're waiting for me. Listen: I've got to be away for a while doing some work, and perhaps you won't be able to find me when I get back, so I want to know where I can find you."

Jones gave her his Washington address, which she repeated.

"Can't—you tell me anything more about it?" he asked.

"No—no." She brushed aside the fingers that sought hers. "I just want you to know that I meant it, that I'll come and find you. Wait for me."

"How did you find me here?"

"What a question! Didn't you call the hotel from the house?"

He tried again. "Has it got anything to do with your brother?"

In the darkness, which was only a dimness now that one was used to it, he saw her head turn sharply. "I told you I don't have any brothers. No, no, you mustn't question me this way. I can't answer."

"Angela."

"What is it? I must go."

"I have the right to ask some things. You've given it to me."

"No. I only promised to come back to you—if you want me. I must go."

She half rose behind the table, pushing against him, and he had to slide from behind the table to let her pass. But as she did so, he reached out to catch her hand and made one more effort. "Angela," he said, "tell me one thing. Is this work connected with perizone?"

She turned to face him in the dimness. "Perizone? What is perizone? Stay here for a few minutes after I'm gone. They mustn't know we were together."

She twisted free and the door flashed the light of the lobby across the dark interior.

For a few moments George Jones sat with hands clasped on the table-top, trying to resolve the pieces of the puzzle.

She was certainly mixed up somehow with Everett Benson—the Everett Benson who had illegal supplies of perizone and who went calling on Socks Madden. And this "work" was as certainly something that she wasn't approaching with any feeling of pleasure. She had been genuinely upset. He felt a chill about the nature of the work; she had struck him as just naive enough to be carried along by the smooth Benson, to be used in pulling his dubious chestnuts out of the fire. And in addition there was the fact, not proved but almost certain, that he had a supply of perizone available and was quite willing to use it. Had she been dosed with it before she came? No; she had resisted his request for information with an energy that showed she was certainly not under the influence of any drug that would weaken her will. But what—?

There was one way to find out, and that was to get close to Benson and stay that way. It was time to call in the local forces. But, by God, if Benson showed up on one of his night club tours with Angela, there would be more than personal privacy invaded.

CHIEF MORAN was a round, red-faced man, who had used a perfume with an accent of leather that morning. "Secret Service, eh?" he said, handing back Jones' identification case after comparing the fingerprints the latter had just made with those in the metal. "All right, what can we do for you?"

"A couple of things. In the first place, have you any local record on Everett Benson, the accountant out at the Braunholzer Institute? I don't think you will have, but there just might be something."

"Wait a minute till I put that in the works." Moran spoke into a dictating box, and turned back. "What's your other request?"

"I want to take one of your women detectives on a tour of the night clubs in the neighborhood. Benson covers them pretty extensively, I understand, and I need someone as an excuse for tailing him there."

The Chief smiled. "That ought to be a pleasant assignment. I'll give you Madge Griffith. She puts up a good front, and will get a kick out of it. When do you want to start?"

"Can you have her ready tonight? I'm not sure of Benson's plans, naturally, but I want to be ready in case he does make the rounds."

"I guess so." Moran hesitated a moment, and then said, "Mind telling me what kind of a case this is? I'd be a little surprised to find any of those people from the Braunholzer shoving the queer. That's a pretty respectable outfit, and I understand they're well paid."

"It's counterfeiting," said Jones. "Connected with that reversed half dollar that turned up here a while back."

Moran lit a cigarette and blew smoke, thoughtfully. A little plastic box dropped from a chute on the desk beside him. He opened it. "Here's your dope on Benson. The only thing local is that some doctor named Rivers is suing his wife for divorce, with Benson as corespondent. That half dollar was the damndest thing. But we're full of damndest things in this town. Did you hear about our art exhibition robbery? We had a loan exhibition from New York, out at the hall in the college. One morning the college people came in here wringing their hands and telling us that someone had lifted about three pictures and a couple of statues from the exhibit. We rushed over there and fingerprinted everything in sight and questioned everybody, and in the middle of the police procedure, the head of the exhibit comes in to say he's very sorry, but they've just found all the missing pieces just outside the hall. Nobody's been able to figure out how they got there. Here's Griffith's phone number; I'll tell her you'll call her whenever you're ready."

Jones said, "Tell me something about that art robbery. When was it, and was one of the stolen pieces Lober's statuette of the 'Girl with Doves'?"

"About the first question it was eight or nine months ago. About the second, I wouldn't remember. There wasn't any robbery, you see. Probably some college kids having a practical joke for themselves."

"Well, thanks anyway," said Jones. He shook hands and left.

IT WAS still too early for lunch, and he decided he might as well spend the time by running out to Hobart College to see whether he could obtain the answer to his question. But that was a disappointment. The professor who had charge of the art exhibit was in class and didn't want to be interrupted. Nobody else could give any details of the pseudo-robbery, except that the missing *objects d'art* had been discovered, neatly wrapped, behind a hedge of ornamental shrubbery that closely surrounded the building. The pictures were small, and so were the two pieces of sculpture.

The question of what connection this might have with the statuette he had seen in Betty-Marie Taliaferro's apartment was still nagging at Jones as he stepped into his room to wash up, preparatory to lunch. The light over the phone was on, showing that a record had come in. He tripped the device, and the next moment was listening to:

"Washington to Agent Jones, matter of Angela Benson. F.B.I. reports no police record, no police contact of record. Central Statistics reports Everett Benson, born Yakima, Wash., graduate Idaho School of Business Administration, has no brothers or sisters. State reports no Angela Benson has applied for passport. Interior reports no Angela Benson has applied for government service at any time. Education reports no Angela Benson has a college record. Census designates Angela Benson of 14 Prytannia Stret, New Orleans, born Baton Rouge, 67 years old, maiden name Seldner, widow, no children. Please advise if this is the one you mean."

It was an alias. Jones felt the skin drawing tight across his face. It was an alias, and she was mixed up in something, and the kind of things people use aliases to get mixed up in were usually not good. But she had been sincere. She must have been; it wouldn't have served any purpose of Benson's or her own for her to come there this morning and leave with nothing more than his Washington address. And she had promised to find him again—why? She couldn't have not meant it.

For a desperate few moments George Jones considered calling Washington back, putting the whole story on record and asking for an integrator reading. But that wouldn't be any good either; it would only backtrack without telling him where she was now, or what was going on—

Backtrack! Of course, he should have thought of it before!

IT TOOK him ten minutes to reach Leonard Marks and cancel the afternoon's appointment, and another ten to get a taxi and reach the airport. The heli needed fuel, and he couldn't get a clearance at once, because so many of the local business-men were just leaving for lunch at home. But he finally got into the air and was away for the house at Benton Center.

Schneidermann had been right when he said there was "a lot of business" around the place; Jones couldn't get in close, but it wasn't too a long walk anyway. There didn't seem to be any lights or signs of activity inside; Jones was not in a particularly cautious mood as he readied his palm-gun and stepped up to the door.

He stood in front of the plate and pressed the button. A metallic voice announced: "There is nobody at home. There is nobody at home. Please depress the lever at the right and leave a message. Please depress the lever at the right and leave a message."

Jones pulled out the knife of many blades and hesitated. No; in spite of the age of the house, if it had a visi-plate at the door and an automatic announcer, it

would probably have an electric defense against pick-locks as well. He stepped off the low entry-porch and went around to the side. The windows were inviting, but there would doubtlessly be electric defense there, too, and the back door was no better.

Wait a minute . . . Attics were not usually fitted with electric defense, and this one had a small window under the sharply-angled gable. The entry-porch was gabled, too, but it had pillars that should not be inaccessible to climbing. Jones stood off, took a look, and decided to risk it. He crossed the road to the disreputable barn, which supplied a plank with a creaking protest of ancient nails; he brought the plank back and, at the second try, succeeded in tossing it onto the roof of the entry-porch. Climbing the pillar was not quite as easy as it looked, but he made it, and grasping one end of the plank, swung it hard against the tiny attic window.

The window broke with a subdued tinkle of glass inside, but there was no flash of blue fire. Several more blows were necessary to take out the shards of glass that clung to the frame, and then Jones wiggled through.

It was a very neat attic, with a few boxes and plio packages carefully stacked under the eaves. At the back, a plastic bannister beside the stairs showed a renovation. The stairway led around a corner and down into a kitchen that was, if anything, neater than the attic, and the kitchen into a dining-room with an old-fashioned wooden table and four chairs. Beyond the dining-room the door stood open into the living room where he had sat with Angela. The furniture still showed the same arrangement, chairs facing out, away from the video wall; but when he glanced at the cases that had held the records, they were empty. Most of the books were gone; all of them, in fact, except the readers that had first caught his attention; also an elementary arithmetic, a book on conic sections, and a history of painting. The whole living room had become as featureless as though it had been arranged by some decorator who wished to offer it for rent.

Jones stepped to the door, across the hall by which he had entered on his first visit, and through another door into a bedroom. Bed neatly made; an easy chair, another chair and a small table, of old design as befitted the house, but made in modern plastic. The table drawers were empty, and so clean that Jones doubted whether even a dust examination would produce anything, assuming that he were to come back with legal authority to enter and the instruments to make a dust examination. A dresser in an equally denuded state.

At one side was a closet, also empty, except for a clothes-hamper, and when he tripped the lid of this, it also was, as he expected, empty. Nothing. But as he turned disappointedly to leave, his foot struck the corner of the lightweight hamper and it moved a few inches along the floor; he saw that something had slipped down behind it.

Jones bent over and pulled it out. It was a garment, a woman's jacket in bright blue orgon fabric. And as he looked at it, memory flashed a signal that left him open-mouthed.

It was the jacket Betty-Marie Taliaferro had worn when she stepped into the apartment, the day of the football game.

## VIII

HE HAD figured on picking Benson up at his house on Onondaga Street, and seeing him installed in a bar somewhere before calling Madge Griffith; but there didn't seem to be any signs of activity around the place, and as the early fall twilight closed in and lights popped on in all the houses round-about, Benson's remained resolutely black. At 20:00, Jones decided it wouldn't be fair to keep the female detective waiting any longer, and also that he'd lost Benson for the night, which was an annoyance just at this stage of the game. He made his way

to the all-night automatic grocery on the corner where there was a public phone, and dialed the number Moran had given him. A pleasant feminine voice answered.

"This is George Jones," said the Secret Service man. "I believe I have a date with you tonight, but the people we were going out with can't make it. Shall we make it tomorrow?"

"I'd love to," said the voice. "Are you where you can talk?"

"Well, this is a public phone—"

"Oh—then when you get a chance, call your friend Mr. Moran, will you? He has a message for you."

"Thanks."

At the hotel there was a record in the box with another request from Moran that he be called, and a number, evidently that of his home. Jones dialed it; the Police Chief's face appeared on the plate, ruddy, serious, and ornamented with a pipe. "Oh, hello, Jones," he said. "Say, is there another of you SS people, a guy named Schneidermann, working with you on this case?"

"Yes. Why? He been to you for help?"

"No, but one of my boys picked him up this evening in a back yard off Herkimer Street. He'd been slugged and was still unconscious. They've got him out at Mount Atholl hospital. I don't think he's in any danger, except of having a bad headache, but I thought you might want to know about it."

"I sure do. The party's getting rough quicker than I expected. Do you have any statement from him?"

"No; as I said, he was unconscious when they brought him in, and I thought anything he had to say would keep until I got in touch with you."

Jones said, "That's probably sound. The slugging's a local crime, and we may need your help anyway. Want to have someone meet me at the hospital?"

"I'll come myself. We local cops always like to see how you big numbers from Washington work over a case." Moran chuckled amiably. "See you there in about ten minutes."

The panel went dark and Jones, reflecting that it didn't seem to be his day to get anything to eat, called the desk for a taxi and hurried down to take it.

Moran was already at the hospital when he arrived, and Jones learned that the dark-faced detective with him was named Aldi, of the Strong-arm squad. Aldi said he thought it sounded like a Rochester job; there were a bunch of hoods working out of that town who made a specialty of slugging people with the chemicalized gelatin bullets that leave a man unconscious for hours and conscious, but not very bright, for days. The nurse who conducted them to Schneidermann's room said he had received his injections and was normal, but that the doctor didn't think he ought to be moved for a couple of days yet.

ABE was leaned back in a wheel-chair with a voluminous bandage around his head. He grinned feebly as Jones came in. "Yi, yi, the things you get me into," he said. "Now it's a gelatin haircut yet."

"I'm sorry, Abe," said Jones. "But when you play with fast boys like Benson, you sometimes catch one. How did it happen?"

"I ain't got my notebook," said Schneidermann, "but the best I can, I'm telling you. Last night, I'm getting some sleep like I ought to, when the Chief comes through on long distance from Washington, and says I am to shift my tail to this blonde job, Miss Taliaferro. Well, I think that is better than looking at Benson, which is a mistake I make, because Benson is not giving me no sock on the biscuit, or at least I think he isn't. So this morning I am outside her place at 318 Schuyler; it's one of those modern apartments, and I figure I will pick her up when she comes out to go to work. There is a blue car standing by the curb, but I don't pay no attention to it, as there are also several other cars. Remembering what time she gets to the institute, I have timed her leaving very well, as it is not fifteen minutes after I

am there before she comes out, and she is really something to look at.

"As she comes out, one of these guys gets out of the blue car and starts to speak to her. She tries to push past him, but then another guy gets out of the blue car, and they start to stuff her into it. As this is kidnapping, which is a fed rap, even though not in our division, I start across the street to help her, but before I can get there, the lights go out, and the next thing I know, I am here. I figure they must have a third man covering them, and I walk into it."

"That's not very satisfactory, is it?" said Jones. He turned to Moran. "How do you suppose he got to a back yard on Herkimer Street?"

"It backs up to Schuyler. All they'd have to do is carry him down the alley past the building. A man named Walters saw him lying there in the yard when he got home from work tonight, couldn't rouse him, and called our people."

"There's a dead end on that, then—but we have a kidnapping case on our hands. I think I know where to put the finger. Last night Everett Benson, the accountant at the institute I was talking to you about, flew over to Rochester, picked up a hood named Socks Madden, brought him back here, and drove to 318 Schuyler. But I didn't think they were going to work that fast. Madden flew right back to Rochester."

"I said it was a Rochester job," said Aldi.

"I guess you got something," said Moran. "Okay, Nito, let's call Rochester and put out an alarm for Madden. You might as well get a squad and raid Benson's place, too—"

"He isn't home," said Jones. "I've been covering his place since about 17:20, and there isn't any sign of him."

"Make the raid, anyway," said Moran. "We might pick up something. You'll probably have to get a warrant, on account of personal privacy, but Graves is sitting in Magistrate's Court, and he'll give it to you on the showing of Benson's connection with Madden."

Jones said, "There is a discordant detail. I'm not sure we have the right picture of this case."

"What is it?" Moran asked. "Perfectly straight case of kidnapping and slugging."

"But what's the motive?" said Jones. "What does Benson hope to gain? Surely, a man in his position wouldn't risk trying to hold Miss Taliaferro for ransom, and if he did, who would pay it?"

Moran scratched his head. "I dunno. I'm just a local cop that likes to see somebody pulled in to tell it to the judge when they step off line. And if this Benson is in the snatch racket—"

Jones interrupted suddenly. "Something else occurs to me. Wouldn't it be a good idea to go to Miss Taliaferro's place and see if we can't pick up a lead? We ought to get a three-di picture of her at least."

"Fine," said Moran, rising heavily. "We ought to be doing something, anyway. Phone in that alarm from here, Nito, and we'll go on out to 318 Schuyler." He turned to Schneidermann. "Don't stop no more of these gelatin bullets."

"Bring me back one of his ears," said Schneidermann, and waved a feeble hand.

THE previous day's rain had stopped and the air was filled with late autumn chill as they whirled silently through the rubberoided streets to the apartment building that housed Betty-Marie Taliaferro. The outer door yielded to one of Jones' pick-locks and the elevator to another. At the door of the apartment, he paused.

"I suppose I ought to press the button just for the form of the thing," he said, and did so.

"What the hell!" said Moran, and both men found themselves staring into the visi-plate at the image of—no, it was not Angela, it was Betty-Marie Taliaferro, and she was frowning.

"Whatever—" she began.

Of the three visitors, Jones was the

first to recover. "Something very important has come up with regard to the institute," he said. "Can we talk to you for a moment?"

"I suppose so, if you think it necessary." Her voice was frigid. The face disappeared, and a moment later the door swung open .

Jones said, "This is Chief Moran of the Geneva Police and this is Detective Aldi. Miss Taliaferro."

"I have seen Chief Moran. What is it you wanted to see me about?" She remained standing and the voice lost none of its frigidity.

Moran said, "Weren't you pushed into a blue car by two men in front of this building at about 8:45 this morning? Kidnapped?"

"How silly!" she said. "Of course not. At 8:45 this morning I was on my way to the institute, and I've been there all day."

Jones said, " A detective saw the incident and he was slugged. By the men who took you away."

She tapped a foot dangerously. "Your detective must have been drunk, or trying to hide how he really got hurt. I never heard of such a thing. Now, if you have anything really important to say about the institute—"

Jones glanced downward toward the moving foot, and suddenly started. "I suppose you're asking us to go," he said, "but we're here as officers of the law—yes, I'm one, too—and we have one more question to ask. Would you tell us where the jacket that goes with that blue dress is?"

Her hands went to her face. That one hit. Then: "I don't know that it's any business of yours where I keep my clothes. No, I won't tell you."

"You won't show us the jacket. The color is really—very attractive."

"No, I won't show you the jacket. Or my underwear either." The voice held scorn.

For a moment, nobody said anything. Then Moran pushed back his cap, and said, "Well—

THE LOCK clicked twice, and Everett Benson walked into the room.

"Hello, Betty-Marie," he said. "Why, hello, Jones! It's really a pleasure to see the old Cornellian again. And Chief Moran! You didn't tell me you were having a party, Betty-Marie."

"I'm not—" began Betty-Marie.

With something like a growl in his throat, Moran said, "It's going to be a rough party for somebody unless one or two things are cleared up, Benson. I'd like you to answer a couple of questions. For example, what do you know about Socks Madden?"

Benson's face held only puzzlement. "Nothing. Who is he, a football player or a fighter? I don't keep up on sports."

Jones said, "Neither. He's the thug you picked up at Governali's last night, flew down here and brought out to this building."

Benson's face reddened. "Oh, so you're one of those April Fool dicks with a tin star who goes around with some floozy trying to work the badger game! I thought that story about you being interested in art was pretty phony." He swept the three visitors with a sneering glance. "It's none of your damned business what we talked about—but just so you won't get any queer ideas, I'll tell you. Madden is going into the contracting business, and I brought him down here to see this building, because I'm thinking of putting up one like it."

"I said it was a Rochester job," said Aldi.

Moran rumbled, "A minute ago, you didn't even know him. How about that?"

Benson appealed to Betty-Marie. "Did you invite these people here? If you didn't, will you please tell them they're violating personal privacy, and can leave any time."

Her face looked drawn and a trifle white. "Tell them yourself," she said. She walked to the mantel, took a cigarette from the box there, and lit it.

"And another thing," said Moran. "Where were you at—"

At that moment memory flashed

Jones another and almost incredible signal. She had lit that cigarette with her left hand. *With her left hand—*

He took two steps toward the girl, poised himself, flung out an arm and said, "Angela, I know you. Why are you doing it?"

FOR A two-count the room froze; then it exploded into action, as simultaneously Benson's hand came out with a palm-gun and Jones' foot went up in the swift side kick all government agents learn. There was a hiss from the gun, just as Jones' kick knocked it out of line, and the cigarette box exploded in a burst of flame. Benson gave a long sighing "Ooouf!" and collapsed on the floor as Moran sank a hard fist in the pit of his stomach. Betty-Marie-Angela was sobbing against the mantel, "I don't care, I don't care. It can't be right, even if you did teach me. I won't go on with it. I want my own life."

"What's it all about?" said Moran plaintively.

"Keep quiet, you," said Aldi, who was sitting on Benson's chest, and hit the accountant hard on the side of the face.

Jones gave a wry grimace. "I don't know the whole story," he said, "but I know it isn't Miss Taliaferro. That lug there kidnapped her, all right."

Moran bent over the prostrate man. "Where is she?" he demanded. "No, wait a minute, Nito. Get his hands." He produced a piece of snake-wire, and in two rapid motions whipped it around Benson's wrists and clipped the seal. Aldi got up and jerked the accountant to his feet.

"Where is she?" said Moran, again. "By St. Peter, if you've killed her—"

"She's all right," said Benson, sullenly; then, as Aldi raised a hand at the cheek already turning red, "I'll tell you. She's at a hideout of Madden's in Rochester."

"What's the address?" Aldi pulled back his fist again.

Benson dodged slightly, and said, "81 Yates."

"Okay, Nito," said Moran. "Get on the phone and call Rochester—no, wait a minute, make it the State Police barracks. I think Madden has protection. I'll take care of this goof." He grabbed Benson by the arm and shoved him into a chair, then swung round to where Jones was helping the still-trembling girl into another chair. "If this isn't Miss Taliaferro, who the hell is it?"

Jones looked up. "That's what I'm beginning to wonder. She says her name is Angela Benson, but according to what I got from Washington this morning, there isn't any such person."

The girl had put both hands to her face and was looking down. Now she said, in a low, quick voice, "There isn't. Oh, don't make me talk about it. I'm so frightened and ashamed." She gave Jones one appealing glance, and he could feel her shoulder tremble slightly beneath his hand.

"Well," said Moran, "there's one guy that can tell us, and that's this lug. Come on, you," he addressed Benson, "open up. You're already in for kidnapping, and that's a psychiatric hospital rap. I can maybe keep you out of the moonmines if you'll cooperate."

Benson seemed to be recovering in the absence of Aldi and his menacing right hand. "You can't send me to the moonmines, and I'm not saying a word without my lawyer," he said.

Jones said, "I think I know a way to make him talk." He turned to the girl: "They're making perizone at the institute, aren't they?" And, as she nodded: "It's a drug which, among other things, releases all inhibitions and makes it impossible for the patient not to accept suggestions." He nodded toward Benson. "He's been using it on women, and now I think a little dose of it would be good for him. I'll get Dick Mansfeld to bring some over."

Benson followed him with malevolent eyes as he got up, but Aldi had come back from his phone call, and he did not attempt to stir. As Jones took two steps, he said, "All right, I'll tell you."

"Make it snappy," said Moran. "We ain't got all night."

"I . . . I work for Howard Chemical. About three years ago, some of our people began to notice that the market for some of our more expensive drugs, such as hydrazone pentamide and cortexine was dropping off to nothing. When our people looked into it, they found there wasn't any real falling-off of the market; it was just that someone was undercutting us on the price, so sharply that we couldn't meet the competition. The source was traced here, to the Braunholzer Institute, so they put me on the job to find out how it was being done."

"Just a minute," said Jones. "I think we'll have Dick Mansfeld over here anyway. He ought to know about this."

"Fine idea," said Moran. "Call him, will you, Nito; tell him that his plant has a kidnapping case and we want him right away." As the detective went to make the call, he said, "That was nice work, Jones, spotting her as the wrong girl. How did you do it?"

"I was at Angela Benson's cottage this afternoon and saw the jacket that goes with this skirt there. And she's left-handed. I saw Miss Taliaferro only once, but that time she was holding her glass in her right hand."

Angela shivered slightly. "That's one of the troubles with me. I can't—" and then stopped.

Aldi re-appeared from the phone. "Be here in five minutes," he said.

## IX

MORAN answered the door. Dick came in, said, "Hello, George," lifted his eyebrows at Benson, who stared back in sullen silence, and then said: "Hello, Betty-Marie."

"I'm not Betty-Marie," said the girl. "I don't know who I am."

Mansfeld took three steps across the room and looked her searchingly in the eyes. "Thank God!" he said. "If I'd known about this, I could—I think I could have saved you a lot of trouble, George. You were here looking up the institute, not just for a visit, weren't you?"

"He was that," said Moran; "and your friend Benson, who has just become one of our better kidnappers, was telling us how he got into the racket. Go ahead, Benson."

Benson said, "So I came here, and Dr. Runciman looked at my references, and as I understood chemical markets, he made me an accountant in charge of marketing. I very soon found out that they were producing rare chemicals, the kind that sell in very small quantity. But I couldn't find out how they were doing it. They didn't have a big plant, like we have at Evansville, or a lot of workers. Everything came out of that one building they call the production shed, and no one was allowed in there but Dr. Runciman and Mansfeld and Miss Taliaferro. They even took the raw materials in, and I noticed that those raw materials—some of them came from our own plant—weren't the ones we used, but stuff like CP sulphur, and carbon black, and cylinders of oxygen and nitrogen. I finally decided that they must have found some means of building up complicated chemicals from the basic elements."

"Just a minute," said Jones. "Would you care to say anything about that, Dick?"

Mansfeld nodded soberly. "I suppose it's got to come out sometime, and we'll be under government regulation and everything. It isn't building up, George—it's copying. Runciman hit on it while he was trying to replace lost and damaged tissues. You know that was the purpose of the institute originally. He had a theory, you, know, that lost or damaged tissue could be regenerated, the way a lobster grows back a lost claw, if we could only find the means to do it. In fact, he still has the theory; that's one of the reasons why he didn't want anything to get out that would hinder this research. He was making progress and getting some remarkable cures. and the

Reproducer was only a by-product."

"The Reproducer?" said Jones and Moran together.

"It operates in a tri-phase electronic field with adjusted variables in isomorphic proportion," said the girl, and Jones gave her a sharp look.

"I don't understand it myself," Mansfeld continued. "All I know is that when there's something to be copied, if you put the original in one part of this field, and the chemical constituents, right down to the last trace in the other, the result will be the copy. There are little outlets, which Runciman calls 'spinnerets,' that weave back and forth across it, and in quite a short time, there you are. It takes a lot of electric power, though."

"So you copied chemicals?" said Jones.

"We copied everything. We even copied a half-dollar once, and I carried it around as a pocket piece for a while."

Jones said, "That was what brought me in on the case. It was left-handed, facing the wrong way."

MANSFELD said, "We found that out. Everything was that way—an exact copy of what we wanted to reproduce, but a mirror image. If you'll look at that copy of Lober's 'Girl with Doves,' you'll see that it is, too. When the loan exhibition was here from New York, I brorowed the Lober, and that Picasso on the wall, and that Derain over there, for overnight, and copied them for Betty-Marie because she liked them so much. That was where I came in, getting the chemical organization right. Sometimes there were failures because it wasn't exact. Perhaps the Derain is one of them. If you put it beside the original, you'll see the yellow is paler."

"Aside from its being a mirror image," commented Jones.

"Yes. Well, as I said, Runciman was more concerned with regenerating tissue than anything else. We finally had Margetsson down here, the football player, you know. He had some disease that made his toe and finger-nails drop off, and we succeeded in furnishing him with a new set. That was the first big success in that line, and after that we went on and made a mouse. It died."

"But you succeeded later?"

"Yes—with a mouse, and then a rabbit. It turned out to be partly a mechanical question of getting the spinnerets in the right position, and partly a mathematical question, but mostly chemical. And when we had made the rabbit, there was something funny about it. It hopped and ate, and did everything else all right, but it didn't seem the slightest bit afraid of anything. Noises or human beings. That is, it didn't seem to have any of the normal instincts. It was after this that Dr. Runciman decided that the only way really to find out what the Reproducer was turning out, was to try it on a human being."

"That was me," said Angela.

Mansfeld nodded. "That was you. Runciman decided that if he produced a monstrosity, he could always destroy it, and Betty-Marie offered to be the raw material for the experiment. Well, the experiment succeeded in a physical sense. The duplicate lived and walked, and seemed all right, but had to be taught to do everything, even eating and dressing. We thought at first we had produced an idiot, but we very soon found that, except for being left-handed, she was really an image of Betty-Marie. She learned things, especially about mathematics, in minutes, where they would have taken days for anyone else. And then she disappeared."

He looked at the girl, and she looked across at Benson. "Now I think I understand," she said. Benson squirmed.

"What is it you understand?" said Jones.

"He took me away from the institute one night and out to that cottage. He said he was going to teach me how to live normally, and he gave me a lot of books and records."

"All right, Benson," said Moran. "Come out with it. Why did you drag her off like that?"

"I—I—" began the accountant.

The phone rang. Aldi answered it, and came back after a moment to say. "It's all right. They've got your Miss Taliaferro safe, and Socks Madden is on State ice. Let him try to crack that one. Okay, Benson, why did you drag her off?"

"Perizone," said Benson, in a strangled voice, "and the Reproducer."

Jones snapped his fingers. "I get it. He couldn't help but know something about the Reproducer from hearing you people talk. So he figured that since nobody could tell him how it worked, and he couldn't understand them if they did, he'd catch Angela here 'young' enough to get her to figure it out for him."

The girl opened her mouth, then shut it again. Jones said, "Go ahead. Tell on him. He was just trying to use you."

She said, "I—think you're right. He taught me that I belonged to him, like—like a dog, and that I must do everything he said. And he showed me tri-dis and movies of Miss Taliaferro, and said that when she went away I must take her place and pretend to be her, and do everything she did, and find out all about the Reproducer."

MANSFELD said, "I see that. When she was 'born,' Angela, as you call her, knew nothing—but she had all Betty-Marie's capacities. Nice trick, Benson; all you had to do was drop out all the parts of her education that had anything to do with loyalty to Dr. Runciman or the institute, and substitute loyalty to yourself. I suppose you even had clothes like Betty-Marie's made for her. But you must have slipped up in the educational program." He turned to Angela. "How did you come to doubt him?"

She looked down. "I didn't until—until George Jones came to the cottage. I liked him and I told him that perhaps we ought to get married sometime. And then Mrs. Twining came in while he was there, and she called up Everett and told him what had happened, and Everett got furious and said that I'd have to change places with Miss Taliaferro at once. I didn't know he was going to kidnap her; he told me she was part of it, and was just going away."

Mansfield laughed and explained, "Benson forgot that Angela had only Betty-Marie's capabilities, not the ideas Betty-Marie had developed through background and years of education. So when George came along, Angela was as simple and natural as a child about it. She liked him and thought she wanted him, so she said so."

Angela nodded, started to say something, and then blushed instead.

"What about the perizone?" said Jones. "You know the manufacture of it is illegal without a license?"

Mansfeld said, "I suppose we'll have some trouble about that. You know the Braunholzer children thought it was more fun to spend money on having a good time than on a research institute. So we were left without financial support just when we most needed it, when we were looking for Betty-Marie's duplicate and afraid of what she might do. So Benson went to Dr. Runciman and explained the perizone shortage, and how much money there was in it, and told him it was a humanitarian thing to make it, and Runciman fell for it. Benson handled the marketing, partly through Howard Chemical, and partly direct."

"I bet he knocked down plenty on the side, too," said Moran. "Come on, lug." He dragged at Benson's bound wrists. "Nito, you bring the girl along. We'll have to put a rap on her as an accessory after the fact in a kidnapping, though I think she'll beat it, all right."

Jones said suddenly, "No, you don't."

"What do you mean, we don't?" demanded Moran.

"I'm the federal law," said Jones, "and I think I have precedence over you. I'm going to take her to Washington—as part of my report. That is, if she'll come."

Angela blushed again.

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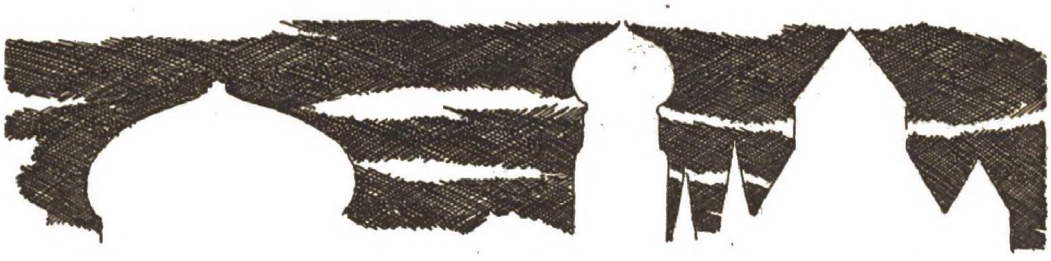
**Next Issue: THE SQUARE CUBE LAW, a Sequel to *Double Jeopardy*, by FLETCHER PRATT**



*Time stopped for Piridov, deferring his death-sentence while the bullets were yet in midair, and in that endless—*

# MOMENT without TIME

*—he became the most dangerous man in Moscow!*

*A Novelet by* **JOEL TOWNSLEY ROGERS**

I

PIRIDOV was facing the firing squad in the execution cellars when the solution hit him.

It was the answer he needed, the answer to the mathematical relation of time to the three spatial dimensions. It came to him in the form of an equation, as simple as the German's historic energy-mass formula—"$e=mc^2$", where "c" represents the speed of light.

"$T = \frac{a}{\pi \frac{e^3}{a}}$ was the answer; it came to him as if written in blinding white letters on a blackboard before his eyes. With "a" representing the absolute—Infinity, or Creation, or the First Cause, however it might be expressed in various inexact concepts.

There were points of reference to be determined, of course. Ordinates and abscissas, plus or minus. The detailed calculations might take years, even with the amazing electronic computators of the Americans. The practical application would be thereafter the task of technicians and mechanics, and it might take an even longer time. The energy-mass formula itself hadn't resulted till almost


four decades after the first crude atomic fission.

But the equation was the thing. All the essential mathematical steps leading up to it fitted into place instantly in Piridov's mind.

Being a man of imagination, as all great mathematicians are, he saw it also as a picture: Time was a like a sword-blade of infinite thinness cutting at infinite speed through water.

The molecules of the water are not altered by the swift sweeping of the blade. They continue in their constant attraction and repulsion, with their constituent atoms hooked unchanged together, electrons revolving around their nuclei, neutrinos like sparks from a whirling grindstone being born constantly and dying, the whole great ocean which the water droplets form rising and falling in its semi-diurnal tides, with luminous fish swimming in the profound depths, waves on the surface moving back and forth with the wind—all untouched and unaware of the infinitely thin sword slicing at its infinite speed. But the sword has swept, is always sweeping, through

all dimensions, intangible to matter; and the edge of it is Time.

The equation was so obvious, in terms known to any schoolboy, that it seemed almost incredible no one had hit on it before. Piridov pulled at his thin beard —an unconscious habit in moments of supreme concentration—with his eyelids still closed on the bright figures which explained all. His tired and broken body seemed light as a balloon. He felt ridiculously like shouting, "Heureka!", in the classic tradition of old Archimedes rushing naked from the bath.

He must communicate it to the Italian and the Dane at once. To the Englishman and the German and the American. They would grasp the vista which it unfolded instantly, would get to work on the calculations in proof without delay. There was no time to waste.

No. There was no time for anything, he realized with profound despair. No time at all.

He had been aware of a voice, rapidly and tonelessly reading off the judicial decree—"Death to the cannibal and traitor Piridov, intellectual deviationist and enemy of the people! By order of the People's Democratic Supreme Court. Approved by Malenko, Political Bureau" —the voice of a nightmare. He had seen the leveled muzzles ten feet off, the narrowed sighting eyes in the grim Tartar faces, the squishing hose of the one-eyed janitor in the corner washing down the floor anticipatorily around his very feet. Involuntarily he had closed his eyes at the shout of "Fire!", uttered with a flash of descending hand by the squat noseless execution sergeant—Diadka Smert, they called him, Sergeant Death, with his terrible flame-mottled face.

And in that flashing instant, as he closed his eyes, he had seen the bright equation.

PERHAPS he hadn't even been the first to perceive it, he thought. It might have been precisely what had been in the great Greek's mind, crouching at the sea edge and absorbedly writing his figures in the sand with a stick, at the very moment the savage Roman spears had thrust into his body. Yet if so, the next lapping of the waves had wiped the figures out with saltwater and blood, beside his sprawled lifeless hand, beyond all reading.

A great and regrettable obliteration. More almost than could be borne. Piridov's hand, soon also to be lifeless, dropped from his beard in a gesture of bitter futility.

What he had been condemned for he didn't quite know. They hadn't discovered the tenuous round-about correspondence which he had maintained with the Italian and the Dane—he was sure of that. They hadn't made any reference to it. With even a suspicion of such forbidden scientific communication, they would have made it a hundred times worse for him.

Undoubtedly he had been a little slow, and not particularly vociferous, in applauding the latest twist in party-line mathematics and joining in condemnation of the Germans as warmongering and counter-revolutionary. They had cited that against him. But probably his great mistake had been to give a minimum passing grade in the Institute doctorate exams last month to Malenko's idiot son, instead of very highest honors.

His crime had evidently not been regarded as too important, though. They hadn't even bothered to arrest Anna when they had come for him, though she had made a sobbing nuisance of herself, poor sentimental woman, clinging to him with her frail night-clad arms until they tore her away. Andrei, taken from his wife and children that same night, had been given only a twenty-four hour grilling, according to the prison grapevine, and then allowed to return to his employment in the Research and Experimental Division of the Paper Trust, with merely a notation on his otherwise impeccable record that he was the son of a condemned state enemy.

For himself, the interrogation had lasted no more than a minimal ten days,

and had been routine in form. A simple confession that he believed in God and had prayed to God for peace against the Red Army—that had amused them—and in general had been a saboteur and wrecker, had sufficed them. They had given him a special firing-squad of his own, in deference to his Hero of Soviet Science decoration, and had permitted him to stand facing it this way, rather than receive the single pistol-shot of mass execution while kneeling against the wall.

For the ease and brevity of it he was very thankful. He was a frail-boned and sensitive man. He had never stood pain well.

Only for the sudden coming to him of the time solution, too late to add it to the sum of human knowledge, did he feel regret in this final instant. An equation of blinding whiteness on his closed eyelids. But soon to be lost with him . . .

Sergeant Death had shouted "Fire!", it seemed to Piridov, minutes ago. The waiting was painful. Slowly and reluctantly, he opened his eyes on the cellar scene.

## While Death Waits—

**THE HOURS of our lives run out all too swiftly. And man, seeing his time ever shorten and shrink as he watches, cries out for the Moving Finger to pause, to wait just a little moment while he scrambles to do the thing he has left undone. But for no man has time ever stopped—except for Piridov. For him even Death waited, giving him all the time in the universe, but no time to live.**

**This is a grim and memorable story, done by a master craftsman.**

***—The Editor***

THE white-painted walls lit by thousand-watt bulbs, the four rifle muzzles pointed at him, the squinted eyes behind the sights, the taut retracted trigger-fingers, squat thick-chested Sergeant Death standing to one side with his hand down at his thigh in the conclusion of the sweeping ax-blade gesture with which he had accompanied the command to fire, the bullets coming at his breast. Four of them, straight at his heart, not more than twelve to fifteen inches away; while from the corner, out of the range of fire, the one-eyed scavenger directed the stream of water around his feet to wash his blood away.

No, the bullets weren't coming. They were motionless in space. The eyes behind the sights were motionless. The water hosing over his feet was motionless, both the stream and the up-splattering drops of it. The red second hand of the electric clock on the wall above the steel door was motionless, the minute and hour hands straight up and down at six.

Piridov brought up a numb hand and felt his throat.

"What's happened?" He moved his throat and lips.

No sound. Absolutely no sound he could hear. The silence and motionlessness remained.

He was immediately both amazed and frightened. He experimented. As if afraid of breaking a spell, he made—or tried to make—a sound not obviously an experiment—a deep breath. It should have sounded in his throat, his nostrils. But it didn't.

Only a crystal silence.

Belatedly, and with a good deal of confusion in his mind, the realization came over him that somehow, in grasping the mathematics of the time dimension, he had momentarily arrested it.

The whirling sword-blade of infinite thinness was forever cutting at infinite speed through all the spatial dimensions. He was on the edge of it. As all men, all things, always are. But for him, within this instant—though how think of in-

stants when there was no time?—the blade had stopped. Stopped, humming, against the breast of Piridov.

How long the timelessness would continue he didn't know. There was only one urgent thought in his mind: to set the equation down before the infinitely swift blade resumed its sweeping.

He fumbled hastily, a little frantically, through all the pockets of his shirt and trousers. Not a stub of pencil, not a paper scrap. Nothing. Not even a stick and a wave-washed sand to write it on, in the moment before the spears. Not even the Greek's last hope.

The white cell walls themselves! If he only had time to reach the one back of the firing-squad, the whitest and cleanest, and only had something to mark or scratch with. A knife or a nail, or anything. Quickly! Before the swift instant moved on.

The four bullets were poised in space in front of him, like a flight of miniature wingless jets irregularly spaced. They were slightly flattened at their heads by the massed air in front of them, slightly oblate axially in their rifled spin. They were lead, he saw, for hitting power and spread, not steel.

With a breathless terror in him, watching the motionless eyes for indication that his gesture was being detected, he reached his thumb and finger up, and picked the nearest bullet from in front of his breast. He took a tentative step to the side away from the other three that remained suspended in their swift flight.

As his head moved through the motionless sound-waves around him, he heard his own startled whisper in reverse:

*"—dnepah-h Stahwuh—"*

The water hosing the cement floor where his feet had been remained in motionless stream from the nozzle directed by the one-eyed janitor. Only the outlines of his feet were dry, surrounded by water frozen in ripples like glass, beneath spray that hung like diamonds in the air. Piridov thought, a little numbly, of a phrase he had somewhere heard— "Footprints . . . in time . . ."

With the bullet clutched against his breast he tiptoed shakily past the terrible eyes of Sergeant Death glaring at him. Near the muzzles of the riflemen his ear-drums came in contact with the first shattering sound-wave of the volley. But with a movement of his head he was out of the circle of it, its outside rim not yet having spread more than a foot away.

He had reached the wall behind them still undetected. He stretched his arm up, standing on tiptoes. In breathless but careful haste he began to scratch the stupendous equation:

"T = —"

He had it down! He leaned against the wall, limbs shaking as if he had run a nightmare race, with feet planted in cement, from the huge swift shadow of oblivion just behind him.

Dim and gray, only a faint marking on the white paint, seven feet above the floor, just beneath the ceiling. With the next coat given to the cellar, possibly even with the next thorough hosing-down, the dim letters would be wiped out.

But it was there, legible at close inspection. Someone's eye would certainly light on it before it was obliterated. Someone who might understand a little, however inadequately, the profound significance of the figures. Someone who, going out of this place afterwards, would communicate it to the few minds in the world who could work it out and prove it.

Not just to die in this ugly cellar.

Yet, Piridov thought despairingly in the next moment, not one man in a hundred thousand, perhaps a million, would understood the equation's importance even to that extent! And even if, against all odds, such a man might happen to see it, he would know nothing of the devious way of communicating with the Italian or the Dane. Nor did anyone except the executioners and the necrotomists ever go out of this place alive.

It was not enough. He must try to

get it started on its way himself.

Breathlessly he put his hand on the smooth-polished latch-handle of the steel door beside him, easing it open silently on its oiled hinges, watching the motionless forms in the cell. Had the janitor's blind white eye followed? Not yet. He went tiptoeing past the guard standing with cradled burp-gun on the other side of the steel door, hunching his shoulders beneath the cold unwinking gaze upon him.

AT A sprawling, stumbling pace he hurried forward along the brightly-lit corridor, past cell doors he dared not look into, towards the door at the far end, likewise sentry-guarded. He opened it beneath the marble gaze and went up stairs and through another steel door at the top, tensed with each hurried step for the sudden shout of reawakened time around him.

The way out was long and multiple-guarded, but not labyrinthine. Four separate flights of stairs, a dozen doors, a thousand silent hurrying steps, and he was in the front receiving lobby of the huge old granite czarist prison—historic Moscow landmark, from which all the modern underground extensions stemmed—and crossing the worn flagstones. Out through the grim barred entrance doors, leaving them open behind him like all the others, past the last machine-gun boxes beneath the stone archway.

In a moment more he was mingled with the motionless throngs of Lubianka Square, beneath the red sunset sky.

He went along at a zigzagging lope, keeping to the sidewalk edges and gutters, heading for the Institute beyond Red Square. A couple of late copies of the Soviet Mathematical Journal should be lying on his desk there, on whose contents page he might pinprick the tiny dots which would spell out the Piridov equation.

Then to get them wrapped and addressed to his friends the good Bolshevik scientists in Bucharest and Helsinki, and put them in the outgoing mail-box, ready to be started on their way with the next collection! In a week, or two or three, after time began again, the figures should reach the Italian and the Dane.

If not thrown into a bonfire, in transit, by a downed mail-pilot to warm his fingers. If not appropriated by some train-crewman to wipe his greasy fingers on after eating his lard and black-bread sandwich. If the pinprick method of communication remained still undiscovered, a possibility which hung over all of them all the time.

He had emerged into the early office-letting-out and food-queue hour. His weaving pace took him in and out through unrelated words, *"Nyet—"*, *"Bog—"*, caught in air on the stopped edge of the whirling blade. Though what the "No" was about, and what the "God", he could not know. The previous words were already beyond this moment in time. Those to follow lay still unspoken.

If now suddenly time should begin again, all those hundreds of marble eyes would be filled with light and movement, all those incompleted words would turn into a great single roar, "Traitor! Beast!", with the motionless arms he was brushing past reaching spontaneously to seize him. Piridov! Here on the street running, Piridov, condemned! Stop the dog! Stop him! Stop!

Not again for him, if that happened, the mercifully swift bullets of the rifle-squad back in the cellar, in this timeless moment stopped. But hours which would be centuries, months which would be eons of undying agony, while they tried to get from his wracked body and screaming mind the secret of how he had got away, which he would not be able to explain in any manner which they —or he himself—could fully understand.

But let it not happen yet. Only give him a half hour more. A half hour, Piridov thought grimly, more vital than life itself—vital to all men.

## II

HE HAD reached the broad marble steps of the Commissariat of Culture and Information, where the broadcasting studios of Radio Moscow were housed across from the great pale pink brick walls of the Kremlin on troop-filled Red Square, and was starting to go past, when abruptly the realization came to him there might be a much swifter and more certain way of communicating —if the timeless moment only held. He veered, running up the wide steps.

It was a building with which he had no acquaintance, staffed and guarded relentlessly by the MVD. But in all bureaucratic organizations there are signs on office-doors. Beyond the vigilant guards in the doorway, who checked with careful eyes the permits which incoming and out-going queues were patiently waiting to extend to them, there was a desk marked "Information" at the foot of the broad stairs. An old man with a scraggly white mustache was seated behind it, smoking a pipe whose fog hung frozen in air, his eyes fixed upon a mimeographed page on the metal desk-top in front of him.

Piridov paused and bent over the old man's shoulder. Carefully he lifted the hand which concealed part of the top sheet, pulling nervously at his beard as he read down:

*BROADCASTING, FOREIGN LANGUAGES, FLOORS* 4-8
*Abyssinian—*
*Afghanastani—*

He peered at the page below.

*English, 4th Floor, Corridor* 1, *Sections A-K*

English would be best. He knew the language better than German—he had got a bronze medal for English proficiency his last year in the university, long ago. There were always English broadcasts going out, moreover, to the British Isles and Scandinavia, the North American sector, India, South Africa, the Anzac sector, twenty-four hours a day without stop. There must be, even in this timeless moment some newscaster in the act of speaking.

He found the lettered door three flights up, near the head of the stairs. Beyond a paneled reception room there was a large room like a newspaper press-room, he imagined—shirt-sleeved man grasping at batteries of phones on desks, rows of glass-eyed typists with fingers motionless in swift flight above their keys, trousered and skirted maniacs with bulletins in their hands caught in swift crisscross rush over the floor. His ear-drums moved through a toccata of teletypes and typewriters, ping of bells and burr of buzzers, a mingled inchoate jabber of half-words.

Beyond plate-glass windows at one side there was a control-room with monitors and engineers in it, half a dozen broadcasting booths with announcers in all but one of them, red lights above four of their doors.

In one of the booths the newscaster was glancing at the clock, lips compressed, script in hand—he hadn't begun his broadcast yet, it seemed; his red light must have just flashed on. The newscaster in another of the red-lit booths had his face turned from his mike, his script at his side—his quarter or half hour must have been just completed; his light in the next second would flash off. In a third booth the newscaster's mouth was frozen in contortion, his right hand lifted, his gaze on the script in his left hand—he must be broadcasting in the moment. The man at the microphone in the other red-lit booth appeared also to be in the midst of speech, although less certainly.

PIRIDOV opened the glass door and tiptoed in beside the man with the lifted arm. In the air-wave against the microphone, bending his ear to catch it, he heard the English word "Peace—". Between it and the newscaster's open maw there lay the word "loving". Close

against his lips, filled with steel teeth and curled-back tongue, there was the syllable "pe—".

Carefully Piridov pulled back the broad thumb which held the script, removed the top page. Roman type. Triple-spaced for easier reading—for easier editing, also, with a few words inserted here, a line or two blue-penciled there. Headed: "North American 10,543 10/10, 17:55-18:35, Salovitch, Sapronsky monitor". With various stamps of approval.

He glanced down it swiftly, seeking the clue phrase.

On the next to last line of the page, at the conclusion of a paragraph, there were the words he was hunting for; "peace-loving peoples."

"—And we promise a bloody nose and a cracked head to any warmongering cannibals who dare oppose the glorious Red Army of our great peace-loving peoples!"

The phrase, although a much-worn cliche of radio and newspapers, occurred nowhere else on the page. That, precisely, marked the point of the frozen instant of speech.

Piridov hurried back out with the page. A Roman-type machine was momentarily unoccupied at one of the battery of typewriter tables. He started to sit down before it.

The monitor! Everything must be thought of. Always check and countercheck. One of the monitors in the control-room would have a carbon, following it to see that no word not in the approved script was injected. Ready to cut off the broadcast instantly if any should be.

He tiptoed hastily into the control-room. Found the hand which held the carbon duplicate, and removed the top sheet.

Beside the typewriter there was a sheet of partly used carbon paper, of about the same blackness as the one which had made the monitor's copy, so near as he could guage it. He placed it between the two script sheets, and rolled them in the machine down just below the paragraph ending "peoples".

He searched his mind for the English words, composing them with care, then hunted for the keys.

His method of typing was the one-fingered style. Beneath the last line of the paragraph, above the next one beginning "The great Stalin—", he pecked laboriously:

"The Soviet mathematician Piridov has just formulated the equation t equals a divided by the sphere of e—"

He thought of adding something more. A farewell, perhaps, to the Italian and the Dane, his brothers in science. But it would be needlessly dramatic. Mathematics was impersonal, or should be. One man did not matter, in its bright pure truth and immensity. Nor was there space to add anything more between the lines.

He rolled the sheets out, laying the carbon paper down again. He stood up. Reentering the broadcast-booth, he replaced the script page on top of the others in the newscaster's hand, clasping down the upthrust thumb on it. He went into the control-room, and restored the carbon to the hand of the monitor who was following it with concentrated gaze. He closed both doors behind him this time as he went out.

It was done! The instant the sweeping of the blade began again, the newscaster would hurl forth the syllable already formed by his curling tongue. Then in the next breath, with eyes bent on the script, he would broadcast through Moscow's powerful voice to a quarter of the world's surface, at c speed, the interpolated equation.

No matter if none of the few minds who could understand the blindingly bright concept might be tuned in. In a hundred listening-posts beyond the curtain the broadcast was being recorded on tape, for later analysis of meaning, motive, purpose, word by word. By keen and anxious men seeking some clue in great imperial Moscow's blatant voice to what lay in the dark mind of the Great One in the Kremlin. The shadow of the

day and hour. The life and death of millions. . . .

Piridov felt tired. Oh, very tired. He closed the studio doors behind him and went stumbling down the stairs. Out the building entrance, onto Red Square.

THE armored regiments on parade still filled the thousand-yard long square. Through the towered archway of the Spasskiye Votora, the Gate of Salvation, the long line of black armored cars was still entering. "Above Moscow nothing but the Kremlin; above the Kremlin nothing but the sky." Beyond the high grim walls rose the golden onion domes, the Tower of Ivan lifting three hundred feet, containing the great Tsar Kolokol, the emperor of bells. Above them all the motionless sunset sky.

He turned away, began to walk toward the Paper Trust building in the Kitai Gorod section, only a few short blocks away to the east. Andrei would still be in his chemical laboratory there—he had been developing a new kind of swift-fading paper for special police work, and seldom left before seven or eight o'clock. The day he had lost last week while being grilled would have put him farther behind. A little incoherently Piridov thought of asking the boy to try to hide him away—

Yet instant reason told him that there was no place to hide. No time to do it in. Still, being in the vicinity, he must take advantage of the paused instant to see the boy, if only for a moment.

He went a little slowly down the narrow crooked streets of the old Chinese quarter, whose ancient edifices now housed the teeming communist offices of the brave new world. He entered the dark doorway of the crumbling old brick building where he had visited Andrei a number of times over the past dozen years. Never graciously received, but not kicked out. Andrei, the good and loyal party man, the pious canter of all the slogans, with his dark and sullen eyes.

The door of the boy's office—at the other end of the chemistry lab on the top floor—was shut, Piridov saw with a surge of alarm. The stony faces of the workers at the tables were all turned that way. At his desk just outside the door Sirradian, Andrei's stocky assistant, was rising swiftly from his chair, his brachycephalic Armenian head bristling with short hairs like a dog's. No need to be told that Sirradian belonged to the secret police—Andrei knew it, and the whole laboratory force. Now the door of Andrei Piridov's office, which should be open always, was closed.

With a kind of breathless sob caught in his throat Piridov rushed forward down the length of the laboratory and burst the door open—

The boy was at the window across the room, with his hands on the frame which he had up-thrust, one foot on the sill. A blank piece of paper was motionless in the air beside his ear. His face was turned back over his shoulder, distorted with a frozen grief, it seemed. Beyond the low window ledge on which his foot was placed, the cobbled pavement was thirty feet down.

He felt himself responsible, Piridov thought with pain. He had been brooding. So many went out the window that way, pushed beyond endurance by the unseen hands. Andrei!

Oh, he mustn't be allowed to do it! Dull joyless fellow, born into a gray Marxist world, without dream and without hope, there might be nothing in life for him within his time. But he had his children, the hope of the future. Piridov rushed across the floor in desperation, in silence and sorrow, to pull him back.

How ridiculous his panicky haste! Andrei was motionless. Time was still stopped, or he himself would not be here. In some way, which he had not quite worked out yet, that was part of the equation's operation.

He halted before he had seized hold of the boy, wiping the sweat from his face. He picked the motionless sheet of paper from the air beside Andrei's head. It had probably blown from the boy's

hand, he realized, when the window had been opened. Andrei's distorted look over his shoulder was not suicidal grief, then, but simple annoyance at the paper wafted from his grasp, and at the door slammed shut by the same gust of air.

A label was pasted on the sheet. It was marked "X-811". The new paper which the boy had been absorbed in developing during these past months—perhaps a sample of the latest proof run. A paper whose particular quality, Piridov remembered the boy's having said, was that anything written on it vanished after a few seconds without trace, making it extremely valuable for police work and for agents in foreign countries in many ways.

He took it to the boy's counter-high work-desk against the wall, picked up a pen, and wrote:

> My dear Son—
>
> Don't feel yourself at all to blame for anything you told them. They had many things against me. It is much the best thing that happens to me, for I am tired and old.
>
> Take care of the children. A special kiss to little Annusha. For them, it may well be, there will come a happier day.
>
> Thy father, Peter.

He laid it against the windowpane, beneath the heel of the boy's palm on the frame. He put his arm around Andrei's heavy shoulders a light intangible instant. He turned, and went out.

## III

HE WAS back on Red Square again. The sunset clouds were still unchanged, in the smallest atom of water vapor, above the great grim Kremlin walls that loomed under the painted sky.

Seat of all power, the unviewable, the terror of the world. Yet even that secret fortress was his to enter and wander through unseen, in this instant which had been given to him, on the edge of the infinitely swift blade. Why not? For the time would not come again.

He crossed the vast square between the massed motionless ranks, around and in between the tanks and guns, like a shadow, towards the line of black cars entering. In the air around the huge gate great brazen bell-peals bonged against his ear-drums, rolling down from the English carillon in the turret which had rung for three hundred years the doom of prince and boyar. Ringing now on the first note of the four-times daily Internationale, at twelve and six o'clock.

Motionless guards with ever-watchful eyes of glass at the outer gate and beneath the arch. Piridov squeezed in between the brick arch wall and the cars, bending his knees and ducking beneath the half-leveled burp-guns. At the head of the line the innermost gate was just starting to open, beyond the invisible beams, the searching eyes, the muzzles of the guns.

He hurried, and squeezed on in through it. He was on wide Communist Avenue, the great citadel's single street, between the vast palaces and cathedrals—the Orujeynaya Palata, a scant century old, which was whispered to contain all the jewelry and gold plate of the looted monasteries, the great green three-century-old Poteshny Dvoretz, the pleasure dome, the fantastic bulbs and minarets and spires of the Pokrovsky cathedral, built by Ivan Terrible four hundred years ago.

Down the center of the wide avenue were garden plats filled with red roses, being watered by gun-carrying police gardeners in red-tabbed gray. Tens and tens of thousands of red roses, beneath the red sunset sky.

Anna had always loved red roses, he thought. If she could only see them now.

He went limping towards the white sprawling Great Kremlin Palace with its golden cupola, and in the entrance of the south wing, where—as even the most ignorant street-sweeper in Moscow knew—the great ones had their offices and

their living quarters.

He found Malenko just leaving the doorway of a room on the thickly carpeted third floor, with a sheaf of papers in his hand, between a pair of stiffly saluting guards. The famous Politboro chieftain's habitual double quotation marks of scowl were carved between his black beetling brows, his soft plump dark jowls were cleanly razored, the shadow of a smile was on his small moist lips, as he strode briskly forth without motion.

Favored heir of the Great One at the present. Holding the party and the army combined beneath his thumb. Malenko in the flesh, as fat and real as his scowling pictures.

Because of him, because of his idiot son, he, Piridov, was now dying.

"You did it, Malenko!" Piridov said with quiet bitterness.

Impotent and futile words. The beetling eyes glared back at him indifferently. The smile remained unchanged. In the motionless air the spasmodic accusation had no sound. Even if Malenko could hear it in this instant, and hear in one voice the bitter cry of all his twenty million other victims, it would move his smooth dark face only to deeper laughter. A tribute to his strength, his power. Sweet to hear.

Malenko! When the Great One died at last, old and full of evil, whether after five more years or ten, there would still be Malenko, no less dark, and no less evil. Andrei's children, and their children, would never see the day of liberation. Piridov fumbled his throat impotently. He knew, somehow, that in this silent and timeless place he could not touch Malenko in any way which would alter, or carry effect into, the next moment.

Impossible to touch Malenko, or any of them, this side of the grave. Armored against all mental or spiritual pain by sheer unfeeling. Armored against physical pain, as well, should all go against them; for like their blood brothers, dead Hitler's crew, each was rumored to carry a small vial of—

Piridov stiffened, tense.

Beyond Malenko's burly out-thrusting shoulder, in the small quiet room which he was leaving, there was the Presence.

NOT a double, but the Great One himself. Sitting at his wide polished desk inside, with thick gray hair roached back above his low forehead, with contented smile beneath his thick gray mustache. Malenko had just left him with some joke. His eyes were crinkled. His left hand was clasped about the neck of a green water-carafe which he was setting down on his desk, his right hand was lifting a tumbler to his lips which he had poured.

A shiver passed through Piridov.

Even Malenko, he thought! Even Malenko, like all the rest, must be prepared against the possibility, however remote in his case, of suddenly finding himself out of grace. Even he lived on the edge of the inquisitorial interrogation which makes a screaming out of men's bones. And had lived there for so long, that to be prepared against it had become a habit.

With shaky hands Piridov felt swiftly over Malenko's coat lapels, necktie, pockets.

There! In the righthand jacket pocket, lying loose, the bulge of a small vial.

He didn't have a handkerchief in his prison trousers, and Malenko seemed to have none, either. He whipped out his shirt tail. Draping it over his hand, he reached in and got the little bottle by the stopper rim.

Colorless liquid contents. He pulled the stopper out carefully with masked fingers. No smell. Probably tasteless, as well, or at the most with only a belated bitterness deep in the throat.

It might be only a cough-medicine or a heart stimulant. He would never know.

But this timeless moment had been given to him, and perhaps not without a purpose. He ducked past Malenko with the unstoppered bottle in his hand. On shaking knees he tiptoed across the floor inside, towards that gray figure with the

crocodile eyes behind the desk.

This was the instant when the sweep of time would begin again! His hands were shaking, his knees collapsing under him. But the moment stayed.

Numbly he emptied the little bottle into the glass of water which He was lifting to his lips. Still no movement of the eyes, the smile unchanged. Piridov put a finger in the glass, and stirred it around.

Only a glass of water still. He threw the little bottle and its stopper beneath the desk on the thick rug.

He tiptoed out past that burly self-confident figure again and the saluting guards, resisting the impulse to run screaming. Down the carpeted stairs again past unseeing eyes, and out beneath the sky. Only then did he take a deep painful breath, hurrying back towards Salvation Gate.

Yet for a moment he slowed his pace beside the roses in the center of the white sunset-lit avenue. Thinking of how Anna would have loved to see them. Remembering how in every poor place they had lived during the first years she had managed to get a red rose slip, trying to grow it in window-box or scraggly little plot of sunless ground.

Tending the dry brown sticks with continued hope, long after they were dead. Once, indeed, there had been a slip which had taken feeble root, and a small bud had come on it. But the bud had died soon after being formed, brown and shriveling, eaten by a worm. She had wept quietly over it. That had been long ago.

He had never thought of her fondness for roses particularly. Just a woman's foolish whim. So many things he had never thought of, remote from the pure world of mathematics where he had found his dream. The sad patient woman who had borne Andrei for him. Had gotten his meals, washed and ironed his one shirt each time so he would have a decent appearance at the Institute before his classes. Fading and wan. Long ago she had dissolved into the background of his awareness.

Poor Anna. It would be very hard for her.

They would never miss one rose of the many thousands. Piridov reached down in passing and picked one of the largest and most beautiful, with velvet crimson petals just unfolding, wet with its hosing as if with dew. He held it close against his breast as he slipped out through the narrow opening of the great arched gate past the black cars streaming in.

IT WAS a long way to walk, with the packed trams motionless on the silent-thronged streets, with the Metro frozen underground. Down to the grimy Khamoniviki district of slaughter-houses, gun-factories and gasworks, where they had lived for the past twenty years. A mathematics professor, purely speculative, had little value in any kind of world.

And he was more tired than he had ever been in his life before. They had broken the arch of his right foot during the grilling, he remembered now. His left knee dragged behind him in a curious kind of way. He went stumbling along the gray endless nightmare streets with bowed shoulders and sagging head—a scrawny aging man with a comical beard, with thin unkempt hair, with vague blue childlike eyes, dressed in coarse wet prison shoes with his shirt tail hanging out, carrying a red rose in his hand. Piridov, who had solved the time equation. But in any city, on any street, the most witless idiot who saw him would laugh.

So many miles to go, so many stairs to climb! But he had reached it at last, the door of the tiny attic room at the top of the rattletrap old wooden tenement, five flights up the vermin-eaten stairs.

In the dark shadows of the hall someone was at the door ahead of him. Verusha Petrovna, the house commissar, he saw, broad-beamed and duck-faced, in her knee-length grease-stained dress, with her stringy peroxided hair. She

was reaching for the knob to pull it open, perhaps to enter in this moment and taunt Anna in her screaming voice. He brushed past the harpy, opening the door himself into the slope-ceilinged little hole which was his and Anna's home.

She was lying on her cot in the corner. She was asleep, he saw. Lying exhausted, with the barest breath.

He had not realized how wasted and wan she was. For years, perhaps, he had not really looked at her. Now in the shadows he could see. He knew, in that timeless instant, the mortal illness which had wasted her. Could tell almost to the month how long she had suffered the pain of it, in silence. The time, soon, when it would end for her.

He moved quietly to her side, not to wake her, looking down at her.

There was a curious thing which happened to him then. For this moment was timeless—he knew that well. Yet in the instant the paused blade seemed to sweep backward thirty years, and her hair was gold, her cheeks pink, her eyes laughing. And she was lying on the lake bank with him in the sweet dark summer night, in a time when all the world was roses. . .

Aged Piridov bent over her, brushing his lips across her cheek.

"I have loved you very dearly, Anna," he whispered.

He laid the dewy rose beside her on the pillow. Just for the moment his heart was breaking.

There was nothing—nothing—that he could do for her. The rose itself must die. He must get away before the timeless instant ended, for her sake.

Yet at the door he paused, with blurred eyes and aching throat, looking back at her. There was something more which she would like to hear, he thought. Although it was not anything in his mathematics, it would do no harm for him to say it to her.

"I will see you soon," he told her.

He closed the door soundlessly behind him, and went past Verusha Petrovna, and down the stairs.

The timelessness must end. It could not go on forever. He was so tired, yet he could not afford to rest for even the briefest moment, lest the suddenly resumed sweeping of the blade catch him there. And his mind was tired, even more than his tired body. As if it was his concentration on the equation which alone sustained the motionless instant. But at the price of a terrible exhaustion.

It was a very brilliant concept, the answer to all the riddles. But he was only a tired and aging man, and he would like to sleep.

He walked the long miles back, with bowed head and limping gait, towards the city's center and the great prison. He went in, closing the entrance doors behind him. He went through the other doors, closing each in turn, along the corridors, down the flights of stairs. At the end of the long brightly lit corridor in the deepest basement he went towards that farthest door. He went back in the cellar room, closing the door behind him.

The noseless fire-burned non-com, Sergeant Death, stood with his hand down-swung. The riflemen stood with their fingers squeezed on their triggers. The one-eyed janitor hosed down the floor in motionless stream and spatter.

Piridov went past them as quietly as a shadow. At the farther wall he turned, facing the squad, placing his feet carefully on the precise dry spots, in the empty spaces of the spattering water, which marked where he had been standing. The bullets in their swift rifled flight were poised twelve inches from his breast.

Piridov closed his eyes.

"I had a dream," he told himself. "A dream of a bright equation within a timeless instant. Of things I love and things I hate. Of a sword sweeping. A dream of water. But I am very tired. So let the dream be over."

And it was. . . .

## IV

THE police officer in charge of Piri-

dov's execution, Sergeant Smert, had stiffened his belly muscles against his belt to the volley crash, as his hand descended. A thousand times he had heard it in the cellars, but it always jarred him a little. Now his belly relaxed and sagged.

He pulled out his pistol as the riflemen lowered their guns, at ease.

"Turn that infernal hose of yours away or you'll get me wet, Jughead," he told the one-eyed janitor. "You can wait till he's been hauled away to clean up. What's the rush?"

But the pistol wasn't necessary. Sergeant Smert grinned as he holstered it again.

"Honestly," he said, "the old goat gave me a laugh. Just as it hit him I swear I heard him say, 'What's happened?', as surprised as anything. And then his shirt tail flew out. Try to tie that!"

He adjusted his polished belt around his waist, and turned towards the clock above the door.

"On the dot," he said. "That's the way I like to do it. No lost time."

He frowned. On the white wall beside the door, just below the ceiling, there was some dim marking. He walked towards it, looking up. It looked as though someone had started to do an algebraic problem. He studied the figures, reading them aloud, for he had had algebra in high school, and was rather proud of it.

"T equals," he read profoundly, "a. Divided by pi. Times one-sixth e cubed. Say, which one of you half-witted characters wrote that there?"

The Tartar riflemen stared at him stolidly.

With an oath, Sergeant Smert stooped and picked up a bullet from the floor, examining it.

"One of you did," he said. "A fired rifle slug, bright on its point, used to mark with. Must have been fired into a bale of cotton or something—not mushroomed. What in hell goes on here? What's the gag? Speak up! No? All right, no more privileges of the women's wing for you baboons, until whoever did it admits it. I guess that will have you tearing at each other's throats in about three days!"

"What does that junk mean, sarge?" said the one-eyed janitor. "That t, a, e junk?"

"Why, nothing," said Sergeant Smert. "Just gibberish. Swing your hose on it, Jughead, and wash it off."

Still he turned the bullet over in his hand. It was a puzzle. . . .

Andrei Piridov looked at the sheet of paper beneath his hand against the windowpane. He thought that he had lost his grasp on it when he had opened the window—the newest sample of X-811 which he had been examining. But apparently he hadn't.

He had a perfectly fantastic feeling that there was writing on the sheet, in that scrawling hand he knew.

"My dear Son—"

He stared at it with swimming eyes.

"—Thy father, Peter."

Nothing. The blank sheet of paper before him. He had been under too much of a strain, it was apparent. Things snapped back into place in his mind.

He turned his head to Sirradian coming swiftly in through the door behind him.

"Is everything all right, Comrade Director?" Sirradian said a little breathlessly. "I saw the door slam shut. I was afraid—it occurred to me—this is the hour—"

"What hour?" said Andrei Piridov.

"The Lubianka," Sirridian said, looking at him with intent eyes. "At this very moment—"

"Oh, yes," Andrei said, his face a mask. "It's the best thing for him, for he was tired and old. It was the wind which blew the door shut when I opened the window, comrade. Just examining the latest sample of experimental eight-eleven. I don't believe we can be certain of success with it, after all. I am not going to recommend the project."

"You are wise," said Sirradian softly.

"Nothing has been expended in it yet but your own time. If you recommended it, however, and it did not pan—*zook*, Comrade Director!"

"*Zook?*" said Andrei Piridov sullenly. "An odd word. There are many phrases you young fellows use which do not sound like good Russian to me. And why run your finger across your adam's apple? Perhaps I somewhat grasp your meaning, though, Comrade Assistant-Director."

He removed his foot from the window ledge, closing down the pane. Had he ever thought of going headlong out? He couldn't afford to. There were the children.

A blank piece of paper in his hand. A hallucination. But he felt more at peace, it seemed to him, than ever in his life before.

The MVD man was still looking at him with luminous gaze. "There will come a day," he said quietly.

"What day, comrade?" Andrei Piridov said dully again.

Sirradian measured him. The loyal party man, the faithful stooge. But Piridov's son. Perhaps someday a candidate for the liberation cell to which he himself belonged.

Their glances held. Not yet could they trust each other. But there was the dawning of an understanding between them. . .

MALENKO strode out through the doorway with the papers in his hand, between the saluting guards, with a sense of quiet elation.

The old man was beginning to fail somewhat, almost unquestionably. That story he had told the old man about his boy Bobo beaning Professor Piridov with a dead cat at the Institute had amused him. He had laughed, recalling his own idiotic mathematics instructor in the religious seminary he had attended as a boy, and the endless jibes and tricks he had played on the old goat, as he poured himself a glass of water from his carafe. Whenever the old man began to reminisce about his seminary youth that way, one could be sure he was getting a little senile.

Not too unendurably long now, perhaps, though the old man was terribly tenacious. Malenko only wished that something would happen to push him on his way. Many times he had thought of doing it himself. If he only dared.

Piridov! A puttering harmless fool, it might seem, Malenko thought. But the miserable worm had impaired Bobo's whole future career by failing to give him a summa cum, out of sheer ignorance and inability, if not outright malignancy. A maggot like that must be trod on. Well, no more of Piridov.

Behind him, in the room he was just leaving, Malenko heard the old man utter a choking gasp. There was a thud like his water glass dropping on the desk.

His heart! If the laughter had brought it on! Malenko paused in mid-stride between the guards, starting to whirl, a soaring elation in him.

"You did it, Malenko!" a quiet voice said.

He didn't know if one of the guards had said it, or if it was only something in his own head. But suddenly terror was in Malenko at that accusing voice.

The eyes of the guards, heeling swiftly, were on him. They had heard it, too. With an incoherent shout Malenko struck out with both big soft fists at the stiffened faces and terrible eyes on both sides of him. He started running down the corridor like a hippopotamus, with bones turned to jelly, thrusting his hand in his side pocket for the small vial. But it was not there. . . .

Salovitch, newscasting in Booth 4, English Broadcast Section of the Radio Division of the Commissariat of Culture and Information, completed his sentence with the word, "peoples!"

The top page of his script slipped from his hand. His thumb had felt a sudden twinge in it—a little soreness, as if it had been bent back—which perhaps had caused him to release his grip on the

pages slightly. He had partially memorized the script, however, and the next sentence came to him, beginning the new paragraph.

"The great Stalin has just announced," he continued without pause, grabbing ineffectually for the falling sheet, "the appointment of Comrade Malenko—"

It had drifted down on his shoe, face up. A line had been interpolated before the paragraph he had started on, he saw. He glanced through the glass as he continued speaking, at Sapronsky in the control-room, who was monitoring him.

But Sapronsky hadn't noticed the omission. He had dropped his own page at the same moment, it seemed, and was reaching with one hand for it while his eyes followed the next page.

It was a lucky break. Some slight added item. He could append it at the conclusion of the script, if called on. It made no difference, he thought.

But his broadcast would be interrupted before the end, and he would never come to it. All broadcasts from great Radio Moscow that night would be cut off. . . .

Citizeness Verusha Petrovna, short-breathed from her climb, waddled swiftly to the door of the Piridovs' little attic room and seized the knob.

Inside, beyond the door, she heard a man's voice:

"I will see you soon. . . I have loved you very dearly, Anna."

Quiet words quickly following each other. Verusha Petrovna leaned her ear against the door panel a moment, gloating. The pale frail woman who held her head so high. Verusha Petrovna had always hated her proud airs, never more proud than when a mask over hunger. She had rushed up specially in this moment to sink a claw or two.

Why, the sly deceptive thing had a lover! Verusha Petrovna pushed the door open with her burly shoulder, her stringy yellow hair about her face.

"What's going on here?" she shouted. "What's all this hoity-toity?"

But there was no man. No one. Only Anna Piridovna lying on her cot in the attic shadows.

There was a rose, a red rose, in her lax hand. Her lips were smiling, her pale sunken cheeks looked pink as a girl's, as if she were lying dreaming on a river's bank in the soft darkness of a summer's night, and had just taken her lover's kiss.

But she was not dreaming. It was not sleep.

Verusha Petrovna felt a chill rush through all her bones. She fell upon her knees, fumbling in her bosom for the secret medal which she kept hidden there.

# THE Foodlegger

*Time-traveler Wade discovers that dirty words change with the times*

**by RICHARD MATHESON**

GROUND cars shrieked to a halt. Muffled curses sounded. Pedestrians jumped back, eyes widened, mouths spread into incredulous O's.

A great shining metal sphere had appeared out of thin air right in the middle of the intersection.

"What? What?" bumbled a traffic controller, leaving the fastness of his concrete island.

"Good heaven!" cried a secretary, gaping from her third story window. "What *can* this be?"

"Popped outa nowhere!" ejaculated an old man. "Outa nowhere, I'll be bound!"

Gasps. Everyone leaned forward with pounding hearts.

The sphere's circular door was being

pushed open at that moment.

Out jumped a man. He looked around interestedly. He stared at the people. The people stared at him.

"What's the meaning?" ranted the traffic controller, pulling out his report book. "Looking for trouble, eh?"

The man smiled. People close by heard him say, "My name is Professor Robert Wade. I've come from the year 1951."

"Likely, likely," grumbled the officer. "First of all get this contraption out of here."

"But that's impossible," said the man. "Right now anyway."

The officer stuck out his lower lip. "Impossible eh?" He stepped over to the metal globe. He pushed it. It didn't budge. He kicked it.

"Please," said the stranger, "that won't do any good."

Angrily, the officer pushed aside the door. He peered into the interior.

He backed away, a gasp of horror torn from paled lips.

"What? What?" he cried in fabulous disbelief.

"What's the matter?" asked the professor.

THE officer's face was grim and shocked. His teeth chattered. He was unnerved.

"If you'd . . ." began the man.

"Silence, filthy dog!" the officer roared.

The professor stepped back in alarm, his face a twist of surprise.

The officer reached into the interior of the sphere and plucked out three objects.

Pandemonium.

Women averted their faces with gasps of revulsion. Strong men shuddered and stared. Little children glanced about furtively. Maidens swooned.

The officer hid the objects beneath his coat quickly. He held the lump of them with one trembling hand. The other he clapped violently on the professor's shoulder.

"Vermin!" he shouted. "Pig!"

"Hang him, hang him!" chanted a group of outraged old ladies, beating time on the sidewalk with their canes.

"The shame of it," muttered a churchman, flushing a bright vermilion.

The professor was dragged down the street. He tugged and complained. The shouting of the crowd drowned him out. They struck at him with umbrellas, canes, crutches, and rolled-up magazines.

"Villain!" they accused, waving vindictive fingers. "Unblushing libertine!"

"Disgusting!"

"Sickening!"

But in alleys, in vein bars, in pool rooms, behind leering faces everywhere, squirmed wild fancies. Word got around. Chuckles, deeply and formidably obscene, quivered through the city streets.

They took the professor to jail.

Two men of the control police were stationed by the metal globe. They kept away all curious passersby. They kept looking inside with glittering eyes.

"Right in *there*," said one of the officers again and again, licking his lips excitedly. "Wow!"

HIGH Commissioner Castlemould was looking at licentious postcards when the tele-viewer buzzed.

His scrawny shoulders twitched, his false teeth clicked together in shock. Quickly he scooped up the pile of cards and threw them in his desk drawer.

Casting one more inhaling glance at the illustrations, he slammed the drawer shut, forced a mask of official dignity over his bony face and threw the control switch.

On the telecom screen appeared Captain Ranker of the control police, fat neck edges oozing over his tight collar.

"Commissioner," crooned the captain, his features dripping with obesiance. "Sorry to disturb you during your hour of meditation."

"Well, well, what is it?" Castlemould asked sharply, tapping an impatient fin-

ger on the glossy surface of his desk.

"We have a prisoner," said the captain. "Claims to be a time traveler from 1951." He looked around guiltily.

"What are you looking for?" crackled the Commissioner.

Captain Ranker held up a mollifying hand. Then, reaching under the desk, he picked up the three objects and set them on his blotter where Castlemould could see.

Castlemould's eyes made an effort to pop from their sockets. His Adam's apple took a nose dive.

"Aaah!" he croaked. "Where did you get those?"

"The prisoner had them with him," said Ranker uneasily.

The Commissioner drank in the sight of the objects. Neither of the men spoke for gaping. Castlemould felt a sensuous dizziness creep over him. He snorted through pinched nostrils.

"Hold on!" he gasped, in a high cracking voice. "I'll be right down!"

He threw off the switch, thought a second, threw it on again. Captain Ranker jerked his hand back from the desk.

"You better not touch those things," warned Castlemould, eyes slitted. "Don't touch 'em! Understand?"

Captain Ranker swallowed his heart.

"Yes sir," he mumbled, a deep blush splashing up his fleshy neck.

Castlemould sneered, threw off the switch again. He jumped up from his desk with a lusty cackle.

"Haah haah!" he cried. "Haah haah!"

He hobbled across the floor, rubbing his lean hands together. He scuffed the thick rug delightedly with his thin black shoes.

"Haah haah! Aah haah haah haah!"

He called for his private car.

FOOTSTEPS. The burly guard unlocked the door, slid it open.

"Get up, *you*," he snarled, lips a curlycue of contempt.

Professor Dade got up and, glaring at his jailer, walked past the doorway into the hall.

"Turn right," ordered the guard.

Wade turned right. They started down the hall.

"I should have stayed home," Wade muttered.

"Silence, lewd dog!"

"Oh, *shut up*," said Wade. "You must all be crazy around here. You find a little. . ."

"Silence!" roared the guard, looking around hurriedly. He shuddered. "Don't even say that word in my clean jail."

Wade threw up imploring eyes. "This is too much," he announced. "Any way you look at it."

He was ushered into a room which spread out behind a door reading, "Captain Ranker—Chief of Control Police."

The chief got up hastily as Wade came in. On the desk were the three objects discreetly hiden by a white cloth.

A wizened old man in funereal garb looked at Wade, a shrewd deductive look on his face.

Two hands waved simultaneously at a chair.

"Sit down," said the chief.

"Sit down," said the Commissioner.

The chief apologized. The Commissioner sneered.

"Sit down," Castlemould repeated.

"Would you like me to sit down?" Wade asked.

Apoplectic scarlet splattered over Chief Ranker's already mottled features.

"Sit down!" he gargled. "When Commissioner Castlemould says sit down, he means sit down!"

Professor Wade sat down.

Both men circled him like calculating buzzards preparing for the first swoop.

The professor looked at Chief Ranker.

"Maybe you'll tell me. . ."

"Silence!" snapped Ranker.

Wade slapped an irate hand on the chair arm. "I will not be silent. I'm sick and tired of this asinine prattle you people are talking. You look in my time chamber and find *these* idiotic things and . . ."

He jerked the cloth from the objects

which the cloth had shielded.

The two men jumped back and gasped as though Wade had torn the clothes from the backs of their grandmothers.

Wade got up, throwing the cloth on the desk.

"Now for God's sake, what's the matter?" he growled. "It's food. *Food.* A little food!"

THE men wilted under the repeated impact of the word as though they stood in blasts of purgatorial wind.

"*Shut your filthy mouth,*" said the captain in a choked wheezy voice. "We refuse to listen to your obscenities."

"Obscenities!" cried Professor Wade, his eyes widening in disbelief. "Am I hearing right?"

He held up one of the objects.

"This is a box of crackers!" he said incredulously. "Are you telling me that's obscene?"

Captain Ranker closed his eyes, all atremble. The old Commissioner regained his senses and, pursing his greyish lips, watched the professor with cunning little eyes.

Wade threw down the box. The old man blanched. Wade grabbed the other two objects.

"A can of processed meat!" he exclaimed furiously. "A thermos-flask of coffee. What in the hell is obscene about meat and coffee?"

Dead silence filled the room when Wade had ended.

They all stared at one another. Ranker shivered bonelessly, his face suffused with excited fluster. The Commissioner's gaze bounced back and forth between Wade's indignant face and the objects that were back on the desk. Cogitation strained his brain centers.

At length, Castlemould nodded and coughed meaningfully.

"Captain," he said, "I want to be alone with this scoundrel. I'll get to the bottom of this outrage."

The captain looked at his superior and nodded. He hurried from the room wordlessly. They heard him stumbling down the hall, breathing steam whistles.

"Now," said the Commissioner, dwindling into the immensity of Ranker's chair, "just tell me what your game is." His voice cajoled; it was half joking.

He picked up the cloth between sedate thumb and forefinger and dropped it over the offending articles with the decorum of a minister throwing his robe over the naked shoulders of a strip teaser.

Wade sank down in the other chair with a sigh.

"I give up," he said. "I come from the year 1951 in my time chamber. I bring along a little . . . food . . . in case of slight emergency. Then you all tell me that I'm an obscene dog. I'm afraid I don't understand a bit of it."

Castlemould folded his hands over his sunken chest and nodded slowly.

"Mmm-hmm. Well, young man, I happen to believe you," he said. "It's possible. I'll admit that. Historians tell of such a period when . . . ahem . . . physical sustenance was taken orally."

"I'm glad someone believes," Wade said. "But I wish you'd tell me about this food situation."

The Commissioner flinched slightly at the word. Wade looked puzzled again.

"Is it possible?" he said, "that the word . . . *food* . . . has become obscene?"

AT THE repeated sound of the word something seemed to click in Castlemould's brain. Eyes glittering, he reached over and drew back the cloth. He seemed to drink in the sight of the flask, the box, the tin. His tongue flicked over dried lips.

Wade stared. A feeling close to disgust rose in him.

The old man ran a shaking hand over the box of crackers, as though it were a chorus girl's leg. His lungs grappled with air.

"Food." He breathed the word in bated salacity.

Then, quickly, he drew the cloth back over the articles, apparently surfeited with the maddening sight. His bright

old eyes flicked up into Professor Wade's. He drew in a tenuous breath.

"F . . . well," he said.

Wade leaned back in his chair, beginning to feel an embarrassed heat sluicing through his body. He shook his head and grimaced at the thought of it all.

"Fantastic," he muttered.

He lowered his head to avoid the old man's gaze. Then, looking up, he saw Castlemould peeking under the cloth again with all the tremor of an adolescent at his first burlesque show.

"Commissioner."

The ratty old man jerked in the chair, his lips drawing back with a startled hiss. He struggled for composition.

"Yes, yes," he said, gulping.

Wade stood up. He pulled off the cloth and stretched it out on the desk. Then he piled the objects in the center of it and drew up the corners. He suspended the bundle at his side.

"I don't wish to corrupt your society," he said. "Suppose I get the facts I want about your era and then leave and take my . . . take *this* with me."

Fear sprang up in the lined features. "No!" Castlemould cried.

Wade looked suspicious. The Commissioner bit off his mental tongue.

"I mean," he glowed, "there's no point in going back so soon. After all—" he flourished his skinny arms in an unfamiliar gesture—"you *are* my guest. Come, we'll go to my house and have some. . ."

He cleared his throat violently. He got up and hurried around the desk. He patted Wade's shoulder, his lips wrenched into the smile of a hospitable jackal.

"You can get all the facts you need from my library," he said.

Wade didn't say anything. The old man looked around guiltily.

"But you . . . uh . . . better not leave the bundle here," he said. "Better take it with you." He chuckled confidentially.

Wade looked more suspicious. Castlemould stiffened the backs of his words.

"Hate to say it," he said it, "but you can't trust inferiors. Might cause terrible upset in the department. *That*, I mean." He glanced with effected carelessness toward the bundle, and his narrow throat suffered an honest contraction. "Never know what might happen. Some people are unprincipled, you know."

He started for the door to avoid arguments. He turned, fingers clawed around the knob.

"You wait here," he said. "I'll get your release."

"But. . ."

"Not at all, not at all," said Castlemould, springing out into the hallway.

Professor Wade shook his head. Then he reached into his coat pocket and drew out a bar of chocolate.

"Better keep this well hidden," he said, looking about, "or it's the firing squad for me."

AS THEY entered the hallway of his house, Castlemould said, "Here, let me take the package. We'll put it in my desk."

"I don't think so," Wade said, keeping back laughter at the Commissioner's eager face. "It might be too much of a . . . temptation."

"Who, for *me?*" cried Castlemould. "Haah. Haah haah! That's funny." He kept holding onto the Professor's bundle, his lips molded into a pouting circle.

"Tell you what," he bargained furiously. "We'll go in my study and I'll guard your bundle while you take notes from my books. How's that, haah? Haah?"

Wade trailed the hobbling old man into the high-ceilinged study. It still didn't make sense to him. Food . . . he tested the sound of it in his mind. Just a harmless word. But, like anything else, it could have any meaning people assigned to it.

He noted how Castlemould's vein-popping hands caressed the bundle, noted the acquisitive shifty-eyed look

that swallowed up his dour old face. He wondered if he should leave the . . . he smiled to himself. It was getting him too.

They crossed the wide rug.

"Have the best book collection in the city," bragged the Commissioner. "Complete." He winked a red-veined eyeball. "Unexpurgated," he promised.

Wade said, "That's nice."

He stood before the shelves and ran his eyes over the titles, surveying the parallel rows of books that walled the room.

"Do you have a . . ." he started, turning. The Commissioner had left his side and was seated at the desk. He had unwrapped the bundle and was looking at the can of meat with the leer of a miser counting his gold.

Wade called loudly, "Commissioner!"

The old man jumped wildly and dropped the can on the floor. Abruptly, he slid from sight and emerged above the desk surface a moment later, dripping with abashed chagrin, the can tightly gripped in both hands.

"Yes?" he inquired pleasantly.

Wade turned quickly, his shoulders shuddering with ill-repressed laughter.

"Have you . . . have you a history text?" His voice was shaky.

"Yes sir!" Castlemould burst out. "Best history text in the city."

His black shoes squeaked over the floor. From a shelf overladen with dust, he tugged out a thick volume, blew off a cloud and proffered it to Professor Wade.

"Here we are," he said. "Now you just sit right here—" he patted the cracked leather back of an armchair—"and I'll get you something to write on."

Wade watched him as he hustled back to the desk and jerked out the top drawer. May as well let the old fool have the food, he thought.

Castlemould came back with a fat pad of artipaper.

"Now you just sit right here and take all the notes you want," he said. "And don't you worry about your . . . f . . . don't you worry."

"Where are *you* going?"

"Nowhere! Nowhere!" the Commissioner professed. "Staying right here. I'll guard the . . ." His Adam's apple dipped low as he surveyed the three articles again and his voice petered out in rising passion.

Wade eased down into the chair and opened the book. He glanced up once at the old man.

Castlemould was shaking the flask of coffee and listening to it gurgle.

On his seamed face hung the look of a reflective idiot.

WADE began to read: "The destruction of Earth's f..... -bearing capacities was completed by the overall military use of bacterial sprays. These minute germinal droplets permeated the earth to such a depth as to make plant growth impossible. They also destroyed the major portion of m..... -giving animals as well as ocean edibles, for whom no protectional provision was made in the last desperate germ attacks of the war.

"Also rendered unpalatable were the major water supplies of Earth. Five years after the war, at the time of this writing, the heavy pollution still remains, undiminished by fresh rains. Moreover. . . ."

Wade looked up from the history text, shaking his head grimly.

He looked over at the Commissioner. Castlemould was leaning back in his chair, juggling the box of crackers thoughtfully.

Wade went back to the book and hurriedly finished the selection. He completed his notations and closed the book. Standing, he slid the volume back into its place and walked over to the desk.

"I'll be going now," he said.

Castlemould's lips trembled, drawing back from his china teeth.

"So soon?" he said, close to menace hovering in his words. His eyes scanned the room, searching for something.

"Ah!" he said. Gently he put down the box of crackers and stood up.

"How about a vein ball?" he asked. "Just a short one before you go."

"A what?"

"Vein ball." Wade felt the Commissioner's hand clutch his arm. He was led back to the armchair. "Come along," said Castlemould, weirdly jovial. Wade sat. No harm, he thought. . . I'll leave the food. That will mollify him.

The old man was wheeling a cumbrous wagon-like table from one corner of the room. From its dialed top rose numerous shiny tendrils that dangled over the sides to end in stubby needles.

"Just one way of—" the Commissioner glanced around like a salesman of illicit postcards; "—drinking," he finished softly.

Wade watched him pick up one of the tendrils.

"Here, give me your hand," said the Commissioner.

"Will it hurt?"

"Not at all, not at all," said the old man. "Nothing to be afraid of."

HE TOOK hold of Wade's hand and jabbed the needle into the palm. Wade gasped. The pain passed almost immediately.

"What does it. . ." Wade started. Then he felt a soothing flow of muscle-easing liquors flowing into his veins.

"Isn't that good?" asked Castlemould.

"This is how you drink?"

Castlemould stuck a needle into his own palm.

"Not everyone has such a deluxe set," he said proudly. "This vein wagon was presented to me by the governor of the state. For my services, y'know, in bringing the notorious Tom-Gang to justice."

Wade felt pleasantly lethargic. Just a moment more, he thought; then I must go. The flow of warmth kept coming.

"Tom-Gang?" he asked.

Castlemould perched on the edge of another chair.

"Short for—ahem—Tomato Gang. Group of notorious criminals trying to raise . . . tomatoes. Wholesale!"

"Horrors," said Wade.

"It was grave, grave."

"Grave. I think I've had enough."

"Better change this a little," Castlemould said, rising to fiddle with the dials.

"I've had enough," Wade said.

"How's that?" asked Castlemould.

Wade blinked and shook his head to clear away the fog.

"That's enough for me," he said. "I'm dizzy."

"How's this?" Castlemould asked.

Wade felt the warmth increasing. His veins seemed to run with fire. His head whirled.

"No more!" he said, trying to rise.

"How's this?" Castlemould asked, drawing the needle from his own hand.

"That's enough!" Wade cried. He reached down to pull out the needle. His hand felt numb. He slumped back into the chair. "Turn it off," he asked feebly.

"How's this!" cried Castlemould. Wade grunted. Someone played a hose of flames through his body. The heat twisted and leaped through his system.

He tried to move. He couldn't.

He was inert, in a liquored coma, when Castlemould finally turned down the dials.

Wade was sagged in the chair, the shiny tentacle still drooping from his palm. His eyes were half closed. They were glassy and doped.

SOUND. His thickened brain tried to place it. He blinked his eyes. It was like compressing his brain between hot stones. He opened his eyes. The room was a blurry haze. The shelves ran into each other, watery streams of book backs. He shook his head. He thought he felt his brains jiggling.

The mists began to slip away one by one like the veils of a dancer.

He saw Castlemould at the desk.

*Eating.*

He was bent over the desk, his face a blackish red as though he were performing some rabidly carnal rite.

His eyes had glued themselves to the food spread out on the cloth.

He was apart. The thermos-flask banged against his teeth. He held it in interlocked fingers, his body shivering sensuously as the hot fluid drained down his throat. His lips smacked ecstatically.

He sliced another piece of meat and stuck it between two crackers.

His trembling hand held the sandwich up to his wet mouth. He bit into their crisp layers and chewed loudly, his eyes glittering orbs of excitement.

Wade's face twisted in revulsion. He sat staring at the old man.

Castlemould was looking at postcards while he ate. His eyes shone. He gazed at them, jaws moving busily, then looked at what he was biting, then looked at the cards again while he chewed.

Wade tried to move his arms. They were logs.

He struggled and managed to slip one hand over the other. He drew out the needle, a sigh rasping in his throat. The Commissioner didn't hear. He was lost . . . absorbed in an orgy of digestion.

Experimentally, Wade shifted his legs. They were numb. If he stood, he knew he'd pitch forward on his face.

He dug nails into his palms. At first there was no feeling. Then it came slowly, slowly, at last flaring up in his brain and clearing away more fog.

His eyes never left Castlemould.

The old man shivered as he ate, caressing each morsel.

Wade thought, he's committing an act of love with a box of crackers.

He fought to regain control.

Castlemould had polished off the cracker box. He was nibbling on the bits of crumb that remained. He picked them up with a moistened finger and popped them into his mouth. He made sure there were no remaining scraps of meat. He tilted up the flask and drained it. Practically empty, it was suspended over his gaping mouth. The remaining drops fell drip-drip into the white-toothed cavity and rolled over his tongue and into his throat.

He sighed and set down the flask.

He looked at his pictures once more, his chest laboring. Then he pushed them aside with a drunken gesture and sank back in the chair.

He stared in sleepy dullness at the desk, the empty box, the can and flask. He ran two weary fingers over his mouth.

After a few moments his head slumped forward. His rattling snores echoed through the room. The festival was over.

WADE struggled up. He stumbled across the floor. It tried to heave itself up in his face. He got to the side of Castlemould's desk and held on dizzily. The old man still slept.

Wade edged around the desk, leaning against its solid surface. The room still spun.

He stood behind the old man's chair, looking down at the shambles of violent dining. He took a deep ragged breath and held onto the chair with eyes closed until the spasm of dizziness had passed.

He opened his eyes and looked once more at the desk.

He noticed the postcards. He stared incredulously.

They were pictures of food.

A head of cabbage, a roast turkey, a loaf of bread. In some of them, partially unclad women held desiccated lettuce leaves, lean tomatoes, dried up oranges; held them out in their hands in profane offering.

"God, I want to go back," he muttered.

He was halfway to the door when he realized he had no idea where his chamber was.

He stood weaving on the threadbare rug, listening to Castlemould's snores ring out.

He went back then and squatted dizzily by the side of the desk. He kept his eyes on the open-mouthed Commissioner as he slid out the desk drawers.

In the bottom drawer he found what he wanted, a strange gun-like weapon.

He took it. "Get up," he said angrily, rapping the old man on the head.

"Aaah!!" cried Castlemould, starting up. His midriff collided with his desk. He fell back in the chair, the wind knocked out of him.

"Get up," Wade said.

A confused Castlemould stared up. He tried to smile and a crumb fell from his lips.

"Now, look here, young man."

"*Shut up.* You're taking me back to my chamber."

"Wait—"

"Now!"

"Careful! Don't fool with that thing. It's dangerous."

"I hope it's very dangerous," Wade said. "Get up now and take me to your car."

Castlemould groaned to his feet.

"Young man, this is . . ."

"Oh, be quiet, you stupid senile goat. Take me to your car, and keep hoping I don't pull this lever."

"God, don't do that!"

The Commissioner suddenly stopped halfway to the door. He grimaced and bent over as his stomach began to protest against its violation.

"Oh! That food," he muttered wretchedly.

"I hope you have the belly ache of the century," said Wade, prodding him on. "You deserve it."

The old man clutched at his paunch. "Ohhhh," he groaned. "Don't shove."

They went into the hall. Castlemould spun against the closet door. He clawed at the wood.

"I'm dying!" he announced.

Wade ordered. "Come on!"

Castlemould, heedless, pulled open the door and plunged into the closet depths. There, in the stuffy blackness, he was very sick.

Wade turned away in disgust.

At last the old man stumbled forth, face white and drawn.

He shut the door and leaned back against it.

"Oh," he said, weakly.

"You deserved that," Wade said. "Richly."

"Don't talk," begged the old man. "I may die yet."

"Let's go," Wade said.

THEY were in the car. A recovered Commissioner was at the wheel. Wade sat across the wide front seat, holding the weapon level with Castlemould's chest.

"I apologize for . . ." started the Commissioner.

"Drive."

"Well, I don't like to appear inhospitable."

"Be quiet."

The old man made a face.

"Young man," he said tentatively. "How would you like to make some money?"

Wade knew what was coming. "How?" he said flatly.

"Very simple."

"Bring you food," Wade finished.

Castlemould's face twitched.

"Well," he whined, "what's so bad about that?"

"You have the gall to ask me that," Wade said.

"Now, look, young man. Son. . ."

"Oh, God, *shut* up," Wade said sourly. "Think about your hall closet and shut up."

"Now, son," insisted the Commissioner. "That was only because I'm not used to it. But now I—" his face became suddenly clever and evil—"I have a taste for it."

The car turned a corner. Far ahead Wade saw his chamber.

"Then lose your taste," he said, never taking his eyes off the old man.

The Commissioner looked desperate. His scrawny fingers tightened on the wheel. His left foot drummed resolutely on the floorboards.

"You won't change your mind?" he said.

"You're lucky I don't shoot you."

Castlemould said no more. He watched the road with slitted, calculating eyes.

The car hissed up beside the chamber and stopped. "Tell the officers you want to examine the chamber," Wade ordered him.

"If I don't?"

"Then whatever comes out of this barrel, you'll get right in the stomach."

Castlemould forced a brisk smile to his lips as the officers came up.

"What's the meaning . . . oh, Commissioner," the officer said, sliding unnoticeably from truculence to reverence. "What can we do for you?" He doffed his cap with a face-halving smile.

"Want to look over that . . . thing," said Castlemould. "Want to check something."

"Yes *sir*, sir," said the officer.

"I'm putting the gun in my pocket," said Wade quietly.

The Commissioner said nothing as he opened the door. The two of them got out and approached the chamber.

"I'll go in first," Castlemould said loudly. "Might be dangerous in there. Wouldn't have you take a risk."

The officers murmured appreciatingly. Wade's mouth tightened. He contented himself by thinking how hard he was going to boot the old man right out into the street.

THE Commissioner's bones crackled as he reached up for the two door rungs. He pulled himself up with a

[*Turn page*]

teeth-clenching grunt. Wade gave him a shove and enjoyed the sound of the old Commisisioner staggering against the steel bulkhead inside.

He reached up his free hand.

He couldn't make it with just one hand. He needed both rungs. He grabbed them and swung in quickly.

Castlemould was waiting. The moment Wade entered a scrawny hand plunged into his pocket. The weapon was jerked out.

"Aaah *haah!*"

The high-pitched voice echoed shrilly inside the small shell.

Wade pressed against the bulkhead. He could see a little in the dimness.

"What do you think you're going to do now?" he asked.

The white teeth flashed. "You're taking me back," Castlemould said. "I'm going with you."

"There's only room for one person in here."

"Then it'll be me."

"You can't operate it."

"You'll tell me," Castlemould ordered, waving the weapon.

"Or what?"

"Or I'll burn you up."

Wade tensed himself.

"And if I tell you?" he asked.

"You stay here till I come back."

"I don't believe you."

"You have to, young man," cackled the Commissioner. "Tell me how it works."

Wade reached for his pocket.

"Watch it!" warned Castlemould.

"Do you want me to get out the instruction sheets or not?"

"Go on. But be careful. Instruction sheets, haah?"

"You wouldn't understand a word of them."

Wade reached into his pocket.

"What's that you've got?" Castlemould asked. "That's not paper."

"A bar of chocolate," Wade breathed the words. "A thick, sweet, creamy rich bar of chocolate."

"Gimme it!"

"Here. Take it."

The Commissioner lunged. He fell off balance, and the weapon pointed at the floor.

Wade stepped to one side and grabbed the old man by the collar and the seat of the pants. He hurled Commissioner Castlemould out through the doorway. The old man went sprawling into the street.

Shouts. The officers were horrified.

Wade tossed the chocolate bar after him.

"Obscene dog!" he roared, as the bar bounced off Castlemould's skull.

He jerked the door shut and turned the wheel until it was sealed. He strapped himself down and flipped switches, chuckling at the thought of the Commissioner trying to explain the bar of chocolate so he could keep it.

Outside, the intersection was suddenly empty, except for staring people and a few wisps of acrid smoke.

There was only one sound in the dead stillness.

The rising wail of a hungry old man.

The chamber shuddered to a halt. The door opened and Wade jumped out. He was surrounded by men and students who came flooding from the control room.

"Hey!" said his friend. "You made it!"

"Of course," Wade said, feeling the pleasure of understatement.

"This calls for a celebration," said the friend. "I'm taking you out tonight and buying you the biggest steak you ever . . . hey, what's the matter?"

Professor Wade was blushing.

●

# The Promise

## By D. S. HALACY, JR.

*What strange inner force made Dr. Carver's model of the Solar System explode as soon as it was finished?*

CARVER, Dr. Joseph Carver, sucked in his breath as the universe blew up in front of him. For long seconds afterward he crouched tensely at the foot thick inspection window of the evacuated chamber.

His "little system" had lasted just over twenty-three minutes. Carver swore softly, incredibly, the word cutting through the soundlessness of the lab. It had been no failure! His fantastic notion—that he could reproduce the solar system in three dimensions—had worked. A sudden clamoring idea seven months ago had started him off. In theory it was simple; taking a picture, so to speak, with his scanner and focusing the scaled down image into the chamber in the Foundation laboratory.


DR. JOSEPH CARVER

For years, radar equipment had been capable of picking up distant objects and representing them on a screen. Carver added a dimension and went on from there.

He had discussed it with Meyer at lunch shortly after the idea came to him, and flushed hotly at the older physicist's sarcastic reaction.

"You've been reading fiction again," Meyer said, and laughed. "Go easy Carver!"

Meyer would think differently now, when he saw the "little system" in action. He might forget his own pet project, the Z bomb. Carver winced at the thought of duplicating his model. Also there'd be plenty of criticism, if the Foundation learned how much equipment he had diverted. Already he had used over a hundred thousand dollars, charging it up to his missile project, and related electronic work.

Then he shrugged, almost angrily. What he had would be worth millions when he perfected it. Any new thing had bugs to be gotten out. He drove a fist enthusiastically against his palm, recalling the scene in the chamber. It had been perfect, the sun a white glowing nucleus, with the planets in their places, racing around on their orbits.

HE WASN'T yet sure of the time scale, just that it was incredibly fast, which was logical with the physical scale he used. He would rebuild it, set up his

scanner again and sweep the skys until he had reflections from every bit of matter in the system. This time he would have his microscopes ready. A stroboscope attachment might not be amiss. There was so much he had to see.

It was over a month, thirty-four days actually, before he energized the grids in the chamber again. Hand on the switch, he held his breath, half afraid he had failed. But there it was, materializing immediately, just as it had before. He singled out the Earth, the moon a band about it. Training the microscope on the speck that represented his planet, he locked in its drive and flicked the stroboscope on. The screen lit up, fuzzy and blurred, and he spent precious minutes clearing up the picture.

Then he gasped, jaw going loose. Before him was the sunlit half of the earth, and he could see the continents, astonishingly like the relief globe in the museum on the grounds. And that must be cloud cover that obscured the hidden parts. The image was perfect apparently, a definition he hadn't hoped for. This was a possibility he hadn't considered.

With damp fingers, he flicked the microscope free and picked up the sun, snapping a filter in place. Dark blobs wavered as he watched and then, as suddenly as before, the whole thing was gone with a sort of inaudible plop!

Damn! He must still be using too much receiver boost, overloading the image until it finally blew the circuits. Disappointed, but with hands still shaking with excitement, he checked the stopwatch. The system had blown up at thirteen minutes this time.

He cursed again, bitterly. He was getting worse instead of better, and just when he was realizing what he had stumbled on. He would have to control his feelings, it must be the voltage, he'd cut it by a fourth next time. And next time, he'd keep his model going.

A month later, he was so sure of success, he called Meyer in. The older man hesitated about coming. His Z-bomb project was taking all his time.

"All right, Carver, if you really have something important," he grumbled. Carver smiled as he hung up, wondering what Meyer would say when he saw the system materialize, and looked at the Earth on the microscope screen. It would make the Z-bomb work look like Middle Ages stuff!

Meyer came, scowling, and Carver seated him before the chamber. "What the dev—" Meyer exploded, but Carver cut him off with an upraised hand.

He flipped the switch and pointed as the system emerged from the sterile vacuum behind the inspection glass. Meyer hunched forward, peering at the whirling specks. Carver indicated the microscope screen and adjusted it quickly. The older man frowned as he watched, eyes moving from the chamber itself to the screen that enlarged the model of the Earth. Carver grinned happily. This time it would work and keep working.

"Recognize North America?" he asked Meyer. The man whistled sibilantly in the darkness. "How in creation do you—" His words cut off as the chamber suddenly went dark again. Carver slammed down a notepad in disgust and turned up the lights.

"I thought I had it this time," he said angrily.

Meyer's eyes still narrowed unbelievingly, then suddenly he pressed his lips together and got to his feet. "Wait a minute, Carver," he snapped. "Is this part of your gag about reproducing the solar system with a scanner?"

"It's no gag," Carver retorted, working futilely with his control board. "I've reproduced the system. You saw it, you saw the accuracy." He paused, before he went on cautiously. "I want you to back me up when I ask for an appropriation." He looked up at Meyer.

THE physicist snorted and got to his feet. "Back you up!" He laughed out loud. "If this is your idea of a joke, Carver, don't include me in any more of them. It's a clever trick, but I'm not

having any. You better forget the magic effects and get to work, or I'll be forced to report you to the Board." He picked up his briefcase and strode to the door of the lab.

"That's an hour wasted," he said coldly. "An hour I can't spare, with the Z-bomb to be tried out on the—" His eyes widened as he caught himself. "That's a secret I can't tell even you," he snapped. He stalked off.

"Meyer!" Carver started after him, then gave it up. Back in the lab he sank into a chair at his desk, staring at the chamber. All that money, all that time. He glanced at the stopwatch. Less than three minutes! His mind raged. So near, and so damnably far.

Each trial had gotten worse. Twenty-three, thirteen, and three. He frowned and picked up a pencil. That was a coincidence. He plotted the numbers roughly on a piece of scratch paper, noting the spacing. There was ten minutes between each of the first two attempts. And suddenly he stiffened. There had been about a month between each test. Fingers stiff, he drew a base line and marked it off. Then he plotted the three times vertically and drew in the curve. A straight line, nearly, intersecting his base line about—

Carver swore and ripped through his stack of notes on the trials. He had kept accurate track of the times and now he plotted them carefully on graph paper. When he had finished, he went grimly to the computer in the building and fed in his problem.

He converted the answer to a date and time and his body was cold now as he went to the phone.

"Meyer? This is Carver. Wait—this will only take a minute." He looked at his paper. "The Z-bomb goes off on the twenty-seventh of this month, right? At twelve noon."

There was a pause, with only the carrier hum in his ear. Then Meyer's explosive roar. "Who told you, Carver?" he shouted. "That is secret information, you shouldn't have. Besides," he went on, "We don't know for certain that it *will* explode."

"It will," Carver said. "Don't worry, Meyer, your bomb will go off." He hung up slowly, hearing Meyer's protests screeching from the receiver until it clicked in the cradle.

Carver stood up and walked to the chamber. He had duplicated the solar system all right. To a degree that was past belief. The bomb would go off, he knew. Because it *had* gone off three times in the model, and time was running out, down the straightline graph that interested the base at noon on the twenty-seventh. It wasn't a warning, it was a promise.


"What happened?" demanded Phil as

## I

SHE looked at Phil Watson thoughtfully. "You're the most restless man I've ever met," she told him.

Phil smiled sourly. "Sorry," he said. "I'm—just always looking, I guess." He tried to straighten up his smile because he wanted this date to run off happily. The attempt only pointed out his unease.

"What are you looking for?" asked Louise.

"Damned if I know," he said. He contemplated her thoughtfully. She was a good looking woman of about twenty three or thereabouts, brunette, slender, high breasted and long legged. Pretty, but no startling beauty, he decided. Brains she must have, and Phil's interest lifted for a moment as he wondered how she used them. She was a schoolteacher. It had been a long time since Phil Watson had been in a position to observe how a schoolteacher used her brains, and then he had not been intellectually equipped to study the process. He smiled wistfully, then, and started to say, "Everything seems so staid and uneventful. I—"

***When a mountain of ice suddenly appeared on Uranus, things happened***

# THE PLANET MENDER

*A Novelet by*

## GEORGE O. SMITH

he saw the havoc in the station

The music from the radio came to a dreamy halt and the voice of the announcer said: "This is the Mars-Week program, brought to you by the Mars Chamber of Commerce. Remember to stay tuned to this station; be sure that you don't miss the announcement of the century! Some time this week—within the next few days—the one-billionth space traveler will set foot on Mars! So be ready for the Mars-wide celebration. Be ready to greet the one billionth person! Who will it be? Who will be the—"

PHIL walked over and turned the radio off. "That's partly what I mean, I think," he said, and then joined Louise Hannon's rueful laugh. He added: "That's no less addled than I am."

"I know," she said.

"I wonder if you do," he murmured. "Look, Louise. Here we sit in a city on Mars waiting for the one-billionth visitor. It should be wonderful. It ought to be a breathless moment—something soul-stirring. So what do we have? A radio program doing its best to whip up some enthusiasm for something that

*all over the solar system . . . especially to Mercury, Mars and Phil Watson!*

would have made people bug-eyed a hundred years ago."

Louise nodded solemnly. "A hundred years ago it was the first man on Mars. That *was* exciting. But you can't go on and on in a breathless state forever. What do you want?"

"A little excitement. Everything's so smooth and well-controlled. Mars was an adventurous place back then. Now? Now we have a planet full of bank clerks and farmers and machinists and hot water and gin mills and apartments and—"

"You'd prefer it if we had to hack our lives out of the planet's crust, fighting the cold nights and the thin air and the arid red desert?"

Phil shook his head. "That's where my seeking falls flat on its face. I like my comforts too . . . but there ought to be something left to chance."

Louise laughed. "In other words you want to hang your cake on the wall after your dessert?"

"Maybe. Maybe."

Louise went to the French doors and looked out on the Martian landscape. It was dark. Hazy-dark, with just enough luminosity at the horizon to show the flatness of the land. She took a deep breath and lifted her arms to the night air. Her gesture was unconsciously alluring and Phil went over to stand beside her. He put an arm around the slenderness of her waist and turned her to face him. Her arms came down, her hands squeezed his shoulders gently; but she held herself at arms' length from him, leaning back and looking solemnly into his eyes.

"You're seeking romance and adventure," she told him. "And I represent —which?"

Phil felt some of the wind go out of his sails. Lamely he said: "Which will you have?"

She leaned forward suddenly and pecked him chastely on the lips. "A little romance first—and then the adventure of motherhood," she told him. "Is that enough?"

These were not exactly the plans that Phil had in mind, but he could not tell her so. Besides, she knew darned well already. His mental fumblings for something to say were interrupted by a slight flickering in the sky, followed by a muttering of thunder. A few pelting drops of rain—large wet ones—struck Phil on the head and splashed from Louise's cheeks.

Startled, they turned out of the half embrace and peered into the night.

THE sky was split by a jagged streak of blue-white and the roll of thunder crescendoed to an artillery-crashing. Phil drew Louise back into the shelter of the doorframe as the rain increased to a steady downpour.

"Talk about your careful controls and your planning," said Louise uncertainly.

"This can happen," he said matter-of-factly. "So one of the circuits went out. Chances are that it went out an hour ago and is now repaired, but the time-lag let this catch up with us only now. If it were bad they'd have let us know. Everything's under con—"

The lightning and the resulting crash came simultaneously, and the heavens opened up. Water lashed down at them in sheets, driven by the wind. Startled, they retreated into the living room, and the rain followed them, soaking the rug and the floor and driving all the way across the apartment to fleck the far wall with darkly wet blotches that tried to run down but soaked into the plaster before the wetness could reach the floor. There was a banshee howl as the wind changed direction; driving rain lashed in through the back windows and slammed the French doors shut. Panes of glass shattered and fell on the tiny balcony outside. Then the wind whipped around again and slashed rain in through the open panes before it banged the doors inward and against the wall, finishing the job of ruining them completely.

Water churned along the baseboard

moulding like a small flood. The wind whipped a picture from the wall and hurled it against the floor. The shade blew from a floorlamp and there was the warning sizzle from the wall plug, enough to call their attention that way in time to see blue-white smoke issue from the socket before the lamp went out.

"It's all right—the fuse blew—" said Phil, groping in the semidark. The back of the apartment still had light; the place was on two fused circuits.

They went into the kitchen by the roundabout way to close whatever windows there were; they sat in the kitchen and eyed the water running on the linoleum.

"This is to be expected?" asked Louise in a cynical tone.

"Something must have happened. I'd better—"

The wind howled again, cutting him off. They went to the window and looked out. Between the lashings of rain that completely obscured the glass in a running sheet of water, the landscape was flashed on and off in the lightning. In its flicker they could see the red mud leaping and churning as the cloudburst whipped down.

"You can't go out in this," said Louise.

"They'll be needing me."

"But you can't—"

Phil rubbed his damp scalp unhappily. "Open roadster," he gritted. "Damn it!"

Louise laughed. "Funny," she said. "Screamingly funny."

"What's so damned funny?" he demanded.

"The gentleman comes a-wooing. Nothing could better fit the gentleman's plans than to be entrapped with the lady of his desire so that she, hard-hearted as she might be, would not suggest that he leave. But the gentleman happens to be big cheese in Weather Control, and in the case of emergency he must forego pleasure for business, no matter if he gets drowned for it!"

Phil grunted. That just about pinned it down pat. "Wouldn't do me much good to stay," he grumbled. "A-top it all, every darned bed in the joint is soaked to the springs."

He left her and went to the telephone. He tried it, but even Louise could hear the constant rattle of static that chattered out of the earpiece. The telephone was useless.

The lights flickered a bit, went dim, then came on again at about half-brilliance, wavering slightly. The semidarkness and the wail of the wind and the constant roar of the rain made Phil's nerves grate. The helplessness of his position added to his state of nerves; he knew that he had no chance to get to the weather control station some twenty

## Cosmic Plumber

**IF MAN ever does step off the Earth and begin to colonize other planets, he will undoubtedly find conditions very much different from those to which his body is adapted. The problem then will be the choice of changing conditions, or adapting a new body.**

**Assuming technology has advanced to the point of space travel, it will also have advanced to the point of dealing with planets and climates as it once dealt with the soil and rivers of its own planet. And transforming a planet would be preferable to breeding a new and strange race of men. So now we have The Planet Mender, a professional who can manufacture environments to order. And a cuter tale of the troubles of a cosmic plumber has rarely been told.**

***—The Editor***

miles away in his open roadster.

Louise was visibly jittering. Phil poured a stiff jolt from the bottle on the sink and put it in her hand. Louise tossed it down without wincing; it seemed to iron her out a bit. Phil tried a jolt himself, but it was raw and bitter instead of the smooth stuff he knew it to be. It did not help him at all.

With a false feeling of confidence, Phil smoothed her damp hair and patted her shoulder. He could feel the damp warmth under the thin dress and he dimly realized that this sort of thing should have aroused him, but it did not and he knew why. "Take it easy, Louise," he said with a wry smile. "We've got a bunch of good bright eggs at the station and they'll have this ironed out in no time."

She shivered.

Phil pushed her gently in the direction of the bedroom. "Get into some dry clothing."

Rain sprayed in through the ruined French doors and filled the apartment with mist, and Phil suddenly followed Louise into the bedroom. She was toweling her bare back as he came in, she looked around, wonderment on her face. Phil grabbed a light blanket from her bed and went out with it. It was only after he had the blanket nailed to the frame of the French door that he realized that she had been completely undressed.

The blanket did not cut the deluge completely, but it helped.

Louise came out in a skirt and blouse with a towel wrapped around her head. She handed Phil another towel, a huge one. He nodded.

## II

THE rain had not decreased; the wind was still howling and the lights were still flickering. Phil sat on the kitchen table wrapped in the huge towel while Louise tested the clothing she was baking dry in the oven.

"Well done or rare?" she asked him.

"Well done, please."

"I think you can try them now," she said. She left the kitchen while he donned his shapeless trousers and rumpled shirt. He called her and she came back with the towel gone from her head, fluffing out her hair with her hands. "Dry?"

"Dry—but for how long?" he mumbled. "I've got to get—"

"You'll wait here until you can get out without being drowned. Pour me another, will you?"

Phil did, and he poured himself another, too. It went down more smoothly than the previous drink but it still lacked something.

Hours passed; the rain got worse; and Phil could no longer comfort himself with his oft-repeated statement that the boys in the station would have it ironed out in jig time. Something was completely wrong with this picture. Man and man's science had brought water to Mars; but it was never planned, never intended, never computed to deliver water anywhere in quantities approaching this deluge. It was more than blown fuse or a dead vacuum tube or even a ruined servo-amplifier. This was a major catastrophe, and Phil Watson was trapped away from the scene of activities.

And then eventually the doorbell rang and they went to answer it. It was Tommy Regan who came in like a ghost, cowering beneath a white rubber poncho that swirled around him like a wet tent with the tentpoles removed. He stumbled into the living room and threw the fore edge of the rubber sheet back and over, flinging a spray of water.

"God!" he gritted. "Phil—come on!"

"How'd y' get here?"

"Covered jeep-wagon. I— Come on!" Tommy Regan tossed a small folded package at Phil and it opened partly on its flight. It was another poncho. Or, more properly, it was a rubber sheet from the station's dispensary. "The process is involved but interesting," said Regan grimly. "You lift the front and

aim, then you plunge it blind until you have to take aim again. Ready?"

"Not without me!" wailed Louise.

"You'll drown," said Regan flatly.

"Wait—" Louise went into the bathroom and came out wrapped in the shower curtain. "Let's go," she said.

"But—"

She shook her head. "I'm frightened bright purple," she said shakily. "But I'm with a couple of people who might be able to help; I'm not going to stay in this mess of an apartment alone while they go out to stop this thing. I'm going along."

"It's rough," said Regan.

"Staying here alone would be rougher."

"But—"

"Come on, then," Phil broke in. "There's been too much time wasted already."

THEY stood downstairs in the lobby while Regan explained. "The crate's out there," he said, pointing through the glass doors. "You can't see it, but it's there. You've got to cover your face and plunge. I'll go first. I'll open the door and get in. Miss Hannon comes second and I'll swing the door open for her. You come last, Phil. Each of you count twenty seconds so I'll be able to time your arrivals. Got it?"

They nodded, and Tommy Regan left.

Twenty seconds later Phil held the lobby door for Louise; she flopped the edge of the shower curtain over her face, put her head down, and disappeared into the wall of downpour. And twenty seconds later Phil covered his own head and went out into it himself.

It was like trying to run in a swimming pool; it was like trying to make time through a haymow. The rain hammered at his head through the rubber sheet. The air he took in was heavy with water and the wind whipped the edge of the sheet around his legs and the skirling sheet carried wetness up into his face. Water tore at his ankles and made him stumble, and the lashing sheet turned him this way and that so that he lost his direction.

He lifted the fore edge for a brief second.

The car was there before him, seen briefly before the water pasted his eyes closed and the wind beat down the uplifted edge of his poncho. He lurched forward and stumbled into the car. Louise slammed the door shut as he fell into the seat.

Regan drove slowly, peering through the rain-pelted windshield. The wipers cut brief arches on the glass and left a bit of transparency just behind them through which the eye could see if it were fast enough. There was, of course, no traffic to contend with, which was a good thing because Regan swerved from one side of the road to the other. It was only about twenty miles from Louise's apartment to the weather control station, but they took a full two hours to fumble their way along the water-strewn road.

Going in was no problem. The station was equipped with a garage. They were inside with the big door closed against the rain before they opened the door of the car.

Upstairs in the station was the mess.

THE acrid smell of burned-out electrical component floated in the air like the cigar smoke in a night club. Hogarth was wrist-deep in a panel-assembly, Forsyth was changing relays as fast as he could unsolder and replace them, Jones was checking blackish-looking cables with an ohmmeter, Robinson was making a run-down on the terminal-strips, Merrivale was probing deep into the guts of a meter with a slender pair of watchmaker's forceps and Wadsworth was chopping the ruined leads from transformers and dropping the things on the floor behind him. Hansen, the janitor, was stolidly pulling burned-out vacuum tubes from their sockets and replacing them from the large sack he had slung over his shoulder. Two of the station's stenographers were there; el-

derly Miss Morgan, whose only familiarity with machinery was her knowledge of how to run a typewriter, was trekking back and forth from the stockroom to the operations department bringing replacement parts; and Miss Larrabee, the station's glamor-girl whose highest asset was her ability to take dictation and keep her stocking seams straight at the same time, was delivering pliers, cutters, screwdrivers and wrenches from one man to the other as they were needed.

"What happened?" demanded Phil.

Regan threw out his hands. "Who knows?" he said plaintively. "All at once everything went to hell. There was a sizzle and then a f-f-f-t! and the whole goddam shooting match went to hell in a five-gallon bucket. Overload, I think—"

"Tried the radio?" said Phil.

"I tried the telephone. No dice."

"Radio's worse," Regan broke in. "It's—"

"Mercury," said Phil flatly. "Something's wrong there."

Regan said, "But how—"

Phil looked around the station. "Someone's got to go. You've got the thing under control as best you can—I'll hit space."

"Okay. But tell 'em to shut the damned water off!"

There was a flurry and a fuss of voices from the stairway leading from the garage. A group of men in rather soggy business suits came in. They were—literally—as mad as wet hens.

The foremost of them looked the situation over with the baffled eyes of the layman and began to sputter: "Who's in charge here?"

"I am," said Phil.

High blood-pressure became apparent. "What on Mars do you think you're *doing?*"

"We've had a bit of trouble."

"You've had—" the gentleman choked up. His face purpled and his throat bulged over the edge of his damp collar.

Phil eyed the group with just a trace of cynical amusement. "As soon as we can find my magician's wand, which is somewhere in the toolroom, we'll have this fixed. In the meantime we're doing all we can with the standard, old-fashioned things like long-nose pliers and side-cutters."

"Who are you?"

"I'm Phillip Watson. Who are you?"

"I'm John Longacre. I'm chairman of the Senatorial Committee on Internal Affairs, and I'll have you know—"

"I'm glad to meet you."

"You're in charge here?" demanded Longacre sharply.

"Yes."

"I should think that an older, more responsible man would be in charge."

"I believe that I am responsible enough. I've been told so by Solar Weather Control. They didn't pick me for the shape of my head or the size of my ears. I'm also capable of doing everything that can be done."

"Are you?" demanded Longacre sourly. "Why aren't you helping? Why isn't this young woman helping?"

"I'm not helping because I'm talking to you, and this young lady is not helping because before any work could be assigned to her you gentlemen entered and interrupted the proceedings."

Longacre harrumphed, took a deep breath, and tried to get hold of his blood-pressure. "There is no sense in bandying any more words," he said. "I am empowered to instruct you to cause an end to this debacle."

"Thank you for the privilege. I assure you that we do not care for it any more than you do."

ONE of the other gentlemen behind Longacre stepped up while Longacre was regaining his breath. "I'm Senator Forbes. Do you realize that billions of dollars worth of damage has been done already?"

"Of course—"

"You must put a stop to it."

"Look," said Phil Watson gently. "Please be assured that we are not sit-

ting here with folded hands hoping it will go away."

Senator Longacre regained his breath and used it to say, "Whether or not your attitude is sufficiently acute will be decided later. At the present moment I carry authorization from the Martian Senate to deliver unto you the right to do whatever is necessary to cause the abatement of this catastrophe."

"Senator, we're wasting time. I assure you that if I needed anything that the Planet Mars has to offer I would not wait for a Senatorial authority to demand it. You're a little late with your offer."

"This is a deplorable situation," said Senator Forbes. "Some time this week we will have the arrival of the billionth space traveler to Mars—and what will he find?"

Phil snorted. "Nine hundred and ninety-nine million, nine hundred and ninety-nine thousand and a few odd hundred persons have put their good right foot on Mars and found the place in about every stage of development from hell to breakfast. Your billionth visitor doesn't faze me."

"But the Mars-wide celebration—"

"How about the Mars-wide deluge?"

"This must be stopped!" roared Senator Forbes.

Longacre added: "You have every authority. Until this terrible thing has been culminated to the satisfaction of—"

"Why not forget the high-flown language, Senator?"

"We'll see about this attitude of yours, young man!"

"I've got every authority?"

"You have. Use it!"

"Miss Hannon, Mister Regan: you have heard this. I have authority to use whatever measures I deem necessary to cause the satisfactory conclusion of this cosmic catastrophe. So, gentlemen, my first order under this authority is to impress you as workmen."

"Impress us?" roared Senator Longacre.

"Impress you. We have one hundred and sixteen thousand vacuum tubes, all of which must be replaced. There are ten of you, which makes eleven thousand six hundred tubes each. I think you may be able to average about five hundred an hour after you get some practise, which will take you approximately—"

"We are issuing you an ultimatum, Mister Watson. We—"

"The title is Doctor Watson, Senator, and no relation to the friend of the brilliant Sherlock Holmes. As to your ultimatum, no one can ultimate to sheer arthmetic, nor especially logical mathematics. One man may dig a hole in ten hours, but that does not mean that thirty-six thousand men can dig the same hole in one second. So I am impressing you as workmen. If you have not completed this job within the time limit of your ultimatum, you have only yourselves to blame. Hansen!"

"Yes, boss."

"You are in charge of this group. See that they get these tubes replaced in the shortest possible time."

"I get it, boss."

Senator Forbes spluttered. "We'll answer to no underling—"

"You'll have to."

SENATOR LONGACRE eyed Phil sourly. "And what are you going to be doing?"

"I'll tell you. When there's trouble, the proper place to stop it is at the source. I am going to Mercury to stop the flow of water!"

"Mercury?"

Phil said patiently, "I'll take another minute and a half to explain. We get water from Mercury via matter transmitter. The way a matter transmitter works is too involved and complicated for any simple explanation, but the gist of the argument is that the damned things have to deliver what's put into them or violate the law of conservation of energy. Since the water is stuffed into the transmitter on Mercury, the only way to stop all this wetness is to go

there and stop the input, see?"

"Haven't you got men on Mercury?"

"Darned right, and a darned good crew, too. So something must be fouled up or they'd have shut it off themselves. So—work hard, gentlemen!"

"Wait. If the transmitter is on Mercury what's all this equipment we've got to fix?"

"Briefly, this is the hygrometric integrating averager and primary servomechanistic feed-back control originating device."

"Huh?"

"You asked for it. I'll explain it after we get dried out." Phil snorted derisively. "We mustn't let our billionth visitor get his dainty feet damp, must we?"

He turned on his heel and left the senatorial group spluttering.

At the door he was halted by a cry from Senator Longacre: "But Doctor Watson, this man is the janitor of this station!"

Phil Watson turned with a laugh. "That's okay. I consider all of you gentlemen unskilled labor."

He got into the car and closed the door; it was opened again almost immediately and Louise got in. "Maybe I can help?"

"Maybe. But—"

"But what?" she asked.

He shook his head. "I'd like the company," he said. "Normally there might be a fuss about taking unauthorized persons on a jaunt like this, but I think it will probably be overlooked because this is an emergency. And you might be able to help."

"I hope so," she said soberly.

### III

THE trek was not as bad as the original run from the apartment to the station. The station's fast little spaceship stood on the field a couple of hundred yards away and the jeep-wagon made it in a matter of a minute or so through the blinding rain. The rough part was getting the spacelock open; it did not flip open, but moved ponderously. Phil was completely wet even under his poncho by the time door swung wide; Louise suffered less because she waited in the car until she could run for it.

And then for the first time in hours the roar of the rain and the rumble of the thunder was muted. The dome of the ship was a blind running river, but Phil did not care. All he was going was straight up and there was nothing flying that night.

He touched the console buttons and they rose through the blackness and the rain.

"What was all that string of long words you used?" Louise asked after a moment.

"Doubletalk. They wouldn't have understood the real name either so why bother?"

"But if the matter transmitter is on Mercury, what is your station?"

"Primary control," he said. "Simply and easily, it measures the amount of surface water on Mars and sends out signals accordingly to control the input. You see, Louise, Mars is as dry as a sponge. This guff about drying sea-bottoms and so on is so much food for the birds. Mars never had enough water to begin with. So the boys computed how much water Mars would soak up and came up with a rather staggering figure. It couldn't possibly be fed in all at once. It's got to go in very, very slow, otherwise we have a recurrence of this evening's floods. Furthermore, the additional mass of the added water is changing the Martian Year and the Martian Day ever-so-slightly because the angular momentum of the water is not exactly equal to the factor of Mars."

Phil stretched in his pilot's chair as Sol burst out from behind Mars. He watched the course integrator trace its line around the planet and towards Mercury. Satisfied, Phil relaxed again and went on:

"To top this all off—there are some places where the water soaks in faster

than others, so we have to make allowances. All over Mars there are hygrometers. Some are on the surface, some are buried deep. From each and every one comes information about the water-seepage and how it progresses. These signals are all combined, added up, divided down, multiplied by a bugger-factor and compared to readings of yesterday and the day before so that an all-comprehensive sigma curve can be drawn. The result of all these shenanigans is that the control station sends forth a signal to Mercury, who then delivers water according to the need."

"But where does the water come out of?"

"The receiving-end of the matter-transmitter is on Phobos. Phobos points one face to Mars all the time, you know, so the water sprays out of the face of the receiving plane right at Mars like a gigantic water sprinkler. It falleth like a gentle rain from heaven upon that place beneath in a finely divided mist. . . Ah!"

"Ah!—what?"

"We're on course at last. Now we make feet. This is going to darned near burn out the drivers, and the power-pile is going to diminish like the proverbial snowball in hell." Phil shoved a lever all the way home and the ship surged beneath them. "I've always wanted the opportunity to try a spacecraft on emergency drive. It's tough that we have to have a catastrophe to make it possible, but unless there's good reason for using the emergency power, it's verboten. Costs too much per hour, gets the guy involved in board of investigation where he had better be darned well prepared to give good and sufficient reason for depleting a pile. M'lady, can you brew coffee?"

"That I can."

"Then go brew. We make Mercury in two hours!"

THE place where the water came from had never been, nor would it ever be, a vacationland. The best that man had been able to produce in the way of redesigning the solar system had not gone far towards humanizing the cosmic hell that was the planet Mercury. Maybe the complete humanization of the planet would never take place simply because Mercury might better remain the way it was—with certain minor improvements. Mercury was an economically sound proposition; there is nothing in human history that suggests that an economically sound proposition has to be even remotely acceptable from the comfort-standpoint. Mercury had its important imports and its important exports and it was necessary. Perhaps a necessary evil, but there it was.

Someone, writing in a sensational vein, had once compared the solar system to a large apartment and had called Mercury the boiler room.

He had not been too far off the trolley. Mars, for one, is not a warm planet. Mercury is. So the water that went to Mars carried heat. The result— Mercury is the boiler room for the solar system. Thirty, end of statement.

Above the landing spaceship, Sol hung in the sky like an incandescent washtub. Below them was a roiling floor of mist, white mist that made the boiler room of the solar system look as though the main steam-pipe had sprung a rather gaudy leak.

It was into this misty maelstrom that Phil Watson dropped his ship, flying by the seat of his pants because the radio beacon was non-functional. There was no beacon, and probably for the same reason that Mars was now having a first-class cloudburst. Something had more than blown a fuse.

The cloud-layer was not as thick as it had seemed from above. The sun still shone through redly, fiendishly hot. Below, the cloud-layer parted and thinned until finally Phil and Louise could look down and see the source of the water that was being delivered to Mars.

"Down there should be the terminal of the Mercury Canal," said Phil.

Instead was a roiling lake that filled

the rock-rimmed valley and spilled over the edges into the valley next, where the water boiled away against the hot rocks and produced the clouds of vapor.

The Mercury Canal was not properly a canal; a real canal is a channel cut out of the face of a planet by man. Nor was the Mercury Canal a natural waterway, for if Mercury had ever had any water, it had boiled away and gone elsewhere sometime within a few minutes after the first day of creation. Instead, the Mercury Canal meandered along what might have been a natural waterway, following a couple of thousand miles of normal declivities in the rocky surface of Mercury. It collected in broad pools here and there and dropped magnificently in a couple of waterfalls, spreading out to collect the heat from Sol as it flowed from Inlet to Outlet.

Here at Outlet Station it should have been a pleasant sight.

The rim of the Canal had been cooled by the water, just as the water had been heated by the planet and the sun. So the combination of water and sun and the general hardiness of life in general had produced a rather lush rain-forestry growth along this end of the Mercury Canal. None of this was visible now. The Outlet Station was immersed completely, too, in the vast lake that churned and tossed.

The tropical sea in a typhoon or the North Atlantic lashing at the rock-bound coast of Maine in a Nor'easter or the Mississippi on a rampage were nearly as violent as this lake below.

"What," sad Phil tonelessly, "do we do now?"

Louise pointed over to one side. There were men and a line of parked trucks that looked very puny against the elemental violence. Phil slid the spaceship sidewise and landed on the ridge near them.

TOM BRITTON came running with the rest of his crew behind him.

"Phil!" cried Britton. "God—"

Britton looked exhausted. The rest of them were all the same; weariness and fear were in every face, in every step.

"What happened," he asked gently.

They all began to talk at once. "Flood—control circuits shot to hell—overload—water spilled over the ridge—cool water on hot rock—earthquake—lost the spacecraft—Station covered—can't get to it unless—"

Phil held up a hand. "I get it. Okay, fellows. Let's—"

An ear-splitting crash came from more than a mile away along the ridge. They turned to look, fear in every face.

The water had risen to the level of the ridge; through a little rill, an uncertain pseudopodium of water had trickled, wavering back and forth with the rise and fall of the waves, steaming briskly as it advanced onto the uncooled rock, reinforced as it was thrust back by the rising water behind it. It rose until it crossed the ridge and started to spill down the decline on the far side, hissing and steaming as it poured over.

Then the meeting of three cross-chop waves at the rill sent a twenty foot curler over the ridge into the valley beyond. The water plunged down the decline in a torrent and there was the shrill-pitched chatter of tearing glass as the ridge divided and opened to let the waters pour from the Mercury Canal into the hot valley beyond. Ton after ton of water poured through the crevasse and the sound on the hot rock was like the feeling of walking on sugar. The fault line spread and the next table of rock slowly uptilted and turned over, sinking like a raft capsizing. It slid into a glare of magma with the water behind it and the resulting explosion hurled rock and lava into the sky with a planet-shattering roar.

"Krakatoa," muttered Phil, awed.

The blackness billowed upward in a mighty column.

Their own ridge trembled.

"Inside" snapped Phil. They made it in a scramble, and the spaceship rose just as the ridge they left split into three uncertain blocks that gutted steam and

incandescent gas after them.

"We've got to stop it," said Phil.

They looked down at the mud, churning water and nodded. Tom Britton tried to speak, but only a croak came from his dry throat.

"We'll go in," said Phil flatly.

"In there?" cried Louise.

"No other way. Cross your fingers and deliver us a prayer. Strap down, fellows. This is going to be rough!"

WITH a flip of his hand on the lever, Phil dropped the spaceship into the angry water. The torrent caught the hull and slapped it back and forth, turned it over and rolled it sidewise. Phil fought the levers and righted his ship only to lose control again as the flood changed in flow and skirled around like the maelstrom that it was.

For down at the bottom of that lake there was an outlet; the system was no more than the washbowl of a Titan and the Outlet Station was its drain.

"Careful," said Britton. "You don't want to follow this flow into the transmitter-plane."

"I won't. I have no intention of returning to Mars through this pipe, and raining down out of the sky in a hodgepodge of my component molecules and junk aluminum and iron and stuff, all neatly divided molecularly."

"Ain't funny," grunted Britton.

"I wish we could see," complained Louise. The murky water pressed against the dome of the ship; it was a terrifying thing to see.

"We've got radar," grunted Phil. "But sonar gear is something that spacecraft don't pack for obvious reasons. And radar is no good under water. I think—yeow!"

A girder had probed for their glass dome; a large jagged thing as wide as a desk-top that would have poked through the dome with the ease of a needle piercing a toy balloon. The result would have been as fast and as deadly.

From below there came a shout: "Phil—up! Up, goddammit! The plane—"

Watson jockeyed the lever; then he moved the ship to one side, slowly. And out of the murk there appeared the edge of a building of concrete.

"We were low," said Phil in a dry-throated voice.

Terrifyingly close below them was a broad plane of force that shone like a perfect mirror if seen in the daylight. Above this plane, now, was a madness of angry water falling into it and falling out of a similar plane laid face-flat on Phobos. It was the down-drain of this monstrous washbowl.

Below the plane was a room, cylindrical and dry. The plane filled the metal-lined cylinder from wall to wall and there was no pressure because the plane did not attempt to hold the water but let it pass through, frictionless and free. In this cylindrical room, protected from the water by the matter-transmitting plane, was the equipment that generated the twin planes that delivered this torrent of water to Mars.

It must be shut off.

First they had to find the pathway to that room below the plane.

It was somewhere up on the top of the building, a tall castlement rising like a turret above the building itself. The word 'building' is not essentially correct, for Outlet Station was like no other building in the solar system. It was more like a well-proportioned and nicely-machined Lunar crater perhaps a mile in diameter. Or maybe a squat angel's food cake, much flatter and much wider across the hollow center. Normally, the water from the Mercury Canal flowed across the top of this 'building' and fell in a Niagara-dwarfing circle upon the plane of the matter transmitter to be hurled upon Mars as a mist from the sky, while the entrance to the underwater equipment rose above the flowing waters like a tall squat chimney.

They found it now, covered completely by the rise of the water.

"Ram it," said Britton. "Ram the door and let the water in—it'll ruin the damned gear below."

"Not if we can save it," said Phil.

"But how?"

"I can get down there through the watertight doors and turn the transmitter off."

"You turn it off and that water will drop on you and—"

"I'll turn it low."

"Ram it and bust the watertights," snarled Britton.

"Let me try it my way. Can you hang onto this crate? Keep it against this casement?"

"I can try."

"You can't just try. You've got to do it, Tom."

Louise looked frightened. "You're going out into this horror?"

"I've got to."

"But—"

"Just have a couple of prayers on tap, snooky. I'll be back."

"You're sure?"

He nodded. "We got a date to finish."

He left. He did not hear Louise complain to Britton that 'a date' was all she represented to Phil Watson.

## IV

DOWN below, Phil donned a spacesuit Hugson stood by, alternately shaking his head and suggesting that Phil bust the watertights and let the whole damned thing go down the drain. Phil went on stolidly.

He blew up the spacesuit until he was spread-eagled in the spacelock. Hugson closed the inner door and Phil was alone.

Gingerly, Phil opened the scuttlebutt and the water lanced in. It drove across the room and spattered against the inner wall and broke into a dashing spray. It ran down the airlock into a puddle on the floor that rose until the scuttlebutt was covered. The water churned in a furrow as Phil opened the valve wider. The room filled until a small space of air was left at the top and equilibrium of pressure had been reached.

Hugson pressed the outer-lock control and the big door swung inward, sending little churning currents around its edge. Phil went outside.

The water tore at him, whipped him about, and he was thankful for the line that held him fast to the ship. He fumbled over the wall of the casement, found the watertight door and opened it; he went inside and closed the outer door until the rushing flow of water was only a trickle.

Here Phil ponderd a problem that he had not anticipated. Before he could enter the building, he must free himself of the safety-line, so that the outer watertight could be closed. But—if he did that, how could he return to the spaceship afterwards?

Chance—hope and chance.

He cut his line and let the rushing water pull it out of the door. He closed the door, cutting himself from the outside world. The pump began to force the water out of the lock, and after a few moments Phil went into the building.

He walked easily, now. The weights he had left in the airlock, his space-helmet he flipped back over his shoulder.

He knew the station well. Here was the safety circuit and here was the control circuit, and above his head, stretching out and away from the slight curve of the cylindrical wall, was the mirror perfection of the matter transmitting plane. The trouble here was the local safety control. Too much pressure would destroy the plane, and sometimes the Mercury Canal delivered a bit more than expected; Mars always got a mild rain when the safety circuit took the extra load.

This time it was a prolonged rainstorm because something had gone hell, west, and crooked and deluged the matter transmitter. The thing was only doing its job—like the gismo that the Sorcerer's Apprentice started and couldn't shut off.

Phil turned off the safety circuit. He shut the admittance of the transmitter down, too, almost to zero.

The mirror surface above his head bowed down until the center touched the

concrete floor. The very center vanished into the stone, and Phil knew that the corresponding surface out on Phobos was bending in the opposite direction and that there was a bit of a dusty rain falling on Phobos from the underside of the receiver plane as the Mercury transmitter plane pushed its way through the concrete.

And then Phil got out of there quick. The thing might give way, and if it did he had no intention of standing under God-knows how many tons of falling water. He had done his best and the deluge upon Mars would cease. If he lost the station it was too bad, but he had tried. The next thing was to go to the source of this mess and see if he could fix things there in time to save the station.

THE torrent of water was slowed; its flow was stopped, but the churning would go on until the energy dissipated. Slowed; that was all. And the sucking flow of the rapids was gone.

But outside the watertight the spacecraft was so close—and so far away.

The safety line was whipped off somewhere, of course.

His magnetic shoes were as helpful on the concrete building as a pair of dancing pumps. He could not let go of the stanchion outside of the door; the water drew at him and pulled him back and forth. He grunted and swore, and the sound inside his helmet startled him.

He tried to step over to the spaceship when the water seemed quiet.

He was whipped from his feet and sent skirling tail over eyebrow.

His hands found the air-bottle valve and he blew up his spacesuit until it was spread-eagling him again. It was buoyant once he shucked the weights from his waistline.

He bobbed to the top and porpoised. The mad roil of the water was stilled; it was churning, of course, but the maelstrom had abated and the lashing waves were less awesome. They were strong enough to turn Phil over and over and to toss him under now and again. But he waited, feeling like a half-dozen dice in a shaker, safe in the cushion of the suit until the spaceship emerged and found him.

"Inlet," he said to Britton. "Or shall I take it?"

Britton stood out of the pilot's chair and waved Phil down. "I'm beat," he said.

"I gather. But look, Tom, before you come completely unglued, hang on while we figure out what happened."

"Okay. That I can do."

"Who's taking the trick at the cutter?"

"Johnny Wilkes and Walter Farrow."

"There's trouble there."

"Right."

Louise shook her head. "Would you bring me up to date? I feel like an innocent bystander."

Phil smiled briefly and said: "Sorry. I'm so used to it that I think everybody knows it." He waved a hand at the swollen Mercury Canal below them; they were sidling along above it, by now some distance from the terminal lake; the water here was still in a flood-rush. "Obviously," he said, "this water doesn't originate on Mercury. The boys here take tricks of a month, running Station One. Something must have happened there. Then the whole thing blew up, and among the things that went into the drink was the spacecraft used here to take care of such jaunts. So now we've got to go out to Station One and clean up the mess. We'll just stop at Inlet Station and pick up the rest of the crew and hie us out there."

"This is all very well," she said a little dazedly. "But you haven't told me where Station One is."

"Oh—forgetting again. It's at—"

"My God!" breathed Tom Britton.

They all looked—at Inlet Station.

INLET STATION was another huge matter-transmitter plane held vertically against the face of a cliff. In normal times, the face of the plane spewed

forth a mist of molecularly divided water that collected into drops of ice that fell into the valley below it. Rock and rill were usually covered with a glint of melting ice that built up into fantastic shapes. It was always a rather breath-taking sight . . . but pale and drab compared to the sight that had awakened Tom Britton.

The face of the transmitter plane was obscured by the froth of vapor that poured forth. This was no gentle flow, but a torrential storm. And cutting the mirror from full view was a half mile of sheer crystal fairyland. Pillars of crystal rose high, surmounted by monstrous, intricately fabricated six-sided figures. Twenty-foot snowflakes interlocked with one another, some of them whole, most of them partially-complete and mingled with the one beside it, lacery tangled into glittering dome and graceful rainbow-arch. Jagged and shapeless stalagmites of ice thrust upward through the graceful lace to heighten the delicacy by comparison and through this Chantilly of ice flowed the frothy vapor that was settling on it to add to the structure.

The sunlight glinted from the billion points, melting them just enough for the next layer to stick, melting the base of the crystal palace so that the structure flowed in a constantly changing pattern.

It was the Crystal Palace of Santa Claus or the Emerald City of the Land of Oz—

They watched, enraptured; perhaps entrapped by the awesome incongruity of such sheer beauty growing out of disaster.

Then Phil shook himself visibly. "Think we can make it to Inlet?"

Britton blinked and tore his eyes away. "How?"

"We might ram the ice until—"

"Until we get frozen in, too?"

"But—"

Britton pointed down. Dimly through the faceted crystals of a tall ice structure could be seen the sullen glint of metal. The power that would drive a spacecraft across the solar system nearly at the speed of light was not strong enough to break the grip of this ice-pack upon the hull. It was more probable that the ice was crushing the hull—

Somewhere down in that maze were the men who ran Inlet Station; and somewhere down in that crystal structure they would remain until the ice melted.

"That's why ship number two didn't go out either," said Britton.

Phil nodded. He set his levers and the vast ice field began to diminish until it was no more than a tiny glinting diamond on the white-hot face of Mercury. Then the spacecraft rounded Mercury, and the diamond was gone.

## V

SOL was dwindling below. The spacecraft was silent again, speeding through the inky black towards a mote in the sky ahead.

Phil stretched and said, "This is an odd situation."

"Odd?" asked Louise.

"Very. Here we are, you and I, isolated in a spacecraft with about six hours of nothing to do. There have been reams of words written and miles of film exposed and kilowatts of juice burned purveying situations like this. Attractive woman and virile man entrapped together with nothing to do but consider each other objectively or subjectively."

"Or personally."

"Yah. So what do we have? Here we are in a situation where your virtue shouldn't be worth a hoot—and the joint is loaded to the scuppers with dead-weary techs draped untastefully on everything that offers a flat surface. Not that we'd wake them up with any mild activity, but they've left us nothing to be active in."

Tom Britton emitted a slight snore, turned over langorously and burrowed deeper in the divan.

"Damned chaperone," growled Phil.

Louise laughed. "So," she said, "since my virtue is safe from harm, let's discuss something else."

"Might as well. We'll take up the matter of your virtue upon some date when the environment lends itself better to experimental evidence. So where do we go from here?"

"Phil, I'd like to know—where are we going?"

"To the ice-mines of the solar system," he said. "I thought you knew."

"You were about to tell me."

"That's so. Well, as I was saying, there is no native water on Mercury."

"I've also been given to understand that there was no air on Mercury either. But we were breathing."

"Sure were. But tell me, Louise, what grade of school do you teach?"

"Fourth grade."

"Then it isn't important to you—or them—yet. But you'd better be getting hep to a newer book of the skies."

"Go on."

"For centuries we have been told that Man is an adaptable animal. This isn't so. Man isn't adaptable. He is adapting. When his environment does not agree with his metabolism, he changes his environment. Nobody could really live on Mars. So we change it. We mine ice on Uranus and ship it to Mercury to warm it, and then deliver it to Mars as a hot rain. This changes both the temperature and the water-vapor content of the planet to a human-acceptable norm. Venus had a lousy atmosphere so we send that to Jupiter where it won't be noticed and replace it with oxygen and nitrogen from Mercury, which we get by delivering the frozen gas from Neptune. The whole thing is simple. Pluto was airless and damned cold. The air Pluto gets now is hot, and someday Pluto will be warm enough to accept colonization. Venus doesn't need hot air, so the stuff that goes there is not warmed much. And so it goes. The rest of the planets and satellites are all treated in the same way according to their various and sundry needs."

LOUISE looked at him softly. "And you're the gent who was complaining about everything being so calm and unruffled."

"What's exciting about running a central heating plant? I'm just a cosmic plumber."

"So?"

"It's darned dull excepting when it blows a fuse."

She laughed. "Do you understand yourself at all?"

"Who can?"

"That I can't answer."

"Then what are you driving at?"

"It's just that the human race is always looking at the other side of the fence."

"Is this bad for the human race?"

"Not at all. People have been looking over the fence for millions of years. So that today you can stand on the intellectual shoulders of your forebears and work with what they left you. It seems unglamorous, but you forget the glorious wonder of it all. You grub in your gadgets and your science and forget to think about the big question."

"Which is what?"

"Where are we going and what are we going to do when we get there?"

"I've pondered that question. It has no answer. Ergo I direct myself at things that I can answer without getting into a tizzy."

"So you go on building and inventing and creating gadgets. The man who crossed the lake in his day is no better than the man who crossed space yesterday. You sit in your cave and draw pictures and dream. You have an itch to create."

"I suppose I do."

"Of course you do. That's why you're here doing what you're doing."

"But I'm not creating."

"You are!" she said vehemently. Tom Britton snorkled, mumbled something unintelligible and then dropped off into deep slumber again. "We can't all be Rembrandt or Rodin, creating something world-shakingly beautiful, or Ein-

sten delivering something profound. Some of us have to go on through life just dropping a thin layer of ourselves on top of what's been left before. You're creating even though you do no more than to keep another man's work from falling apart."

"I've never looked at it that way."

"Of course not. That's why you also shy at the first tenet of creation."

"Who—me?"

Louise looked at her wrist watch. "It isn't too many hours ago that you were saved from the irksome task of answering an embarrassing question."

"Which?"

"I asked you whether romance and marriage and a family might not be the answer to your unrest."

"That's a woman's question," he said slowly.

"Maybe it is. But it's a man-and-woman answer." Louise smiled and looked at him. "You're quite a guy, Phil. If you were to make the right motions and the right noises at the right time—you might find an enthusiastic cooperation."

"In other words, I am being proposed to?"

"You are not. And if you propose to me right now, you'll get a quick 'no'."

"But I thought—"

"Think a little deeper, Phil. You dated me last evening because of the possible thrill of wooing."

"I'm—"

Louise grinned. "Phil, if you claim that you dated me because you considered me as a possible matrimonial partner I'll scoff at you for the liar you are. No woman is that naive. So we'll just go on."

"Go on what?" he asked. "Admitting that I dated you for the possible fun and games?"

LOUISE nodded. "Men come a-wooing for the fun and games and the woman's game is to make them stay for the duration. Or so the books tell me. So you will continue to lay siege to my virtue and I shall continue to employ every weapon to capture the enemy. And someday one of two things will happen: you'll get tired of the siege and go elsewhere, or you'll succumb to my wiles. Who knows?"

"But—"

Louise laughed. "Let's leave it that way, Phil. It's true. Maybe my thinking is a bit archaic, but that's my opinion."

"Okay," he said with a smile. "We'll get this mess cleaned up and then we'll get you back to Mars quietly so that we can take up where we left off."

"You're still not convinced about this family idea, are you?"

"They do sort of tie a man down."

Louise smiled. "We'll leave it that way until you are convinced. Okay?"

"Okay."

She stood up and crossed the control room to stand before him. Her stance was deliberate. She knew that her slender waist and softly rounded breasts were attractive enough to make a man ignore the fact that her dress was crumpled from too much wearing. She leaned down to take his hands from where they lay at ease on the arms of his chair, and she knew that this motion also gave him a brief view into the neckline of her dress. His eyes widened satisfactorily. She drew him up, standing. She lifted her face.

He reached for her and she melted into his arms, clinging to him. Her lips were soft and mobile under his; her skin was warm and soft under the dress.

Phil raised his head, eyes a little glazed, and looked around the control room. Louise leaned back in his arms, grinning at him.

"You're a witch," he told her.

She laughed. "Just think of how nice it would be if we didn't have a collection of tired gents cluttering up the joint. Maybe even a joint of—ah—maybe our own?"

Phil laughed and kissed her again. "Damn you for being a calculating female," he said.

Louise kissed back before she whirled out of his arms.

He reached for her again, but she held him off with a shake of her head. "Coffee?" she asked.

He looked at his watch. "Somebody's got to stay alive for the rest of this leg."

"All the better reason for saving the canoodling until later."

"I can canoodle and—"

"Drive with one hand? Nope. I'll have no divided attentions, Phil. But I will build coffee."

"Might find an egg, too."

"I'm way ahead of you."

"Good."

She chuckled. "Just a bit more of the old bait, old man."

"Shucks, lady. I can cook too."

"It's a lousy substitute."

"For what?" he asked.

But he asked the back of her head—just as it disappeared down the ladder towards the galley. He eyed his reflection in the nearest port, wiped his brow, and said, "Gr-r-r-*ruff!*"

## VI

URANUS was dim-lit by a tiny sun that cast an ineffectual light across a flat vista of blue-black ice. Crests of white showed white-diamond glints—not really snow, but a rime-ice. Below—somewhere at the end of the radar beam—was Station One.

Station One, doing something unpredictable, no doubt.

They dropped down, following the radar beacon until they saw it.

It had to be seen to be believed.

Uranus is mostly ice. Normally its gravity was enough to keep the ice cold-flowed into a reasonably flat surface. It is too cold to snow, too cold to rain, too cold to hail or sleet or hurricane or much of anything. But it is not too cold to grind together, to thrust one planetary block against another, to cause upthrusting mountain-ranges of ice which in the normal course of events will cold-flow into the resemblance of flatness. These up-thrustings are rare—

Station One had met one of these.

Strain develops slowly; an ounce at a time it builds up over a long period until a tremendous pressure develops. The pressure overcomes everything. Then, with two monstrous forces thrusting against one another, the angle of thrust will begin to change. The vector of force will become more amiable to the forces involved and the whole vista then drives forth along the new direction of resulting motion. In the case of planetary thrust, this direction is upward, causing mountains.

Forty miles high the mountain of cold-flowed ice had risen. Up and up and up in a rising pillar, a rising pyramid until the top, bowed over by some trick of angular force until it leaned sidewise, broke from the mountain top and came tumbling down the side of the slope in a giant avalanche.

There was neither rock nor stone; only ice.

Station One was a huge structure of metal and concrete, driven by an atomic pile contained inside of it. It moved across the face of Uranus on tractor-treads that depressed acres with each planting of a monstrous foot. It left behind it a trail that might someday amaze some visitor from somewhere-else.

Station One pushed before it a rectangular matter-transmitter plane like the scoop of a platypus, and the speed with which it scooped up the ice of Uranus was dictated by the needs of the Mercury Canal.

But now it had gone berserk.

Because it had been caught in the rise of a mountain ridge, and then walloped from above by a catapulting avalanche.

Shelling with a three-inch rifle it might have withstood for a time. But not cascade upon cascade of tertiary ice that slithered down in shards like giant shrapnel.

Its normally hump-backed appearance was crushed into a veritable sickleshape. Forward was the girder-structure that supported the matter-transmitter plane; behind it on a small flat platform stood a tiny spacecraft. Both were untouched

by the downfall. But the center-section had taken the brunt.

It had been a tough fight.

Battered and dented, the central of the station was, for the most part, intact. But it took only one hole to admit the poisonous atmosphere of Uranus—

PHIL swore and Hugson crossed himhimself; Tom Britton reached for a hat he did not own and Louise went solemn.

Two men had died awfully in that monumental structure. Two men had died—but the insensate mechanism still fought to carry on its function as it had under their hands. Intellect would have known when it was licked. Brains would have turned the vast machine aside to direct its voracious appetite against a less threatening ice-scape. But the undirected machine gouged and tore at the insurmountable rise, and more ice slid down to fill the gap, to fill the insatiable maw of the uncontrolled machine. The process was without interruption: an endless Niagara of ice poured downward into the matter-transmitter plane.

From a cosmic viewpoint, a forty-mile cliff of ice avalanched across space to the Mercury Canal. And one step further, Mars was under the hammer of a forty-mile avalanche of rain.

"How d'ye feel, Tom?"

"Fit. I've been slumbering."

"Want to take over?"

"Sure. We can handle this. We'll back Station One out of the mess. That'll relieve Mercury Inlet and eventually the Canal will go down to a reasonable level. We'll stay here to patch up." Tom Britton called his crew together and they donned spacesuits.

Phil Watson waited until Station One began to move backwards, away from the downpour of cold-flowing ice. As the transmitter's cutting action withdrew, the down-flow lessened. Phil sighed and lifted the ship and headed it towards Mars.

"I hope," he said to Louise, "you don't mind if I collapse."

She cradled his head in her lap. Phil squirmed into a comfortable position. He slept almost at once.

Louise slipped out from under and went to sit in the pilot's chair. The maze of instruments meant little to her, but so long as the autodriver registered on the green lamp they were in no danger. She dozed herself from time to time, shaking herself awake to cast an anxious glance at the few meters that she could read.

Turnover-time came and Louise debated if she should awaken Phil. But she remembered that space is a large bit of vacant lot and so she took the levers and produced one of the most wide-spread turnovers in the history of space flight.

Eventually a planet came up out of the ambiguous stellar display below and Louise went over to awaken Phil. A couple of million miles tossed off in a ragged turnover was one thing, but landing a spacecraft was definitely another.

She touched him gently and he came awake. He drew her down and she snuggled beside him for a moment before she said: "Mars is dead below."

He got up quickly. "All I'm getting out of this shindig is hard work and frustration."

"Does it make you think of a white cottage and—"

Phil grunted. "Me? I'm too young to be a father—"

HE SET the ship down near the weather control station. The marks of its previous landing were obliterated by the rain, but of that rain there was no longer much trace.

Above, in the blue sky, the smallish sun shone brightly, and the air was chill and bracing. A cloud or two was billowing in the Martian sky. The rain had soaked in and the ground was muddish and wetly red, but not mushy. People lined the landing field, waiting for them.

"Expecting a reception?" asked Louise.

"No. But the gang will be waiting

for me to give them the low-down on the cloudburst and how it happened."

"Looks larger than the gang."

"There's always Senator Longacre and his crew of plughatted characters."

The air was moist, and it smelled of spring and growing green things. It rolled into the airlock, fresh and pleasant. The ramp went out and Phil waved Louise first.

Halfway down the ramp a cameraman called: "Hey! Watson! Let her come second!"

Louise let him pass; Phil went down the ramp and turned to take her hand as she stepped from the ramp onto Mars.

There was a flaring of flashes and a crescendo of music from a portable sound projector parked somewhere. A hubbub of voices rose and grew into a cheer.

Senator Longacre stepped forward and shouldered Phil aside. He handed Louise a large bouquet as the flashers flared again, and from the back there came a battery of dolly-trucked television cameras.

In the midst of the racket, Phil heard the good senator start a bit of carefully-prepared oratory:

"— the one-billionth space traveller to set foot upon Mars—"

"— she's got legs," said one of the photogs, "let's cheesecake her—"

"— a few words, Mrs. Watson—"

"— wife of the weather control manager—"

"—smile, please, Mrs. Watson—"

"— who cares about him—?"

"— school-teacher."

"School-teachers didn't look like that in my day!"

"You were young and—"

Louise turned back. There was a humorous glint in her eye. "Phil," she whispered, "you're in the middle. After what you did to Senator Longacre, he'd like nothing better than to get you in a jam."

Phil nodded. He looked around the field. People were arriving in droves; the field was becoming jammed with revelers. The sound-wagon had been hooked up with the MCOC network and was blaring something about a Mars-wide holiday for the billionth visitor. He looked at the billionth visitor and found her attractive. He remembered the billionth visitor's quick mind and he found it attractive also. And then he realized that he knew something about woman that Louise did not: that the lure was the lip and the breast and the round hip, but the door to the trap was the character and the personality and the rather intriguing question of what kind of intellect might spring from—

"Louise—will you wed with me?"

"I told you—"

Phil stretched himself tall and extended his chest. "I shall flick a finger and bring ammonia to Terra; I shall twist a dial and rain methane on Mars. I shall start this goddam deluge again. Or I can go on a nice drunken spree and let the whole damned solar system scratch for itself."

"But—"

"It might have my brains and your looks."

"But if it had my brains and your looks?"

Phil grinned. He knew what to say: "My looks aren't too bad."

They rode through the streets of Marstown arm in arm under a blue sky. It was spring and there were violets thrusting their heads up through the ruddy soil. And while nobody would ever see Phillip Watson's name in the Books, or see Louise Hannon Watson carved in marble, their future would someday ride through the streets of Pluto, or Aldebaran IV, or—

●

# COUNTER-TRANSFERENCE

## A Novelet by WILLIAM F. TEMPLE

*The analyst, of course, always represents something to the patient; but what did these five madmen mean to Dr. Scott?*

I

SHE'D BEEN in the room fifty times before, but it was only this time she noticed that Dr. Alexander's desk was on a cunning little dais, six inches higher than the floor to begin with. Since Dr. Alexander was six inches taller than anyone else she'd seen, she always, in this room, had the impression that she was being addressed by Jupiter from the hill of the Capitol. Her white overall was the garb of a priestess, for white was the sacred color of the lord of heaven.

He laid the fifth file neatly on the others, bestrode the pile with his forearms and placed his fingertips together.

"You seem to have your hands rather full, Dr. Scott."

His voice always seemed to reach her down a steep, echoing defile, reverberating. His blank gray eyes looked through her, through the window behind her, at the undulating sky-line.

This was New Rome, and there were six other hills, all crowned with white temples like this one. All had fifteen floors ruled by an overlord who might be Jupiter, Zeus, or Jove, or Dr. Alexander. His attention was always diffuse. He might be all of them, and they all him.

"Yes, Doctor. But I think I can handle them all."

He sighed. It was a far-off gale, that blew briefly and died.

"Yes, my dear Scott, but can you handle them all at once?"

She was startled. "You mean group therapy? I need more time—"

"There's no time to give. One hundred and ten new patients are expected next week. Your present five patients have had a fair share of individual treatment."

"Oh, no, Doctor, I've not dug deeply

## *Dreams and Reality*

ALL IMAGINATIVE people have moments of wondering whether the world is reality or illusion, whether they are what they appear to be, or a madman dreaming the whole thing somewhere in the seclusion of a padded cell. And even psychiatrists must sometime begin to doubt, to wonder whether the patient sitting across from them or themselves be filled with hallucinations and neurotic imaginings. Here is a chilling picture of a world driven frantic by hunger and the mass psychiatric problem it brought—a story of quiet and dreadful suspense.

*—The Editor*

"I hate my sister!" she burst out

enough yet. There's a lot—"

"There's enough to go on in the files here, Dr. Scott. You can't take them one at a time any longer. On those lines we'd be fighting a losing battle. Our majority now, remember, is only eight per cent. You'll have to switch to Group Therapy. Simple treatment the first day, permissive the next, psychodrama the next. On the fourth morning I expect to see you here with five applications for Certificates of Sanity."

"But I—"

"The others can do it."

She flushed and knew that he was watching her critically, though the focus of his eyes hadn't changed.

"Very good, Doctor. I'll do my best."

The fingers came apart, and he pushed the files to the edge of the desk-top.

"I'm sure you will. It's quite simple. Be firm. Be tactful. The only danger is, as always, transference. Watch that."

"Yes, Doctor."

She reached for the files. They were thin—much too thin—and Orvello's, which was the thinnest, slipped from the middle. Three flimsy pages scattered on

the floor. She was nervous, and fumbled picking them up. They escaped again.

Jove descended from the heights with all the dignity she lacked and gathered them neatly for her. He gave them to her with a slight smile.

Briefly, she wondered what kink she had that made her act and feel so helpless in Dr. Alexander's presence. He was always having to come to her aid in one way or another, and she knew that despite herself she invited it. A father fixation?

But when analysts started to analyze themselves they got sillier answers than they gave their patients, so she shut her mind and backed out.

SHE TOOK the files to her consulting room and dropped them on her desk. There was no time to waste. The world was going mad, fast, and she was a front-line soldier in the fight for sanity. She must ring for her present patients to be sent in at once. The sooner she got on with it the better. No time to waste.

So she went to the window and stood gazing out, biting her nails, doing nothing else and thinking even less. She didn't want to think. She didn't want to do anything except run away to a desert island and be absolutely alone—and safe. Away from people. She was in the wrong job. A psychiatrist shouldn't be afraid of people.

Now she began to think about people.

There were nearly 3,000,000,000 of them in the world now, and they were still increasing. Soon there would be standing room only. People would have to starve standing up. Planetary colonization had been a failure. The pressurized cities on Mars had taken decades to build—most of the material had had to be transported by rocket—and they were full almost before they were finished. The inhabitants were like a lot of rabbits in a cage, breeding because they had little else to do.

Natural foods had long been insufficient to appease the world's appetite, despite intensive agriculture, despite the propaganda which made overeating a sin worse than murder. Synthetic foodstuffs only partly closed the gap. There was little real nourishment in them; they left people still hungry.

Hungry people become aggressive. When the World State had arrived people cried "An end to war at last!" So it was an end—to the series of nationalistic and ideological wars which had shattered both their civilization and their nerves. But under any stress the parochial element in man comes leaping to the surface. Necessity knows no laws; and food was a necessity. The fabric of the million and one bewildering, confusing, frustrating State laws was ripped apart in a score of places by desperate uprisings, pocket civil wars.

*Area C had 11% more bread than our Area last week! We demand...*

*Fish for the fishermen! We risk our lives to get it. Why should we...*

*Congress has had nine banquets this month already. They don't starve. Down with...*

*They say that we in the hot climates need less food than those in the cold belts. Let 'em come here and see if they can live by sunbathing alone. Up with...*

And so on. The Government's answer was—more laws. More restrictions; red tape by the parsec; ignorance of the law was no excuse. Punishment was a cutting of food tokens, so people sat up nights trying to cram into their overloaded memories the law bulletins pouring off the presses almost faster than they could read them; by no failing of theirs, they were determined, should their children go hungry. They battered at their own brains, worried themselves into breakdowns, hysteria, or madness.

That was only one facet of an overcomplicated, insecure civilization which had driven itself to the verge of a wholesale nervous breakdown.

Only 58% of the population was now accounted in control of itself. 42% had retreated from life into the countless mental clinics, of which this was one: a

clinic understaffed, with that staff undertrained; held together only by the mature experience and greatness of Dr. Alexander. A fort guarding the frontiers of sanity, in momentary peril of being overwhelmed.

THERE WAS no time to waste. Nevertheless, she couldn't tear herself away from the window. She gazed at the midgets walking in the street two hundred feet below. They were outside, and therefore sane, if hungry. She envied them. Whatever they did, they must be adequate to their tasks. They hadn't the weight of responsibility which was crushing her because her competence was in question. Dr. Alexander doubted her ability—and so did she.

She had to persuade five people back to normality, win them their certificates of sanity, in three days; she must make them sure of themselves, balanced people, while she herself floundered over the shifting sands of self-distrust. The blind leading the blind.

The phone rang. Now she had to leave the window. It was Dr. Alexander.

"I was thinking about Orvello. Give him insulin shock if you can't get him to snap out of it . . . how's it going?"

"Oh . . . fine."

"Good. Keep it going." He hung up.

Keep it going! She'd better start. She jiggled the handset cradle and got the Attendants. "Dr. Scott here. Locate my current patients and send them up. Five of them—you've got the names in the log book."

She glanced through the files again—

| | |
|---|---|
| B. H. ORVELLO: | *Acute melancholia* |
| MISS E. GRANT: | *Anxiety neurosis* |
| F. HEINZ: | *Paranoia: persecution mania* |
| M. P. GRANDIS: | *Paranoia: dementia* |
| J. WALKER: | *Inferiority complex* |

A nicely assorted batch, by her diagnosis. No two alike. Best that way, though, with Group Therapy.

The door handle turned. Instantly she dissolved her worried frown, sat up straight at her desk and tried to look in complete control of the situation, like Dr. Alexander.

"Confidence, confidence—you must radiate confidence," the great man had told her, radiating plenty of it himself. "Else you'll get nowhere with 'em."

## II

MISS GRANT came in, hesitantly and highly scented. Dr. Scott was relieved. It was easy to carry off the confidence trick with Miss Grant, because the lady had none at all herself. Too, she had something of a fellow-feeling with Miss Grant, perhaps because they were the only two women in this present concern, or because they were both unsure of themselves and scared of people.

Miss Grant was forty-seven, thin, small, flat-chested, with an ugly beak of a nose and a mustache, all of which would have quite spoiled her chances of matrimony even if she were rich, intelligent, and gracious—and she was none of these.

Poor Miss Grant, thought Dr. Scott, she's never had a chance. Miss Grant thought so too, and was very anxious about it, especially as her ovary cycle had ended. So she screened her drawbacks as best she could with layers of cosmetics, clouds of scent, and continual chatter designed to divert attention from her physical defects and direct it to the various calamities surrounding her.

"Oh, dear, Doctor, what is it? Why have you sent for me at this time? I thought I was only supposed to come in the afternoons. Have I got to lie on that dreadful couch again and answer all those questions? I don't think that couch is very safe. One of the legs is broken, I think. Yesterday, I distinctly felt it swaying—"

"No, Miss Grant, we're through with the couch. We're moving on to the next stage. You're progressing so well, you see. Please take a chair."

Miss Grant perched herself on the edge of a chair, dubiously. Then she changed her mind and chose another chair. Dr. Scott watched her dithering and wondered how this bundle of nerves ever came to tie her pet cat on an ironing board and operate on it with a knife. She'd not got to the bottom of that yet. Miss Grant said "Tut-tut" and moved again.

"Dear me, there seems to be an awful draft wherever I sit. I can't—"

The door opened. It was Grandis and Walker together—a beautiful contrast.

In a rare whimsical moment she'd penciled "Delusions of Grandis" on the margin of the actor's report. He was sixty, a tall fellow with a fine figure and a graying, leonine head. Wherever he was, he projected his voice to the back of the balcony. It was a resonant voice. He had an excellent stage presence, good health, energy, enthusiasm. He had everything an actor needed—except acting ability.

He'd been on the boards for over forty years, never once made Broadway, never risen out of the stock companies. He'd achieved this record solely by his knack for throwing himself wholly into a part, making it entirely his own, with no resemblance to the author's creation. Hamlet, Algernon Moncrieff, Dick Dudgeon, the Reverend Davidson—they all somehow became Martin Grandis, loudmouth and show-off. He shouted and went through the motions.

Recently, however, he'd developed a tendency to go through the motions offstage. He was grieved that he hadn't been "discovered" yet, and as time was running out he put on a continuous performance, tirelessly exhibiting his talent. When someone had recognized this talent and offered him a job as a fairground barker, Grandis had fled over the border and joined the 42%.

He made an imperial entrance now, confiding in a bellow to Walker that "Yon Cassius has a lean and hungry look."

Actually, it was Walker who looked lean and hungry. He'd been a clerk, and looked apologetic about it. He didn't think he'd ever been a good clerk. He didn't think he was good at anything. He'd been told this so many times since infancy by his step-mother that he believed it, and slouched and drooped about, apologizing for his existence.

When his boss had sacked him, Walker had become doubtful of his ability to do anything at all, like shaving, or eating, or talking. They sent him to the clinic.

"Please sit down," said Dr. Scott. "We're doing it a little differently from now on. We're going to tackle it together."

AS THEY sat down, Heinz came in cautiously. He peered around the room first before inserting himself, in case the man with the bomb was there waiting for him. There was no doubt that they were out to get him: he knew too much. He wasn't quite sure what he knew, but it was too much. And their spies were everywhere.

Miss Grant, Walker, and Grandis were spies, of course, but that Dr. Scott—she was the real brains of the espionage set-up. He allowed her to think she was fooling him. Never by any hint did he let on that he knew what was really going on, and when she told him to sit down he answered civilly "Yes, Doctor," and took the chair in the corner with its back to the wall.

Orvello not so much came in as was carried in by an attendant, who deposited him in a chair and left. Orvello couldn't be expected to do anything of his own volition, as he believed that nothing was worth doing. Absolutely nothing. Not any more.

"All is vanity and vexation of spirit," saith the preacher! and Orvello would have said it too, only he didn't believe it worth saying—or that anything was worth saying. He believed that "The paths of glory lead but to the grave," but he didn't believe in glory. We start dying from the moment we're born. All is dust. Effort is futile. Nothing lasts.

neither our works nor ourselves.

If Walker looked sorry for himself, Orvello looked sorry for the whole human race. His face was dark, sagging, like a bloodhound in mourning. Melancholy had marked him for her own, and he wasn't even pleased at this distinction.

Dr. Scott knew that somewhere there was a cause for this frame of mind, but she hadn't discovered it yet. It was difficult to discover anything about a man who refuses to speak a word. That was why his file was the thinnest. Not that the others had thick ones. . . She was, she knew, beginning this thing with dismally inadequate knowledge.

She braced herself. She had to weld this mixture into a group.

First, the pep talk routine:

"Now that we're all here, we can start getting properly acquainted. All you people are going to know one another well before we're finished. You're going to be good friends. And you're going to learn that *real* friendship springs only from helping one another. This is where we psychologists fall back on the old wisdom. . ."

Some of them had met briefly before, but she introduced them properly and talked on about mutual aid for a while. The audience sat silently—even Miss Grant—and watched her. Except Orvello, who thought the floor was less effort to regard.

SHE SWITCHED to another line of confidence building. "You've all had thorough medical examinations. The reports are open for your inspection. You'll see that in a physical sense you're all perfectly healthy and normal. Thus you have no fear that your mental troubles spring from organic defects. So to begin with, you all already have one thing in common—good health. It's not by any means universal these days, so you see that you're a very lucky group of people.

"Another thing you share is the habit of misusing your energy. There are all kinds of ways of misusing our energies, and each of you does it differently. It's just these differences that will enable you to spot one another's mistakes and help out.

"Each of us contains a dynamo, figuratively speaking, that continuously provides energy through metabolism. If we're tired of life, as Mr. Orvello imagines he is, we can make a closed circuit and let the energy chase itself round and round in futile circles. If we're frightened of life, as Mr. Walker is, we can bottle it up, sit on it. Which is a dangerous practise, because the pressure only increases until the top is liable to blow off. Or we can fritter it away in worry, as Miss Grant does. Or use it to fight imaginary enemies, as Mr. Heinz does. Or let it flow in full force, as Mr. Grandis does, but without proper control or direction.

"Freud's teaching is that this energy build-up may find release through one of two main channels, *Libido* or *Mortido*. *Libido* means the energy being used in constructive and creative work, in organization, bringing people together, friendship—as we're doing here. It also means the preservation of the race through the sexual urge. In short, the life instinct. *Mortido* means the energy being used for destruction, discord, isolation, and the preservation of the individual through the elimination of rivals or enemies, sometimes by murder. In short, the death instinct.

"*Mortido* has been having far too much of its own way in the world lately, and you and I are going to get together to fight it. Now. . ."

As she talked they were all very quiet. Strangely quiet. It disturbed her. When she'd taken them separately they'd all, except Orvello, had plenty to say. Perhaps they were shy of each other?

But when she'd concluded her talk and dismissed them for the day (there were no questions), she'd realized it wasn't that. She didn't have to try any more to build up a fellow-feeling among them: they already, somehow, had it. They

were banded together in insanity, watching her from the other side of the fence.

### III

SHE SLEPT badly that night. She lay there in the dark little room, endlessly going over the world's problems. People just didn't have a chance to attain mental stability these days. Almost from the cradle they were importuned and plagued by authority to learn this and know that. School-children didn't play happily together in the evenings any more. They had a minimum of four hours' homework every day, including week-ends. The teachers explained: "New knowledge, new techniques are increasing all the time. The problem is how to get it all into their heads."

Nobody seemed to question the necessity for knowing so much, not even the children. Which was odd, because what was scientific fact when you were at school had become a scientific fallacy by the time you were married. Behavior that was free yesterday was frowned upon today and punishable tomorrow.

Scientists and lawyers were arrogant and made their pronouncements as though they were saying the last word about the subject.

But the last word was continually changing all through your life, ever more frequently, bewilderment upon bewilderment. Civilization had fashioned for itself a world to live in which was a constantly altering maze, like those its research workers built to torture rats into a state of neurosis: every time the rat thought it had learned the way through, that way mysteriously changed again. It was never done learning what always turned out to be false. Eventually it believed in nothing, nothing at all, not even itself—and went either quietly or violently mad. As civilization was doing now.

This wasn't the first time these reflections had made her sleepless and nearly desperate. Once she'd been driven to the point of telling Dr. Alexander himself about them. It had been in the lounge, after the day's work. He'd been approachable, indeed, almost benign.

"My dear Dr. Scott," he said, leaning back in the armchair, fingertips together, "don't disturb yourself so. We can't have the staff deserting to the patients' side. There's no need to worry. You're right in your diagnosis, of course—civilization is having an attack of neurosis because its frames of reference keep changing too rapidly. But it's only a phase—growing pains. A complete breakdown can be avoided if we work hard enough."

"What do you mean, Doctor—'growing pains'?"

"Exactly that. Mankind is reaching the stage where it's becoming self-conscious—*conscious of itself as a race-entity.* You know that babies are at first quite unself-conscious. But when they're weaned, and have to change from instinctive behavior to behavior conditioned artificially from without, they gradually become aware of themselves. It's not always a happy phase. Indeed, happiness almost always resides in self-forgetfulness."

"But mankind—isn't a baby—"

"It is, historically speaking. If a wall thirty feet thick represents the age of the world, then the thickness of a *dime* is equivalent to the whole duration of man's existence, and the thickness of a postage stamp represents the length of time in which he's been slightly civilized. On the same scale, the period in which life will still be possible on Earth is perhaps a mile."

"Good heavens!"

DR. ALEXANDER smiled indulgently. "Up till recently we've achieved only a partial self-consciousness, as individuals. As a leaf may become aware of itself as a leaf, and then later as an inseparable part of a tree. And then, because the sap flowing in its veins is the same sap as that in the tree's roots, the leaf will enter gradually into the whole being of the tree. First the leaves be-

come self-conscious, then the twigs, branches, boughs and finally the tree is self-conscious, conscious of itself as a *whole*. Get it?"

"But my mind is quite different from yours—"

"My dear Dr. Scott, all you mean is that our present opinions may disagree. Please remember that your *own* opinions are always changing, with experience. And you're often in two minds about them. Note that—*literally* in two minds. Your mind—and another. Sometimes three minds. That's where the mental conflicts, the growing pains, begin. People are trying to get too many minds into the compass of their own brain. In time, they'll learn that they can't absorb the huge mind of mankind itself—but that they can let *it* absorb *them*. The leaf can't be the tree, but the tree can be the leaf—and all leaves."

She'd reflected awhile. "I think I begin to see. Of course, Horgen and Burke, following the work of Dr. Rhine on extra-sensory perception, have shown that there are no sharp divisions between individual minds—they overlap, are part of a great sea of thought, so to speak. I'd accepted that in theory—"

"Yes, that's the trouble. We accept things in theory, and then continue to act on the old habits of thought, because habits are the very devil to grow out of. But we *do* grow out of them, and if the new theory's right it becomes the new habit of thought. We're in the painful transition stage, all of us—that's what I've been explaining."

And she'd gazed at him with wonder and admiration. He sat there, patient and all-seeing, above the battle. Thank heaven for the great characters, the calm and omniscient, to whom the ordinary people turned for reassurance and guidance in times of stress. Shakespeare, Goethe, Jesus of Nazareth, Dr. Alexander—they were the safe, firm-based rocks in a turbulent sea that threatened to smother you.

Even so, there were times when we lost faith and spent dark nights of doubt. This was one of them. She lay curled up under the blankets in the little bedroom like an eyrie on the rear cliff of the hospital, hating the night and dreading the day.

The faces of Orvello, Miss Grant, Grandis, Walker, and Heinz seemed to float like luminous balloons in the darkness about her. She was scared of them all in a way she'd never been scared of anyone before. And the worrying thing was that there seemed no solid reason for it. Separately, they were harmless. Together, they seemed to amount to something altogether different—and sinister.

SHE FACED them again in the daylight.

"Today we have permissive treatment. That means you stand up in turn, if you wish, and get all your troubles off your chest. Beef as much as you like—we're all interested in your pet hates. The others may listen—sympathetically, we may be sure—and make notes and use them to comment helpfully. As I've said, we're all helping one another in this. . . ."

Orvello, of course, ignored her, as usual. It didn't matter: the others had plenty to say.

Miss Grant leaped up with an impetuosity that sent invisible waves of scent rolling around the room. A certain lively eagerness rescued her face from repulsiveness.

"I hate my sister!" she burst out, and went into a long tirade. It appeared that she had a younger and incomparably more attractive sister, who, she believed, had usurped her (Miss Grant's) place in the affections of her parents, her brother, her friends, and—most of all—her fiance. For, improbable though it seemed, once a man had cared for Miss Grant. But her sister had stolen his love away and married him. Now it was too late. Miss Grant had lost her chance of marriage, of ever having children, of ever being loved by anyone again.

At the end of it, Dr. Scott asked: "By

the way, Miss Grant, what was your sister's name?"

"Pam," said Miss Grant, bitterly, and sat down.

Dr. Scott nodded gravely. Pam was also the name of Miss Grant's cat, which she'd tied to a board and worked on with a knife. That tied up.

"Now, has anyone any comments to make?" said Dr. Scott.

"I have," boomed Grandis, standing up to his full, respectable height, and throwing back his leonine head so that the balcony could both see and hear him. "Miss Grant was unjustly treated by a small-hearted, jealous woman, and so was I."

That was all he had to say with regard to Miss Grant; the rest concerned a female theater critic on the *Times* who had maliciously torn his Hamlet to pieces. Apparently it had been a very witty notice, and was syndicated throughout the States.

"Not only that," he thundered, "but she reprinted it in a book of her collected reviews—she made me a laughing stock all over again. It killed my career! No manager would take me seriously after that. She'd saved up all her cattiest cracks to unload on me. It wasn't a criticism at all—only an exercise in what she fancied was her wit. It was all sarcasm and spitefulness and steals from Oscar Wilde. Yet it made her—and finished me. She stabbed me in the back and made a stepping stone of my dead body."

His voice became hoarse, bellowing. "If I ever get hold of her, I'll *kill* her!"

HE STOPPED, breathing heavily, sweating a little and white-faced with rage. They all looked at him—except Orvello.

"Thank you, Mr. Grandis," said Dr. Scott. "Please sit down . . . any comments?"

"Yes," said Heinz, getting up and casting a swift look over his shoulder to ascertain that no one had crept through the wall behind him. "I read that notice. It was by Ursula Reigmann. I happen to know she's a dangerous spy. She's caused many deaths. I've several times warned the Government of her, but they can't see it—they're blind, blind. Unfortunately, she's not so blind—she got to know that I'd found out about her, and she's out to get me. She's put the whole spy ring on me. But I'm not blind, either. I know who they are. Some of them are here in this hospital."

He glowered at Dr. Scott, hesitated, then decided to say no more. He mustn't give away his knowledge that she was one of them. He sat down abruptly, after another look round. He made a smaller target when seated.

"I'm glad you're all saying your pieces so well," said Dr. Scott. "I'm sure everyone is very interested to learn that they are not alone in their troubles. But we seem a bit short on comments. Surely some of you have something to say about the expositions we've heard?"

Walker got up, hesitantly, uncertain of himself, as usual. He opened his mouth, but nothing came.

"Don't be shy, Mr. Walker," said Dr. Scott, encouragingly. She felt kindly disposed towards him, in a vague, mothering sort of way. He doubted himself, as she doubted herself. But he couldn't conceal it, so she was stronger than he, yet understanding.

Inside, she was worried, because instead of the friendly, interested discussion group necessary for this kind of treatment, there was only this series of individual, resentful outbursts. She felt she was failing in her chairmanship. She hadn't the personality for a successful organizer and go-between. Dr. Alexander would have handled it with masterful charm.

Perhaps it was the predominantly male element in the group acting out its old prejudice against any feminine attempt at authority. Whatever it was, they weren't with her. She was frightened, but whether it was fear of failure or fear of them she didn't know.

Walker stuttered: "My—my—st-stepmother. . . ."

His face was red. His jaws worked, but he couldn't say any more. He didn't need to. All the hate he felt for his despotic foster-parent was in those few broken words. He sat down confusedly.

He couldn't be encouraged to say any more, so Dr. Scott outlined his case to the others, trying to make it interesting, to enlist their sympathy or strike some spark of response. It was hopeless. Grandis, Heinz, and Miss Grant stared at her without expression. Walker, still flushed, looked away. Orvello had not lifted his gaze from the floor.

## IV

THE permissive stage was exhausted before the time allotted for it ran out. Desperately, blindly, she decided to plug on with the final stage right away. Surely this would appeal to Grandis, the actor, at least.

She explained psychodrama. They were to cast themselves in various roles and play them out. The idea was, partly, to relieve emotional tensions by re-enacting physically and before an audience the scenes of key emotional stresses of the past which they were continually acting mentally, in their subconsciouses. That helped to get rid of pent-up fears and guilts. Artists, writers, actors were always projecting their own emotional problems on audiences and thereby purging themselves of conflicts. Every unstable person at times needed a sympathetic audience. This was their opportunity.

More than that, it was an opportunity for a person not merely to make others understand him but also for him to get to understand himself. This could be done, for instance, by casting a man who resented his father as the father of a resentful boy, so that for the first time he might sense something of his father's point of view. It would help to balance his hitherto one-sided outlook.

As they were such a small group, they'd best have playlets designed for only two characters—else there wouldn't be sufficient audience. Perhaps Mr. Grandis had some ideas on the subject?

She was pleased when Grandis got up with, for the first time, an expression approaching enthusiasm. He thought it was a very good idea.

"I presume," he said, "that we make up our own lines as we go along?"

"That's so."

"Excellent. I've often thought I could ad lib better stuff than the playwrights kept putting into my mouth in the old days. Now, I suggest a short scene where I, as an actor maligned by a female critic, meet that critic one day in the flesh."

"Good," said Dr. Scott. "Miss Grant, would you like to play the critic?"

"Well," said Miss Grant, doubtfully, "I'll try. I don't think I'm very good at making up lines."

As it happened, even if she'd been very good at it she'd have had small chance to deliver the lines. Grandis hogged the scene with a violent and almost nonstop monologue. Some of it was the prosecuting attorney from *Double Alibi;* some of it was the falsely accused hero from *Sing-Sing* released after twenty years and encountering the real murderer. But most of it was Grandis himself playing out his own hate, working himself into a frenzy.

Strangely, Miss Grant's few words were effective:

"It wasn't me, but someone else . . ."

"No, you're mistaken. I never said that—*she* did."

"It was *her* all the time."

Very effective, though neither named nor indicated the real culprit they had in mind; she and Grandis seemed to have a mutual understanding about it. Grandis raged on. The stream of white-hot hate passed through Miss Grant, using her only as a medium. It was directed at Dr. Scott, and she felt every lash of it.

TREMBLING, but in control of herself, she stopped them. They were both trembling as much as she. Miss

Grant was nearly in tears, and Grandis was sweating heavily.

"Well, we seem to have touched upon a mainspring there," said Dr. Scott, with a slight catch in her voice. "Do you feel any better for the release, Mr. Grandis?"

Grandis pulled the handkerchief from his sleeve and dabbed at his forehead.

"You stopped me . . . too soon," he said. "I think—"

He didn't say what he thought, but sat down. Miss Grant had already flopped back into her chair.

"Now I should like you to reverse the roles," said Dr. Scott. "Mr. Grandis be the critic and Miss Grant be the maligned—actress."

But she couldn't persuade them to do it. Their only real interest was in continuing to play the roles they'd cast themselves for these many years past.

It looked like a blind alley. Dr. Scott felt that pain in the nape of the neck which heralded another of her excruciating headaches, and knew that she couldn't face any more of it today. She dismissed them all.

Heinz protested. "Dr. Scott, I'd like my turn—"

"Tomorrow," she said, flatly.

When they'd gone, she stared miserably at the empty chairs. Tomorrow was the last day. One day left. And there wasn't a hope of even beginning to re-educate these people in less than a month. She arose and paced aimlessly up and down. Then she found herself staring down through the window again, her fingers massaging the back of her neck.

Those lucky, lucky people down there! That was where she belonged, doing some daily routine task—a stenographer or a shop assistant — knowing exactly where she stood and what she had to do. This trying to cope against time with problems which were beyond her was driving her—mad.

She started. Wasn't that exactly what had driven the others mad? And was driving this civilization mad?

She was on the same path . . . It was a trap. This whole place was a trap that would drive her insane if she stayed here. She must get out while she still had some hold on sanity.

Desperately resolved, she went along to see Dr. Alexander. He was alone at his desk.

"Dr. Alexander, I've come to notify you of my resignation."

His unblinking gray eyes continued to look through her as though he were watching those other hospitals on the hilly skyline. But his brows lifted a fraction of an inch.

"Resignation, Dr. Scott — or desertion?"

He spoke quietly, but his voice seemed to come down from the clouds.

HER mind faltered. This spot below the judgment seat of Zeus always unnerved her. But the alternative was unbearable also, and so she plunged almost hysterically into an account of her patients, her inadequacy, the futile Group Therapy.

He heard her out. Then he said: "I warned you of the danger of transference. It's dangerous, from the disengaging aspect, if your patients should build up a mental image of you as the benevolent parent or guardian, whose love they were deprived of. It's doubly dangerous, from your point of view, if they begin to visualize you as the person responsible for the deprivement. It's a nuisance if they transfer their love, and cling. But if instead they transfer their hate, and—"

He paused. Then went on: "Of course, it's only Grandis who's shown evidence of that. You'd better leave him out of it for the next few trials, and concentrate on the others. They may be all for you, and perhaps will swing him round in your favor."

"But I don't want to go on with it," she burst out. "If I do, I'll go out of my mind. It's beyond me. I'm sorry. I hate to feel I'm letting you down. But if I don't leave at once, you'll soon not only

have lost a doctor but have another patient on the register. I'm at the end of my tether. I appeal to you."

He matched his finger-tips, and thought, regarding his neat desk-top.

Presently: "Very well, Dr. Scott, I accept your resignation. I ask you only to stay on for one more day, to complete the treatment for this batch."

She was torn between relief and dismay. "But I can't do it alone. I can't hope to complete the treatment in one day."

His gaze lifted, went through her again as though she were not there. "You need my assistance?"

She nodded, looking up at his face. She knew she'd always needed his assistance. Indeed, more than his assistance. She wanted him always to have the direction of her life, while she obeyed meekly, scrupulously, adoringly. Without that reassuring father-image guiding her she was useless and lost.

"All right," he said. "Continue your work tomorrow. I shall look in sometime in the morning and give you a hand. We'll finish it between us. Afterwards, you may leave."

She thought that if he could always be there, indicating the way, she'd never want to leave. But of course he had his own more important work to do—it was impossible for him to ignore that merely to do a junior's job. She would have to leave the day after tomorrow. And now tomorrow had lost much of its forbidding quality.

## V

SHE SLEPT well that night, and awakened only a little fearful of the time that must be spent alone with *them* before Dr. Alexander came to lift the burden from her.

The quintet came in cheerfully enough (except Orvello, of course, who had forgotten how to be cheerful, if he'd ever known). Even Grandis smiled his "Good morning" at her.

The morning sun was bright and warm and she unlatched a window to let the beams enter unsullied by the dirt on the panes. Also, to let out some of Miss Grant's scent — she seemed to have bathed in it this morning.

She surveyed them as they sat in the sunlight. They were harmless, really—surely? Why had she ever allowed herself to be afraid of them? Probably because in her mind's eye she lumped them together as a group. It wasn't transference she had to beware of, but counter-transference—the image of the patients the psychiatrist builds up in *his* mind. Merely because they sat together, on the other side of the fence, so to speak, they were not therefore a group. They were five separate lonely and lost people. She must think of them *that* way. Each taken as an individual was not frightening.

Except, perhaps, Orvello. And there the fear was not so much of him as of the unknown. What morbid thoughts were moving in the closed circuit of his mind?

"Now," she said, almost brightly, "let's try another playlet with a different cast: Mr. Heinz and Mr. Walker. Going over your case, Mr. Walker, it seems to me that the root of your inferiority complex is the mistake of accepting your stepmother's valuation of you as if she were infallible. Why should you attribute infallibility to her and not to yourself? Was she really that good?"

She waited optimistically for an answer. Her optimism wasn't justified. Walker had become interested in his shoes.

"What did your father think of her?" she resumed. "According to my notes, you mentioned that your father didn't think very highly of her. It would have been much better if you had accepted his opinion of her, instead of her opinion of herself—or of you. You should have got together with your father and had a heart-to-heart talk with him about it, instead of bottling everything up inside yourself. I think you'd have found that he disliked her overbearing manner too,

and distrusted it. You'd have learned that she was actually in the minority, and that your opinion of yourself was certainly nearer the truth than her spiteful and ignorant judgment . . . would you like to play that talk with your father now?"

Walker nodded without looking up.

"Good. Mr. Heinz, will you play Mr. Walker's father?"

Heinz's face fell. "I wanted to do a piece about espionage—"

"Later," she said, firmly. ("Firmness, always firmness," Dr. Alexander had said—often.)

He shot her a resentful look. "You're afraid of what I might tell," he muttered.

"What's that?"

"Never mind, Doctor," he said, surlily. "Okay, I'll play your piece."

Walker had to be coaxed a little more, but he began on the right lines.

"Father, I want to talk to you about mother."

"She's an overbearing slut," said Heinz, venomously.

"She says I'm stupid. Is she right, do you think? My boss thinks I'm stupid too—that's why he fired me."

"No, he fired you because *she* told him to," said Heinz. "It's all part of the plot—don't you see? She thinks *I'm* stupid too, but I'm not." He sniggered. "I know who she is."

DR. SCOTT'S heart began thumping. A tingling, electric taste came into her mouth. She felt suddenly cold. It was all beginning again. She darted a quick appealing look at the white-painted door. Please, please open—let Dr. Alexander come and save me. But the door remained shut.

Walker said: "She? Do you mean—?"

"Of course," said Heinz. "If it weren't for her, none of us would be in this prison! She's the brains behind it all. . . ."

He went on, and she scarcely listened to the nonsense. only watching with agony the effect it had on Walker. He was turning against her. She could see the bitter hate coming into his face.

"We must stand together against her," Heinz was saying. "United we stand, divided we—"

"That's enough," said Dr. Scott, suddenly. She put on her mask of sternness, praying that it wouldn't slip, that she could keep command until *he* came. Oh, where was he?

Walker and Heinz stood staring at her. As she had donned her mask, so Heinz had dropped his. The ambiguity was gone: hatred of her blazed nakedly from his eyes. And Walker's expression oddly matched his.

"I think we're getting a bit off the trail," she said, trying to keep the tremor from her voice. "I think—"

"You think you could do it better?" said Heinz, coldly. "Maybe you could, at that. You come out here and play the feminine lead yourself."

"Oh, no!" piped Miss Grant, anxiously. "I want her for *my* play. She's going to play my cat — I mean, my sister, Pam."

For the first time Orvello looked up. Then, dreadfully slowly, he stood up. His dark, sorrowful eyes rested the weight of his grief on Dr. Scott.

"Elizabeth, why did you leave me?" he said, his deep, inexpressibly sad voice rolling like a funeral drum.

She realized he'd already cast his own play and was acting it. The deep voice overwhelmed her feeble noise as an organ drowns the lesser instruments.

"I—I'm not—"

"I loved you and believed in you, and I believed in John too. My wife and my best friend—my whole world. And when you ran away with him, I believed in nothing. Nothing! You condemned me to the outer darkness where nothing lives or moves or has meaning. But I have come out of hell to get you, Elizabeth."

His eyes began to glow now with a red, bitter fire.

"You are coming back with me, Elizabeth, to the outer darkness. For why

should I be alone in hell?"

All of her horrified attention had been on him, and she hadn't seen Grandis and Miss Grant rise. But now they were all standing in a close group, their eyes blazing at her with hatred.

Orvello's faithless wife, Walker's cruel stepmother, Grandis' heartless critic, Heinz's prime persecutor, Miss Grant's conniving sister — she was all those different beings to them and yet the same being—a focal point.

And they were all different beings to her, and yet—it happened like a change of stage lighting, creating a new scene from the old—they were *the same being.*

At last the group had become really a group—as an octopus is a group, of cells and tentacles. There it was in existence: a hydra-headed, multi-limbed, ten-eyed thing, with all its eyes glaring at her with a unified, murderous hatred.

SHE WAS paralyzed and dumb, gripping her desk. All that moved in the room was a weak current of air from the window. All that sounded was the faint stir of movement from the street below. She cried voicelessly to those happy, sane people down there—help me, help me, help me—

And to another—Dr. Alexander, Dr. Alexander—father!

As if in answer to the call, the door opened silently. Just as silently, Dr. Alexander entered. He closed the door.

"Thank God!" she stammered. "Oh, thank God!" And she did not know whether she was speaking aloud or only inside her own head.

Dr. Alexander's tall figure walked quietly up behind the group—*and joined them!*

There he stood, inches above the others, his gray eyes no longer looking through her, but at her. They were not blank now. They were cold and cruel, hating her.

Why, oh, why? Because she had failed? Because she'd lost a skirmish in the battle he was so set on winning?

But why join the other side? Because he couldn't help himself? Because they were numerically stronger than he, drawing him magnetically until he merged into them as a drop of water merges into a pool? A human pool?

His own voice spoke in her memory: "Mankind is reaching the stage where it's becoming self-conscious—*conscious of itself as a race-entity.*"

*They* were a whole because they'd become conscious of themselves as a whole. And that whole must be mad! Mankind was mad!

She was a lone fragment of sanity here. So long as she retained her individuality she was sane.

Slowly, purposefully, the group began to move towards her. It had coalesced completely. She couldn't distinguish Dr. Alexander, or Grandis, or Heinz or any of the others any more; it was a homicidally mad monster, coming to annihilate her because she would or could not join it. That which was not part of it was against it.

Its movement seemed to break the spell. She screamed and jumped up, scrambled to the window behind her. She flung it wide open. She belonged down there—among her kind, the sane and simple ones. Breathlessly, she went to join them, and they scattered beneath her as she approached.

Dr. Alexander looked down after her.

He shook his head sadly. "*Mortido,*" he murmured. "Inwardly directed."

He shut the window and leaned with his back against it.

"She was on our side," said Dr. Alexander, quietly. "I tried to get her for us. A few minutes more and she would have realized it. Never mind . . . our ultimate victory is certain. You may go."

They drifted out of the room. Orvello moved sluggishly, apathetically. She had run away from him again, and his life was pointless without her.

Dr. Alexander turned back to gaze down through the window. The ambulance was there already, and the midgets milled about it. He regarded them dispassionately: the enemy. ● ● ●

# OUR INHABITED UNIVERSE

## Part VI—The Poison Giants

## By JAMES BLISH

THE old saw, "Beauty is only skin deep," applies furiously to the four known giant planets of our solar system: Jupiter, Saturn, Uranus, and Neptune (in order of increasing distance from the sun). These beauties — and anyone who has ever seen one through a telescope can testify to their beauty— are as perverse as they are striking.

Their atmospheres are 100% poisonous and the life they support, if any, must be as pestilential as their atmospheres. They all have at least one satellite which travels backwards. They all rotate faster at their equators than they do at their poles. (So does the sun, by the way; nobody knows why.)

Jupiter, the nearest, seems to be continually in the throes of a series of volcanic cataclysms. Saturn is surrounded by a very thin, flat series of rings. Uranus' axis is so tipped to the plane of the planet's revolution around the sun that it points almost in the direction the planet is going—like a bead spinning along a string. Neptune is distinguished by showing no markings at all, even in the largest telescope; it is the remote and expressionless imbecile of the solar family.

But all the direct observations of these planets which we have been able to make up to now apply only to the topmost surfaces of their atmospheres. Laymen's books on astronomy glibly offer data on the "surfaces" of the outer planets, but seldom warn their readers that the surface they are talking about is the interface between atmosphere and space, *not* the interface between the planet proper and the atmosphere.

This holds true even for such a crude figure as the diameter of any of these gas giants. The diameter of Jupiter, for instance, is always given as 88,800 miles, more than 11 times the diameter of the Earth. It is seldom added that at least 14,000 miles of this must be atmosphere. In Saturn's case the discrepancy is even greater; Saturn is said to be 75,100 miles through, but since Saturn's atmosphere has been calculated to be at least 10,000 miles deep, the diameter of the planet proper is probably under 55,000 miles. If the same percentages apply to the smallest of the gas giants, the 31,-

**Four Astronomical Beauties—Labeled "Don't Touch!"**

000-mile Uranus, that planet's actual diameter is probably not more than 24,000 miles. (Even so, that's three times the size of the Earth.)

## Skin Deep

More delicate measurements are even more dubious when they are analyzed in this way. When you read, for instance, that the "surface" temperature of Jupiter is about -216° F., you could be forgiven for assuming that the average temperature of the gasses at the *bottom* of Jupiter's atmosphere comes out that low. Actually, of course, this is the temperature at the top, at the cut-off point between the visible atmosphere and space.

Nobody knows for sure how far down the bottom is; no one has ever seen it. Nobody knows whether or not there is any real "surface" on any of the giant planets, unless you call the tops of their rock cores a "surface." This much can be said with certainty: since the pressure near the hypothetical surface of Jupiter is probably about a million times the atmospheric pressure on Earth, the temperature down there is nowhere near as cold as -216° F. It may be as high as -122° F.

Science-fiction writers who have had the temerity to risk even fictional heroes in personal explorations of Jupiter have consistently underestimated the atmospheric pressure, which is so enormous that nothing whatsoever is known about the chemical reactions which are possible beneath it. On the other hand, most science-fiction writers have enormously *over*valued Jupiter's gravity, speaking of it as "incredible," "crushing," etc.

This overestimation of the gravity is understandable. Jupiter's mass is 318 times that of the Earth, and the first natural snap assumption is that its gravity must be just as much greater.

The effect of the gravity of a large mass upon the human body—or any other body—depends, however, entirely on how close you are to the *center* of that gravity. If a given planet is very dense, like the Earth, then its surface gravity will be high even if its mass is comparatively small. If, on the other hand, the planet is of low density, it will never be possible to get close enough to its center of gravity to feel the full attraction of its mass.

This is the case with Jupiter, as it is with the other gas giants. Jupiter is enormously massive, but it is also very diffuse. Its density is only 1.3, which means that it is just one and three-tenths times the density of water. Its gravity at the surface of its atmosphere —its visible "surface"—is only 2.6 times that of the Earth.

This is not very high. The human body could endure it with ease, if not with comfort. The human body can stand up under four gravities for minutes at a time, and jet pilots pulling out of power dives have endured as much as nine gravities and lived through it. And the "surface" gravities of the other giant planets, believe it or not, are almost exactly that of the Earth!

## Let's Build a Planet

This is not to imply, however, that a human being could live on any of these enormous bodies for more than a split second—even in a heated, pressurized spacesuit. To make the reasons clear, let's put together a model of the typical gas giant. We'll use specific figures relating to Jupiter, since Jupiter is the gas giant we know the most about; but the model could apply to any of the four known planets of this type. (There may be one more still undiscovered in our solar system, as we'll discuss later on in this series.)

Our picture of Jupiter, then, begins with a core of metallic rock, with a density of about six (or, six times the density of water); it is 38,100 miles in diameter, which is bigger than either Uranus or Neptune, even counting their atmospheres.

This rock core is swathed in a sheet of ice about 17,300 miles thick. At this depth and under these pressures, the ice,

which should have a density just slightly *under* one, probably averages out at 1.6. Above the ice core, in turn, is the atmosphere proper — an atmosphere 8,200 miles deep. If you were to rest the Earth on the surface of the ice layer, it wouldn't stick up above the surface of Jupiter's atmosphere!

This model, by Rupert Wilde of Princeton, holds true in percentage terms for three out of four of the known gas giants. The proportions are: core, 43% of the planet's radius; ice, 39%; and atmosphere, 18%. Apply these percentages to the radii of the other gas giants (excepting Saturn) and you know as much as anybody knows about their constitution. (Unfortunately for the model, the mean density of Saturn is so low that its atmosphere must be considerably deeper than the percentages allow, or its rock core several times smaller.)

From this discussion it's easy to see that the gas giants in no way resemble the Earth. The model explains why even such a tiny, airless, savage world as Mercury is referred to by astronomers as an "Earthlike" planet. All the inner planets are "Earthlike" in this sense: they're small, dense, and *don't* consist almost entirely of ice and atmosphere.

When we examine the chemical make-up of the gas giants, furthermore, we discover speedily that they are so different from the inner planets as to seem like members of an entirely different system.

These atmospheres consist almost entirely of hydrogen, a gas so light that no Earthlike planet can hold onto it in the gaseous state. They contain no free oxygen, no free carbon dioxide, no water vapor. While they carry clouds — so many that it's impossible to see past them — these clouds are made up of methane (marsh gas), and of crystals of ammonia. Traces of sodium, and perhaps of some other metallic elements, contaminate these clouds enough to make them rather colorful—but not a whit more breathable.

The gas giants are swathed in the purest poison.

There is one other simple fact about Jupiter which makes it the inferno that it is: its speed of rotation upon its own axis, which is a little matter of 25,000 miles an *hour* at Jupiter's equator. That's a distance almost exactly the circumferance of the Earth, every hour.

Now, you can't make a planet of the size and low density of Jupiter turn that fast without serious consequences. One of these consequences is immediately visible through even a small telescope: Jupiter bulges alarmingly at his equator, and is correspondingly flattened at his poles. And small wonder—the enormous planet's day is only nine hours and 50 minutes long! It is actually possible to watch Jupiter whirling through the telescope, and it's an awe-inspiring sight.

Even brief observation of the planet shows also that the clouds which hide the surface of Jupiter from us are blown in regular bands around the planet, along the plane of rotation — "trade winds" of terrific velocity. And finally, the rapid changes in the clouds of Jupiter, clouds which should follow trade-wind patterns without deviation if the planet's rotation were the only factor governing them, show that down below the surface we can see there is always a complex of tornadoes, cyclones, and even worse disturbances for which we have never needed names on our placid Earth.

Dante, who pictured the outermost circle of Hell as a region of perpetual hurricane, might have had Jupiter—or any other gas giant—in mind. A region of perpetual ice lay at the bottom of Dante's Hell, and that is true also of the gas giants. Yet somehow the poet's grim inferno seems almost cozy compared to the conditions "normal" to the gas giants.

## Volcanoes and Water

After all this, it seems like piling Pelion upon Ossa to suggest that the actual surface of Jupiter may be notable chiefly for volcanic upheavals, or chem-

ical explosions, which would make the Krakatoa blast seem like the lighting of a kitchen match. Nevertheless, the evidence—the Great Red Spot is one such indication—seems to make it pretty definite that this, too, is true.

Earthlike life, even at nearly its simplest, is therefore ruled out on the gas giants. These planets are utterly unlike the Earth.

The reader will have noticed, all the same, that in discussing them I've been very free with a word which doesn't apply at all to two of the "Earthlike" planets, and only tentatively to the third of the four. That word is: *ice.*

Yes, there is water on all of the gas giants, and plenty of it, solidly frozen and compressed though it is.

The reader who knows his chemistry will have noticed also that my account of the gasses present in the atmospheres of the gas giants included a list of all the major elements necessary to life. There is hydrogen and oxygen in ice; carbon in methane; and nitrogen in ammonia. All these elements, which are the basic constituents of protoplasm—the stuff of Earthly life — are present in great abundance on all gas giants.

This fact alone does not at once make the gas giants the natural abodes of life —not by a long shot. The four elements mentioned above, for instance, are also the sole constituents of hydrogen cyanide, a compound not notable for its friendliness to life. Most of the oxygen on Jupiter which is not bound up in ice, as a matter of fact, may be represented by cyanogen. And protoplasm needs *liquid* water, so there can be no protoplasmic life on Jupiter, or on any other gas giant.

But if we put aside almost completely any Earthly standards of comparison, we may be able to postulate some life forms for Jupiter and his brothers. A simple illustration from chemistry will help to visualise the problem.

The structure of the basic protein molecule is an assembly of the four basic elements in this order:

$$NH_2CHCO{\bullet}NHCHCO{\bullet}NHCHCO{\bullet}\ \text{etc.}$$
$$\quad R_1 \qquad\quad R_2 \qquad\quad R_3$$

where the various R's are "radicals," or complex atom-groups which differ from each other and give the total protein molecule its character. One simple way in which such a protein could be put together would be one in which all the R's were also combinations of the four basic elements.

Peculiarly enough, we do have one life form on Earth which is non-protoplasmic, and which seems instead to consist of nothing but protein molecules of this kind. Many varieties of it exist, but some of the commonest and best-known tend to form crystals of long molecules, laid down in simple lines, randomized as to length, but hexagonal in cross section. You may even have seen an electron-microscope photograph of such a group of molecules in an April 1951 *Life.* The name of this life form is:

Virus.

## Floating Virus

We can't take the space here to enter into the really bitter argument which biologists are perpetually carrying on over whether a virus is really "alive" or not. In most respects, viruses do behave as if they were alive; the argument seems to stem mostly from bad semantics. What is most interesting from our present point of view is that the "individual" virus is the virus molecule.

In other words, viruses have no gross physical form to preserve. Given the chance, many virus molecules gather together to form crystals, just as molecules of table salt do, but such aggregations are not necessary to preserve the integrity, the vitality of a virus. The molecule is also the organism, complete, vital, and—though nobody knows how—capable of reproducing itself.

This form of life has many advantages which make it seem a reasonable choice for an environment like that of Jupiter. It can maintain its integrity in

any medium that does not attack it chemically (or thermally). It does not care how severely it is fragmented; it can literally be torn apart molecule from molecule. It does not care how violently it is buffeted about by forces above the molecular level. In temporarily quiet areas it can proliferate very rapidly; but no cataclysm, no matter how immense, can ever destroy the species, so long as a single molecule of it survives.

There is one basic objection to this view of the gas giants as possible abodes for virus life: viruses as we know them are not independent organisms, but parasites; they are never active except when they are infesting some higher form of life. (The hosts of viruses range all the way from bacteria to man.) We know so little about the chemical reactions possible at gas-giant pressures that we cannot say that this restriction *must* apply to Jovian viruses; but in order to meet the objection, let's assume that Jovian viruses need complex hosts as much as Earth viruses do. Are such hosts possible to Jupiter?

I believe they are. Remember that to a virus even a bacterium is a "complex" host. Yet a bacterium is little more than protoplasm in its simplest and dullest form.

We've already remarked that the reason why protoplasm is impossible on Jupiter is the lack there of any water base for it. On Jupiter, however, there are certainly liquids — liquified gasses. The most likely candidate is liquid ammonia. Now, liquid ammonia is a good solvent for most organic compounds at normal pressures; under a pressure of a million atmospheres, almost anything should dissolve into it, even at -122° F. And one of the properties which makes water so important to life is that almost anything is soluble in it to some degree.

Water has two other properties which make it important to life. The first is: it doesn't ionize, except infinitesimally. The second is its extreme conservatism towards heat; it can soak up many calories before its temperature will rise appreciably, and it can lose a good many before its temperature will fall. Ammonia, of course, ionizes very powerfully in water, becoming a strong alkali; but when it is the solvent instead of the solute, which means at very low temperatures, it tends not to dissociate, very like water. And, at the low temperatures where it can exist at all as a liquid, it is almost as heat-conservative as water.

Thus we have a possible "protoplasm" base for complex Jovian life. What the complex hosts of Jovian viruses might be like is more difficult to imagine. It's probably safe to assume, however, that they would be floaters or fliers. No sessile (rooted) or surface-bound creature would have a chance against the torrential gales characteristic of the gas giants.

During the days of the first spectroscopic observation of Jupiter, the planet's occasional greenish aspect and the fact that it showed a strong line in the chlorophyll region of the spectrum made a number of astronomers suggest that its atmosphere must be filled with "aerial plankton." Since the same observations applied to the other gas giants, too, they were all supposed to have "aerial plankton" — particularly Neptune, since it's the greenest of the four. Later, the greenness and the so-called chlorophyll line both turned out to be due to methane, and the "aerial plankton" theory died a swift death; but we've revived it here, minus the chlorophyll, for the reasons given above. To be Jovial about it, it holds ammonia.

But despite their enormous size, the gas giants are still largely unknown. Like many a beautiful woman, they are easy to speculate about but hard to approach. The virus hypothesis suggests, at least, that approaching them may involve unseen risks; they may well wind up being posted:

QUARANTINED!

"I get off at five o'clock," she said

# PUBLIC EYE

## By ANTHONY BOUCHER

THE GREAT criminal lawyer had never looked so smugly self-satisfied, not even just after he had secured the acquittal of the mass murderer of an entire Martian family.

"Yes, gentlemen," he smirked, "I will gladly admit that this century has brought the science—one might almost say the art of criminalistics to its highest peak. Throughout the teeming billions of the system, man continues to obey his primal urge to murder; yet for fifty years your records have not been blotted, if I may indulge in such a pen-

*A wily counsellor proves he was in two places at the same time*

and-ink archaism, by one unsolved murder case."

Fers Brin shifted restlessly. He was a little too conscious of the primal urge to murder in himself at the moment. It was just as well that Captain Wark chose that point to interrupt the florid speech.

"Mr. Mase," the old head of the Identification Bureau said simply, "I'm proud to say that's true. Not one unsolved murder among damned near seventy billion people, on nine planets and God knows how many satellites and asteroids; but I'd hate to tell you how many unconvicted murderers."

"Who needs to tell him?" Brin grunted.

"Oh come now," Dolf Mase smiled. "I'm hardly responsible for *all* of them. Ninety per cent or so, I'll grant you; but there are other lawyers. And I'm not at all sure that any of us are responsible. So long as the system sticks to the Terran code, which so fortunately for criminals was modeled on Anglo-American concepts rather than on the Code Napoléon . . ."

Captain Wark shook his grizzled head. "Uh-uh. We'll keep on sticking to the idea that if justice is bound to slip, it's better to free the guilty than convict the innocent. But it kind of seems to us, Mr. Mase, like you've been pushing this 'free the guilty' stuff a little far."

"My dear Captain!"

THE PATRONIZING tone was too much for Brin. "Let's cut the politeness, Mase. This is a declaration of war. Let's have it out in the open. Captain Wark represents everything that's official and sound and inescapable. And me —well, as the best damned public eye in the business, I represent everything that's unofficial and half-jetted and just as inescapable. And we're feeding it to you straight. Your quote legal unquote practice amounts to issuing a murder license to anybody with enough credits. You've got three choices: A, you retire; B, you devote that first rate mind of yours to something that'll benefit the system; C, the Captain and I are going to spend every minute off duty and half of 'em on hunting for the one slip you've made some time that'll send you to the asteroid belt for life."

Dolf Mase shrugged. "I wish you a long life of hunting. There's no slip to find. And no!" he protested as Captain Wark began to speak. "Spare me the moral lecture which I can already read, my dear captain, in those honest steely eyes of yours. I have no desire to devote myself to the good of the system, nor to the good of anyone save Dolf Mase. Such altruism I leave to my revered if somewhat, as you would say, Mr. Brin, 'half-jetted' brother. I suffered enough from his starveling nobility in my younger days—I too declared war, first on him and then on the rest of the seventy billion. . . Good day, gentlemen—and may tomorrow find waiting in my office a sextuple sex slayer!" With this—and a gust of muted laughter—Dolf Mase left the Identification Bureau.

"You've got to hand it to him," Fers Brin chuckled in spite of himself, as he contemplated the closing panel. "He picked the most unpronounceable damned exit line I ever heard."

"And he pronounced it," the Captain added morosely.

He never slips," Fers murmured.

The phone buzzed and Captain Wark clicked his switch.

The face on the screen bore an older gentler version of the hawk-beaked, crag-browed Mase features which had so recently been sneering at them. The voice too had the Mase resonance and formality, without the oversharp bite.

"Thank you, gentlemen," said Lu Mase. "Deeply though I regret what I heard, I confess that I needed to hear it."

"It's like I told you, Professor," said the Captain. "He's always hated you and the cream of it all, to him, was making you think that he did his job for the sake of justice."

Fers moved into phone range. "And

now that you know what follows?" he demanded. "There's bound to be something somewhere. The devil himself isn't perfect in deviltry."

On the screen Professor Mase's eyes seemed to stare unseeing at the infinite array of microbooks which lined his study. "There was that time when Dolf was young. . . He'd convinced me that he'd changed. . . And of course you'd have to study the statute of limitations."

"We'll have the best men in the system on it tomorrow," Wark assured him hastily. "Just a minute. I'll turn on the scriber and you can give me the details."

"He's my brother, Captain," Mase said softly.

"Which means how much to him?" Fers snapped.

"Still. . . I'll be in your office tomorrow at nine, Captain."

The screen went dark.

Fers began a little highly creative improvisation in the way of cursing, not unaided by his habit of drinking with lurid speaking space pilots.

But Captain Wark was more sanguine. "What's another day, Brin, when we've got the war launched at last? That was a first-rate job you did of fast-talking the Professor into listening in—and the brilliant Dolf Mase fell into the good old trap of thinking a phone's off when its screen's dead."

"He didn't fall," Fers corrected. "He didn't care. He's so proud of what a big bad villain he is, he's glad to tell the world—but he forgot we might pipe it through to the one man whose opinion of him mattered. There was the slip; now when we learn this past secret. . . Hell!" he remarked to the clock. "I'm on another of those damned video interviews in fifteen minutes. See you tomorrow—and we'll start cleaning up the system."

THE interviewer, Fers observed regretfully, should have had better sense than to succumb to this year's Minoan fashions, especially for broadcast. But maybe it was just as well; he could keep his mind on her conversation.

"Now first of all, Mr. Brin, before you tell us some of your fascinating cases—and you don't know how thrilled I am at this chance to hear all about them—I'm sure our watchers would like to hear something about this unusual job of yours. Just what *is* a public eye?"

Fers began the speech he knew by heart. "We aren't so uncommon; there must be a hundred of us here on Terra alone. But we don't usually come into the official reports; somehow lawyers and judges are apt to think we're kind of—well, unconventional. So we dig up the leads, and the regular boys take over from there."

"Has this system been in use long?"

"About a hundred years or so. It got started in sort of a funny way. You probably know that the whole science of crime detection goes back only a few centuries—roughly to about the middle of the Nineteenth. By around another century, say in Nineteen Fifty, they knew scientifically just about all the basic principles we work on; but the social and political setup was too chaotic for good results. Even within what was then the United States, a lot of localities were what you might call criminalistically illiterate; and it wasn't until the United Nations got the courage and the sense to turn itself into the World Federation that criminalistics began to get anywhere as the scientific defense-weapon of society. After the foundation of the W.F.B.I. man began to be safe, or nearly so, from the atavistic wolves—which, incidentally, are something I don't think we'll ever get rid of unless we start mutating."

"Oh, Mr. Brin, you *are* a cynic. But how did the public eyes start? You said it was funny."

"It was. It all came out of the freak chance that the head of W.F.B.I. a hundred years ago—he was the legendary Stef Murch—had started out in life as a teacher of Twentieth Century literature. He wrote his thesis on what they used to call *whodunits*—stories about murder

and detectives—and if you've ever read any of that damned entertaining period stuff, you know that it was full of something called *private eyes*—which maybe stood for private investigator and maybe came from an agency that called itself The Eye. These characters were even wilder than the Mad Scientists and Martians that other writers then used to dream up; they could outdrink six rocketmen on Terra-leave and outlove an asteroid hermit hitting Venusberg. They were nothing like the real private detective of the period—oh yes, there were such people, but they made their living finding men who'd run out on their debts, or proving marital infidelity."

"I'd like to ask you to explain some of those words, Mr. Brin; but I'm sure our watchers want to get on with the story of *your* life as a public eye."

"Sorry; but it's a period you've got to use its own words for. Anyway, Stef Murch saw that detectives like these *private eyes*, even if they never existed, could be a perfect adjunct to official scientific criminalists and solid trained policemen. We don't wear uniforms, we don't keep office hours, we don't always even make reports or work on definite assignments. Our job's the extras, the screwball twists, the— Look: If you wanted an exact statement of a formula you'd have it written by a Mark, wouldn't you? But suppose you wanted a limerick? We take the cases that have the limerick-type switch to them. We do what we please when and where we please. We play our hunches; and God knows it's scientific heresy to say so, but if you don't get hunches you won't last long at the—"

Suddenly, Brin's image had vanished mysteriously from the screen.

"Mr. Brin! Where are you? Mr. Brin, we're still on the air!"

"Sorry," said Fers Brin off-camera. "Tell your watchers they've had a rare privilege. They've just seen a public eye get a hunch and he's acting on it right now!"

HIS hunch was, Fers realized later, like most hunches: a rational piecing together of known facts by the subconscious mind. In this instance the facts were that Professor Mase was a just and humane man, and that his lifelong affection for his brother—quite possibly wilful self-delusion—could not vanish overnight. Conclusion: he would give the lawyer one last chance before turning evidence over to Captain Wark, and there was only one way Dolf Mase would react in self-protection.

Resultant hunch: Murder.

The helicab made it from the casting station to the Professor's quiet Connecticut retreat in record time; but the hunch had come too late. It might even have been too late the moment when the screen had gone dark during the earlier conversation with the Professor. For, as the prosecution was to reconstruct the case, Dolf Mase had already remembered where there was evidence of his one slip and was on his way.

It wasn't usual for a public eye to find a body; the eyes were generally called into the case later. It wasn't usual for any man to find the body of a man whom he had liked and respected—and whom he might possibly, with a faster-functioning hunch, have kept alive.

Professor Lu Mase had been killed very simply. His skull had been crushed by a Fifth Dynasty Martian statuette; and long after the bone splinters had driven life from the brain tissue, the killer had continued to strike, pounding with vicious persistence at what he could not make dead enough to satisfy him.

A shard of the statuette had broken off and pierced the throat. A red fountain had spurted up in the room.

It was an old-fashioned, even an archaic murder, and Fers Brin found his mind haunted by a half-remembered archaic line. Something about being surprised that the old man had so much blood. . . .

Another level of his mind registered and filed the details of the scene. Another level took him to the phone for

the routine call to the criminalistics squad. But the topmost conscious level held neither observation nor reason, but only emotion—grief for the too trusting Professor, rage at Dolf Mase, who had crowned a career of licensing murderers by becoming a murderer himself.

By the time the squad arrived, the Brin emotions were under control, and he was beginning to realize the one tremendous advantage given him by the primitive brutality of the killing. Dolf Mase had forgotten himself—his lifelong hatred of his brother and all he represented, had boiled over into unthinking fury.

Now, if ever in his life, Dolf Mase must have slipped—and the Professor's death, if it resulted in trapping this damnable sponsor of murder, would not be in vain.

Within an hour Fers knew the nature of the slip.

It was a combination of an old-fashioned accident and the finest scientific techniques of modern criminalistics that forged the perfect evidence against Dolf Mase.

A man was fishing in a rowboat in the Sound. And it was precisely over his boat that the escaping murderer decided he could safely jettison the coat he had worn. The weighted coat landed plump at the fisherman's feet. When he saw the blood he hastily rowed ashore and reported it. The laboratories did the rest.

"You ever read about Alexander Wiener, Fers?" Captain Wark asked later that night. "He damned near invented the whole science of serology. Now he'd be a happy man if he could see how we've sewed up this whole case on this one piece of serological evidence. The blood on the coat is the Professor's; the sweat stains on the collar check with all the clothing we found in Mase's empty apartment. And there's the case in one exhibit."

"It's hard to believe," Fers said, "but only eighty years ago a judge threw out a case that depended strictly on serological identity."

"Sure, and five hundred years ago Faurot had a hell of a time making fingerprint evidence stick. But now we've got, as Wiener foresaw that long ago, enough identifiable type-factors in blood, sweat, mucus, semen and the rest to establish exact personal identity with as much mathematical certainty as a fingerprint. Mase has made his getaway and is lying low for the moment; but the dragnet's out and once we've got him, he's going to face a prosecution case he can't get out of—not even if he gets Dolf Mase for his lawyer!"

IT WAS the bright eyes of a passport inspector, three days later, that spotted the forgery and caused Dolf Mase to be jerked at the last minute, in the guise of a traveling salesman for extraterrestrial insect sprays, off the Venus rocket. He had shed the salesman's extroverted bonhomie for his normal self-confident arrogance by the time he was booked for murder.

"I'm reserving my defense," was his only remark to everyone from Captain Wark to the Intersystem News Service.

That's where the case should have ended. That way it would have been nice and simple and eminently moral: villainy detected, guilt punished, and science—for there seemed no doubt that Mase's reserved defense was a bluff—triumphant.

Only this was precisely the point at which the case skipped right out of its orbit.

Fers was puzzled by Captain Wark's face on the phone. He'd never seen the rugged old features quite so weirdly taut. He didn't need the added note of urgency in the voice to make him hyperjet himself down to the Identification Bureau.

All that the Captain said when he arrived was "Look!" and all that he did was to hand Fers a standard fax-floater on a criminal suspect.

This one was from Port Luna. Jon Do, wanted for burglary in hotel. Only iden-

tification, one fingerprint lifted from just-polished shoes of victim, who had the curious habit of tucking spare credits away in his footwear for the night.

"So?" Fers asked. "Don't know as I ever saw a fax-floater on a more uninteresting crime."

The third time Captain Wark opened his mouth he managed to speak. "You know it's routine to send all stuff like that here; we've got the biggest file of single prints in the system."

"Yes, daddy," said Fers patiently. "I've heard rumors."

"So I punched the data on a card and put it through, and I got an answer. Know whose print that is?"

Fers looked again at the date of the hotel theft—November nineteenth, the same day his hunch had taken him to Connecticut. "If you're going to say what I'm afraid you are, I'll tell you right now I don't believe it."

"It's a fact. That is the print of the middle finger, left hand, of Dolf Mase! On the day of the murder he was looting a hotel room in Port Luna."

"Look," said Fers. "We live in an Age of Marvels, sure—and I wonder what age Man's ever lived in that he hasn't thought that—but I've got a funny way of only believing what's possible. And our Marvels just plain flat do not goddamned well include being in Connecticut and on the moon within the span of a couple of hours."

"It's the perfect alibi in history, Brin. Alibi means elsewhere, or used to—"

"And how elsewhere can you get? But hell, Captain, we didn't see the murder; but we did see Dolf Mase here in this office just an hour before it. According to your fingerprint, that's equally impossible."

"Mase won't say so. He'll say we never saw him; that we're trying to frame him."

"Which is an idea at that," Fers mused. "Is there any real reason why the defense—"

The Captain smiled grimly. "I was afraid you'd try a little temptation, Brin. And I wasn't sure how well I'd resist. So before I phoned you I sent a spacegram to the Chief of Port Luna."

Fera exploded. "You idiot! You half-jetted hypomoronio—"

"Hold it, Brin. Identification's my job. It's what I know and what I'm good at. If I get a request to identify a print, I damned well identify it."

"Even when you know there must be something phony?"

"There isn't. I know the Port Luna chief. He's a good man. There isn't a known method of forging a print that could get by him. This is for real."

"But we *saw* Mase here!"

The Captain sighed. "You know, Brin, I'm beginning to wonder. . ."

BRIN'S temperament is a mercurial one. Suddenly the public eye snapped his fingers and beamed. "The serological evidence! We've got him cold on that coat! And you yourself said blood-typing and sweat-typing are as certain identity evidence now as fingerprints"

"And you yourself said it was only eighty years since a court threw out serology. Which evidence will it believe now? The new-fangled proof, or the fine old proof that ninety per cent of all identity work is based on?"

Fers slumped again. "It *has* to be some kind of gimmick of Mase's. The only other possibility—"

"The only other possibility," said Captain Wark flatly, "is that the whole foundation of the science of identification is one vast lie."

The public eye rubbed his red pate and frowned. "And the only way to find out which," he said softly, "would seem to be at Port Luna. . ."

Port Luna was erected as the first great non-terrestrial city. It was intended as the great pleasure dome of Man, the dream city of everyone from the millionaire to the stenographer saving up for her vacation by skipping lunches.

But rocket travel developed so rapidly that pleasure-planning Man said to him-

self, "What's the moon? It's nice to be under; but what do I get out of being *on* it? Let's go to Venus, to Mars—"

And the pleasure dome became the skid road of the system, untended, unrepaired, unheeded. The observatory crew lived under a smaller dome of their own. So did the crews of the space strip. Passengers were rushed from space liners to the Terra Shuttle without even seeing the city of Port Luna. And in the city where the bars and stereos and other needful entertainment for the barracked crews, and all the shattered spacemen who drifted back this far but could not quite bring themselves to return to Terra.

It would take a good man, Fers reflected, to be Police Chief in Port Luna.

"The Chief left on the last shuttle," a uniformed sergeant told him. "You must've crossed him. He's gone to Terra to pick up a hotel sneak thief—and say: Guess who our little old Port Luna sneak thief turned out to be?"

Fera sighed, but not audibly. He registered proper amazement when the sergeant revealed the startling news, registered it so satisfactorily that from then on, as far as the sergeant went, Port Luna was his.

But even the confidential files on the case were no help. The victim was a salesman from Venus, ostensibly traveling in mocrobooks but suspected—according to a note in the dossier—of peddling Venusian pictures on the side. The amount stolen was approximately what Dolf Mase might charge for five minutes of consultation in his office.

"I'm beginning to get an idea," Fers said slowly. "I don't like it, and I can't get rid of it. Sergeant, I want you to do something for me."

"Sure. I got a kid who's crazy about public eyes. He's gonna get a big blast out of this. What you want I should do?"

"Got some omnidetergent here? Good. Now watch me wash my hands."

"Huh?"

Very carefullly Fers scrubbed, rinsed and dried his hands. "Now write down that you saw me do that, and put it through the time stamper. Then lock it in your safe."

"I don't get it."

"I'm not too damned sure I do myself. But I've got to try. Now which way's that hotel?"

The Luna Palace was at the corner of Ziolkovsky and Oberth, only a short walk from the station. Fers was relieved, both because he hated to walk, wearing gravity soles and because he loathed these streets of cut whisky and tenth-run stereos, of cheap beds and cheap bedmates.

The Palace was a barely perceptible cut above the other hives of bedding-cells, exactly right both for the Venusian peddler—who wanted to display a touch of swank to his customers—and for the sneak thief—who would find the pickings too slim elsewhere.

THE girl behind the desk might have been the model for whom Minoan designs were revived. Fers was pleased; it was easier to work among attractive surroundings.

"My name's Bets," she stated.

"That's nice," said Fers. "Is the manager in?"

"I get off at five o'clock," Bets announced.

"If that means that he comes on then, maybe I better stick around. Mind if I linger over the desk?"

"Nobody comes in here much," Bets revealed.

"Good place for a spot of quiet brooding then. Bets, I've got me a problem—one they can't solve by criminalistics. One that maybe disproves criminalistics."

"Not even in the lobby," Bets further disclosed.

"And I think I've got the answer," Fers went on. "I'm almost sure I've got it if I can find out how to prove it. Did you ever read a *whodunit*, Bets?"

"I get kind of hungry around five," Bets admitted.

"I like that period—the Twentieth Century, not around five—partly because of Stef Murch, I guess, and partly because I had a great-great-grandfather who was a *private eye*. I've read a lot and they keep saying they couldn't write a detective story about the 'future'—meaning, say, now—because everything would be different and how could you be fair?"

"I like steaks," Bets proclaimed.

"And the answer I've got is one you could have figured out even in the Twentieth Century. It's a problem that couldn't happen till now. but the answer was in their knowledge. They had a writer named Quinn or Queel or something who used to issue a challenge to the reader, and this would be the place to do it."

"The best steaks are at the Jet," Bets explained.

"Challenge," Fers mused. "What brought Dolf Mase's left middle finger to the Luna Palace? And how am I going to prove it?"

"Only lately," Bets annotated, "there's too many crooks hanging around the Jet so I go to the Spacemen's Grotto."

Fers leaned over the desk and bussed her warmly. "Bless you, Bets," he said. "I knew our conversations were bound to meet eventually! And if this works, you'll get the biggest steak on the whole damned moon!"

The sergeant looked with some dubiety at the public eye who held on to a chair to steady himself with his right hand while keeping his left hand carefully in the air.

"I don't think," Fers observed, "that I could pass a sobriety test. Call of duty. Got me into a little drinking more along the standards of a *private eye*. But I've got some jobs for you. Got an ultraviolet light, first of all?"

The baffled sergeant followed instructions. Perplexedly he assembled the dossier on the sneak-thief, the time-marked slip from the safe, the ultra-violet lamp.

He flashed the lamp, at Fers' behest, on the public eye's left palm, and stared at the fine set of hitherto invisible fingerprints.

"Notice the middle one," said Fers. "Now look at the sneak-thief's."

After a full minute of grunting study, the sergeant looked up. He might have been staring at a Venusian swamp-doctor in the flesh.

"And remember," Fers went on, "that my hands were scrubbed with omnidetergent three hours ago. I shook hands with that man and got his prints on this invisible fluorescent film some time in the last three hours. Therefore he's on Luna. Therefore he isn't Dolf Mase, whom your Chief is probably still interviewing on Terra."

"Then—then there's two guys with the same print!" The sergeant looked as if his world were collapsing around him.

"It makes sense," said Fers. "It's crazy but it makes sense. And don't worry—you're still in business. And I wonder another drink would save my life or kill me?"

DOGGEDLY the sergeant had fought his way through his bewilderment to the immediate problem. "Where is he? If he's here, I gotta arrest him."

"How right you are. He's at the Jet and his name's Wil Smit."

"That son-of-a-spacesuit! We been trying to pin something on him for years!"

"I thought so. It had to be somebody you'd never actually arrested and printed, or you'd have had him on file and not needed to send out a fax-floater. So when I learned that the Jet was in favor with the criminal set this season, I wandered around there—if you can call it wandering in these damned gravity-soles. I threw around the names of some criminals I know on Terra—little enough to be in his league but big enough to be familiar names out here. I said I needed a guy for a hotel job only it had to be somebody with a clean record. It was around the seventh drink that I met Wil Smit. When we shook on the deal I got

all drunk and obstinate and, by God, if I was left-handed, he was going to shake left-handed too."

"But you ain't left-handed. Or are you?" added the sergeant, to whom nothing was certain any longer in a system in which the same print belonged to two different guys.

"Right-handed as a lark," said Fers airily, and then paused to contemplate his statement. He shook his head and went on, "You go get Smit. Suspicion of theft. Book him, print him, and then you'll have him cold. About that time I'll be back and we'll take the next shuttle. Meantime, I've got a date with a couple of steaks at the Spacemen's Grotto."

An urgent spacegram had persuaded the Port Luna Chief to stay on Terra with his presumptive prisoner until the public eye arrived.

"Of course," that prisoner was remarking once again, "I shall refuse to disclose the reason for my presence on Luna, the name under which I traveled thither, or the motive for my invasion of the picture-peddler's room. I shall merely plead guilty and serve my sentence on Luna, while you, my dear Captain Wark, continue to prosecute here on earth the search for the abominable murderer of my beloved brother."

The Lunar Chief gave his old friend a yes-but-what-can-I-do? look.

"Nothing." Captain Wark answered his unspoken query. "You've got your evidence; you have to prosecute. But Brin's spacegram hinted—"

"The public eye," Dolf Mase stated, "is a vastly overrated character. The romantic appeal of the unconventional—"

At this point the nascent lecture was interrupted by the entrance of a public eye and a Lunar sneak-thief.

And in another five minutes there occurred one of the historical moments in the annals of criminalistics: the comparison of two identical prints made by two different men.

Wark and the Chief were still poring over the prints, vainly striving to find the faintest classifiable difference, when Fers addressed the lawyer.

"War's over," he said. "And I think it's unconditional surrender for Mase. You try to bring up this Lunar 'alibi' in court and we'll have Smit shuttled down here and produced as a prosecution exhibit. Unless you force us to that, we'll just forget the whole thing; no use announcing this identity-problem until we've adjusted our systems to it. But either way we've got you cold."

"I still," said Dolf Mase smugly, "reserve my defense."

Hours later, Fers Brin was delivering his opinion over a beer.

"Only this time," Fers said, "we know it's a bluff. This fingerprint gimmick was a gift from his own strange gods —he never could have counted on it. All he has left now is some wind of legalistic fireworks and much damned good it'll do him."

"You've done a good job, Brin," Captain Wark said glumly. "We've got Mase nailed down—only. . ."

"Only you can't really rejoice because you've lost faith in the science of identification? Brighten up, Captain. It's okay. Look: it's all because we forgot one little thing. Fingerprint identification worked so beautifully for so many centuries in so many million cases that we came to believe in it as a certainty. We took it as an axiom: There are no identical fingerprints. And we missed the whole point. There never was any such certainty. There were only *infinitely long odds.*"

CAPTAIN WARK sat up slowly and a light began to gleam in his eyes.

But the Chief said, "Odds?"

"Galton," Fers went on, "is the guy who started it all on a serious criminalistic level. Sir Francis Galton, English anthropologist. It's all in your office; I looked it up again while you were disposing of our print-twins. Quite a character, this Galton; practically founded meteorology and eugenics too. And he

figured that the odds on any two fingerprints coinciding on all the points we use in classification was one in sixty-four billion. For his time this was fine; it was just about the same, for practical police work, as saying one in infinity. But what's the population of the system now?"

"The whole system?" The Chief's eyes were boggling. "Damned near—*seventy billion!*"

"So by now," the Captain exclaimed, "it just about *had* to happen sooner or later!"

"Exactly," said Fers. "From now on a *single* print is *not* identification. It's strong presumptive evidence, but that's all. And it'll usually be enough. Just remember never to feed the defense ammunition by trying to claim that an odds-on chance is an unshakable fact. And you've still got the best possible personal identification in two or more prints. You noticed that all the other fingers on those two men were completely different. Chances on two prints coinciding are about one in forty quadrillion, which is good enough for us. For a while. And we don't have words for the chances on all ten matching up. That works out to the sixtieth power of two times the eightieth power of ten—if you want to see what it looks like, put down a one and write ninety-eight zeros after it."

Captain Wark looked like himself again. Happily he raised his beer mug in a toast. "I propose we drink to the identification man of the future Inter-Galactic Empire," he proclaimed, "who first discovers two sets of ten matching prints!"

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# THE READER SPEAKS

*(Continued from page 8)*

go far toward redressing the balance. Keep the rest of the readers in stitches, they tell me. You'll be happy to know that we, personally, are on the lookout for humor all the time. We published most of the Fred Browns and practically all of the Ken Crossens and there are a lot more on the books. As to sex—well, by an odd coincidence, I decided to talk about that in this month's SS. It is our personal conviction that sex is here to stay and that saying "go way" won't be much help. But there are conditions, as Joe Gibson might say.

## A LITTLE MAYHEM
### by Ben Kriegh

Dear Editor: TWS has undergone a metamorphosis which is beyond compare! It was by random choice that I selected the Dec. issue from the mag stand, after having left SF alone for about three years, and when I turned to the letter dept (first thing, always) I was amazed to find that some interesting letters of discussion were splashed around. There were fewer 'Blah-Blah was good, Ugh-Wug fair, illustrations terrible etc. etc.' It would indeed be interesting if the readers' likes and dislikes were set apart from letters, evaluated and put in the mag on a point basis of some sort. Leave letters for discussions, such as those by Poul Anderson and Lewis Sherlock.

Little ideas scattered in many of the letters seem to add up to something rather significant, namely, that science-fiction and its readers can fulfill a rather serious aim, the aim being the stimulation of imaginations and creative ideas and more logical thinking. While this may seem rather naive, I have found that many people who have neglected things like science and science fiction acquire a great interest and a great revelation in their thinking when someone urges them to read certain stories or mags. It is clear that while the sciences have progressed, the social sciences have remained more or less static. The point is, why?

It would seem that the source of such a difficulty might lie in the bases of the systems, i.e., the bases of societies. Just as a change in the basic postulates of a geometrical system produces a new geometry, so might a change in the basic premises of our societies bring about a new society—which may or may not be better than the old. A very important basis for most societies seems to be religion, and thus far religion has done little to help man achieve progress. In fact it seems to inhibit progress. The Nazis and now the Communists have shown that a mind properly indoctrinated at a very early age loses its ability to think outside of the system indoctrinated into it. It is tremendously difficult for a child who was taught from infancy to accept everything in the Bible, say, to achieve an understanding of science and its aims without causing deeply rooted emotional conflicts within. The consequences of such conflicts are usually not good.

While there has been some trend toward leniency in the religious point of view, the trend has not been nearly rapid enough. The net result is an extremely unpleasant looking future for nearly all of us. The point is that many of us, especially in the science-fiction class, should realize this and should

help in doing something about the situation. While an older mind cannot be greatly revised, the new minds could certainly be given a chance to mature without having to endure our own prejudices, fallacies, etc. Though in some respects philosophy has done no better than religion, it at least is different in that it is quick to change with the times. It is interesting to note that religion and philosophy both bandy a great many concepts about freely, whereas the problem is not purely philosophical or religious, but fundamentally semantical. It is surprising that semantics has not made a more fundamental impression upon those circles. For example Mr. Anderson asks if the concept of survival after death is meaningful, then says "I think it is" etc. The point is not clear, however. An enbalmed body may "survive" for hundreds of years after death. Or is it a "soul" which survives? If so, what is "soul" and why have it encumbered with a body in the first place? This could go on and on. Another point in Mr. Anderson's letter brings forth semantics. He says suppose, time does not flow continuously but becomes static for a length of time. Question: how does time stop for a length of time? Or is such a statement meaningful? He wishes to illustrate a point with a meaningless play on words, apparently.

His example should be semantically sound to begin with.

There is lots more to say, but no space to say it. I only wanted to stir up a little mayhem anyway.—*513 Deerfield, Silver Spring, Md.*

The mayhem started long before you got back, brother, but I'm glad you're here. We're just the referee, or supposed to be, but we sometimes wonder if all those wild punches are supposed to miss the fighters and clout the ref. Now that you're here, you can take some.

As you will see by some letters that follow, you'll find it difficult to discuss something as emotional as religious belief on a coldly objective basis. Maybe we all have air-tight compartments in our minds marked "keep out," and the reason is always an emotional one. Welcome home.

## THE MONTHLY TICKET
### by Hal McAllister

Dear Sam: After having both cursed and blessed stf authors, editors and fans for some fifteen years in vain, I am going to put some of these blows and blandishments in writing, probably also in vain.

The December letter column is responsible for this. I have just about decided that few if any of the fans read stf for the enjoyment or the relaxation that it gives them. It seems more as though they wish to inflate their own ego by finding fault with the author's plot or the technology used in the story.

The number of letters that tear down and find fault with the author's intent and scientific extensions would indicate that a large percentage of your readers do not know how to read and absorb the thought or personality of the author as placed in the story in the form of plot, character and dialogue.

A reader must be an artist, just as a violinist or a ballet dancer is an artist. Just as the violinist and dancer recreates a mood or sensation which previously existed only in the mind of the composer or choreographer so must the reader recreate in his own mind the very dreams and desires that existed for the author when he painted with his pen his own dreams and desires of the future.

I wonder how many people who read Lovecraft's "Mountains of Madness" jumped up in the middle of the story to check the location of the mountains in an atlas. I'll admit that I did look it up, but only after having finished the story, and then not to see whether Lovecraft was right or wrong, but to find out whether or not that area had been mapped. If not, then the story might still become fact. Therein lies the fascination of science fiction.

I think that most readers fail to realize that today's science fiction is tomorrow's truth. By this I mean that when an author writes about the first trip to the moon, he should include the technological details which would normally be included if the story were actually written at the time of the flight. However, when writing about a trip to the moon after man had reached the outer planets or even the stars, these same details could be omitted, for they would already be quite familiar to the general public *of that time.* For example: During 1946 we read many newspaper accounts and stories about the A-bomb. These accounts were filled with quotes from the "Smyth Report". But now how many articles tell about the possible use of the bomb in Korea, but fail to mention the effective radius and after affects of the bomb?

If a person reads stf for the science, he or she would be much better off with a good text book, but if one reads for the relaxation or the escapism it provides, then there is nothing better than good science fiction. As for economy, where else can one find such a bargain as a trip to Ilya as a member of a United Planets patrol for the small sum of two dimes and a nickel. It would cost the average man a fair amount of money to spend a week at the beach fighting mosquitoes, sand flies and sun-burn, but for twenty-five cents he can cavort among the stars fighting metal-clad insects and the desire to go canoeing with the local femme fatal.

As for me, I will continue to swipe a quarter from the little woman's purse and trot down town to buy my monthly ticket on any tub with tubes that will clear heaviside for ports unknown. But after, and only after the space suit and beta ray pistol are stored away between the covers of the book do I begin to wonder; could Mercurian tungsten crystals really be a form of sentient life? After all, it's only an extension of our own virus theory. Or could a mesotron generator really be condensed to the size of a hand gun? It's just a matter of a power source and shielding. Who knows? Someday maybe . . .

So dear Ed, just keep them coming, but for Sam's sake, don't let a thing like "The Thing" happen to our mag.

By the way, I think J. Wells has a good idea about the journal for analyzing science-fiction gadgetry. It may not revolutionize scientific research, but it would sure make for some good reading.—*General Delivery, Issaquah, Wash.*

The only thing that worries us is the possibility that the little woman might catch you swiping that quarter from her purse, in which case we'll have to send flowers and tearfully erase your name from our list of loyal supporters. Couldn't you go to work or something (no, no, not that!) and earn the price of a legitimate sub? Forgive me, it was just a thought.

## FROM A PINHEAD
### by Bob Farnham

Congratulations!! The cover pic on the December issue is the first—and only—strictly stfpic that I recall ever having seen on either TWS or SS, and I wish there had been no print on it. I'd have liked to frame it but for the print. Couldn't the title of the mag be printed in smaller lettering with varicolor inks? I expect you've had 'hints' about this before but anyway I'm 'hinting' again. It is impossible to obtain copies of the original without paying a price that few of us can afford and a print-free cover pic . . . oh boy! Period!

In James Blish's story of Mars I found considerable interest, but if conditions are as he says, what would be the gain in emigrating to that planet? I moved here from Chicago to get away from the cold weather and a trip to Mars holds little appeal. THE WANDERER'S RETURN by Fletcher Pratt was a very interesting story but to me the ending seemed too confounded tame! No kick to it. The story by E. Hoffman Price was also very good and I enjoyed reading both of them but the rest, while I liked them, seemed sort of common-run-of-the mill stuff. I'm beginning to realize I know little of writing but I have a definite idea of what I like to read. I do not mean to say that the stories in Dec. TWS were not worth while. They were very good and I enjoyed reading them but—there was that indefinable something that gave me that dissatisfied feeling when I'd finished reading the magazine. More action—faster and bloodier! And keep the Fem-interest at a minimum. Keep 'em out altogether if you can.

Fems belong in the arms and not in the prints! Another thing that gets my goat is too whang-danged much science and too whang-danged little fiction in science-fiction stories in general. How about a few LONGEES by Edmond Hamilton and Leigh Brackett? I've long plugged for a story co-authored by the two of them but Sam Merwin alluz said *"N-O!"* Gnatz! I'm going to make a personal appeal to Hamilton via the mail for such an opus! Altogether, the December issue was Excellent, and the inside illos were "Fan's Dreams of Perfection!" THANKS! for a swell issue!

Now I wonder if you'd let me do a little plugging? Our fan club, THE CENTAURIANS, is undergoing reorganization and we want active members. A publisher, Secretary, and Stencil Cutter are badly needed. We have a Welcome Committee, an Official Mailer and a Treasurer . . . I've been President for the past two years and want to step down and give someone else a chance, but we want a President who will push the club along. Membership is restricted as to number. Write me for more info. NOW—one more, please, Sir? About the coming Chicago Convention—Chi-Con 2—in 1952. At this writing I do not know the date, but the hotel has already been secured with plenty of room, and to those fans who plan to attend, from what little data I've garnered, I can promise a whale of a big time. If what I think will happen, does happen, there will be plenty of excitement! Personally, I'm going to wear a suit of armor and THREE bullet-proof vests, and ride inside of a General Sherman Tank! IT'S CHICAGO IN 1952! *I'll* be there! WILL YOU? ? ? How about that, Mr. Mines; will *YOU* be there? ? ? ? ? ?—*104 Mountain View Drive—Dalton, Ga.*

Pardon us while we stop spinning. After pooh-poohing the December ish through a miasma of faint praise you say thanks for an issue that was "swell," "excellent" and next door to perfection. Just when did this conversion take place? Also, Bob, we hereby nominate you for the prize understatement of the year. "I moved here from Chicago to get away from the cold weather," says you, "so a trip to Mars holds little appeal." Urk.

Will I be at the Chicago Convention? I doubt it, Bob, I haven't got a bullet-proof vest.

## OF SHIPS AND SHOES
### by Michael Wigodsky

Dear Mr. Mines: I have some dozens of things to get off my so-called mind, and since most of them have some slight relation to the December *Thrilling Wonder*, I intend to include them in my letter.

First, let me introduce myself. If you, considered as an editorship, were still "good" old Sam, this wouldn't be necessary (the quotation marks around *good* refer to the comments he put on my rejection slips). I have been reading TWS since the Summer, 1946 issue, and writing letters to TWS for more than four years. So, if I speak too familiarly in the following letter, I'll probably be thinking you're still Merwin (after all, one begins to feel a certain affection even for an editor when one has insulted and been insulted by him for more than four years).

A loud, though somewhat belated, hosannah to your reply to Mr. Wasso in the November *Startling*. I'm sorry to say that I was never quite sure that Merwin would maintain the quality standards he had set up; in the end, what can one think of the taste of a man who likes jazz? (or swing or whatever coterie name SM prefers for his variety of monotonous discord). The question is, how much of a purist are you? But it doesn't really matter. I'd even forgive you for liking Mahler, for as long as you hate popular music, "you are right and I am right and everything is quite all right." Wonderest thou what I'm meaning by a purist? To shed light on the matter: I am strictly a Bach and Mozart buff, with a mild liking for most other 18th century composers except Haydn, and an intense dislike for almost all the romantic composers. (Here we part company—Ed.)

The first time I read the last paragraph of Bob Hoskins' letter (derogating Weinbaum) I decided to devote at least a page of my letter to roasting him. Then I reread it and discovered that Mr. H. gave no reasons for his sweeping statements. If he is willing to enter into an argument on the merits of his case, with concrete statements, I will gladly match my typewriter, magazine files, and mind, such as it is, against his, such, for all the evidence to the contrary given in his letter, as it isn't. To the fannish world at large: Resolved that the late S. G. W., had he lived, would have far outdistanced all present day science fiction writers, including Henry Kuttner -etc. and R. A. Heinlein-etc. The gauntlet is flang, as SMJr used to say.

I agree with Mr. E. H. Mann on at least one point and go beyond him: that one of the tests of really first-rate fiction is that it challenges the reader's basic ideas and concept of "logic." The handiest examples that come to mind are the "decision" chapter in *Huckleberry Finn*, which by quiet understatement burns into the reader's mind the absurdity of a moral code based upon racial prejudice, and almost any of the comedies of Aristophanes. (Though Aristophanes was probably wrong in thinking that the only way to make fools listen to reason is to tell them that they are fools.)

A suggestion: longer answers to and comments on letters.

I may be just playing Watson to Mr. Sherlock, but I'd like to heartily underscore his inability to understand why the religionists (or, if you want a more descriptive term, fools) find the idea of a Prime Mover Unmoved more comfortable than that of a Universe Unmoved (though both concepts are probably meaningless, unless the latter is taken as an approximate summary of the entire tendency of the present state of our knowledge). I don't think, though, that Lewis will get many scurrilous letters; all the fans I've known would simply nod agreement. The nearest thing to a believer among the fans of my acquaintance is a pantheist.

Mr. Levine might be interested to know that the first and most popular of the "we're property" stories, SINISTER BARRIER, was written, not by a materialist, but by a Hindophilic mystic with a profound distaste for Western civilization. Doesn't this mess up his conclusions?

Allow me to join the crowd jumping down the neck of Mr. Wells. 1. "Science fiction should be practically the only literature of a scientific world." No, no, 1,000 x no! Sf has for its function the exposition of ideas about scientific speculation or about the sociological effects of scientific advances coming or to come. It sometimes stirs the emotions within a small range and to a small degree, full empathy being virtually excluded by alien-ness in various forms. But all critics are agreed that the two main functions of literature are the illumination of human nature, to which a futuristic setting can add little or nothing, and the complete upheaval of the reader's emotions. Therefore, much as I love science-fiction, I seriously doubt that a work in this medium can attain to quite the first rank of art, and I would regard the event for which Mr. Wells so longs as an unmixed calamity. 2. Mr. Wells' mention of Burroughs seems to be something of a slip, since ERB represents nearly everything which he so excoriates, having no scientific ideas, superficial characterization, and virtually no redeeming qualities save fast action. 3. "It should put petty novels about individuals and their adventures with the police and the opposite sex to shame." Mr. Wells seems to feel that stories are more interesting without people. Or perhaps he thinks that man will reach fruition only when individuality is abnegated in the ant-state. 4. Wells' fantasy novels were hackwork, written in a hurry and showing few of the distinguishing characteristics of his serious work. The one exception, *Mr. Blettsworthy on Rampole Island*, was written late in his life when he was under no economic necessity of writing hastily and only as well as his market demanded. C. S. Lewis, whom Mr. Wells mentions favorably, is actually a religious pamphleteer who is actively hostile to science but some of whose allegories accidentally take the form of science fiction.—*402 West Clay, Houston, 19, Texas.*

That scream of anguish you hear emanating from the direction of Houston, 19, Texas is Mike giving tongue at the sight of this truncated, abbreviated, disemboweled and amputated letter. But if we had printed it as received, with two husky mailmen staggering under the load, there would have been no room for DOUBLE JEOPARDY. We kept all the good ideas, anyway, and just took out the lists of stories Mike either liked or disliked.

Oh, about the music—I guess this was a beautiful but brief friendship. We are not a purist in our musical taste. We dislike varations on a theme ad nauseum, we dislike finger exercises for piano, violin and cello, we dislike tinkle, tinkle, tinkle. We like the romantic composers, we enjoy melody, we even have a sneaking fondness for music with (excuse the expression) a "program." And if that puts us beyond the pale, we said it and we're glad, glad.

## SHERLOCK'S HOMES
**by Dick Ryan**

Dear Ed: I don't know what Lewis Sherlock's philosophy is, but in his letter in the December TWS he builds up a whopping case for agnosticism. That's a very nice belief, if not quite as comforting as some orthodox religion. It seems to me the whole thing hinges on whether or not one needs to be comforted. Despite the injunction that "God helps those who help themselves" the Bible, and no doubt the Koran and all of the other great books which point the way for the followers of a faith, contain a great many more references to just that—faith—than to using one's own ?-given powers.

If that seems a little sketchy, let me try to clarify. Will anyone disagree that religion is essentially a prop? A very ornately constructed one, but nevertheless a prop. It's handy to have someone to whom you can pass the buck when you get in deeper than you expected. And if you believe in that Someone it really takes a load off your mind. Of course the problem is still with you, but maybe about then you

get an idea, and if it puts you on solid ground again, there's your faith strengthened a little more. He, says the believer, or It, or They, came to my aid. Nothing wrong so far. Belief in a higher Power which can manifest itself in a way mortals can understand tends to make those mortals stick close to that Power's dictates; that is, the straight and narrow. When the believer is multiplied by the population of a city, or country, or world, that whole population takes another step toward civilization.

But wait a minute. Is it so fine after all? Here's where Sherlock's ideas on dead-end thinking come in. I know of no religion which leaves something in doubt. If it did, it wouldn't be a religion. According to religion, nothing important is in doubt —but anyone who stops to think about it knows there's a heck of a lot of stuff that's in doubt, and pretty deeply too.

So what do we do? Throw out religion? Hardly. First of all, it couldn't be done if you tried. All you would do is make a lot of people mad. And they wouldn't all be fanatics, either. Everyone's entitled to his beliefs as long as they don't threaten the rest of us.

We have then, broadly, two groups: The religionists, with a god, a conception of the world's beginning, a set of rules for living, and a belief in some hereafter; and the atheists, who believe in nothing and do as they damn please. There are fanatics and fanatics.

The point I'm trying to make, and not quite succeeding, is that there is something wrong in the thinking of both these groups. The atheist's is too broad; the religionist's, too narrow. The religionist daren't go beyond his Book; the atheist is too often a stray from religion, someone whose setbacks have embittered him. In the end you are accountable to yourself, if to no one else. That's why religion is handy for lazy thinkers especially; that's why people who like to think they are much put-upon turn to atheism.

A person needs a code of morals or he will eventually become disgusted with himself; but at the same time he needs to keep his thinking straight by constantly examining new ideas and concepts and keeping his mind open to them. There's something very wrong with a person who never changes his mind. How many people who quote "Live and let live" actually practice it?—*224 Broad Street Newark, Ohio.*

This is one of the mild answers to Sherlock's letter, of which there have been many, of various heats. Let us go further.

## TRUTH OR CONSEQUENCES
### by Sgt. Edwin Corley

Dear Mr. Mines: I've been inactive too long really to be able to predict the general reaction of Fandom (copy reader, spare that capital "F"!) to Lewis Sherlock's thought provoking dissertation on religion and philosophy. His comments on the latter seemed to be a bit incomplete, since he regards philosophy as a kind of extension to religion. However, they can pass if taken as a slam at the theory of *absolute* (all-knowing) philosophy. But since such all-encompassing knowledge is obviously impossible, it seems that Mr. Sherlock's own statements are at odds with each other. Philosophy has always been a search for knowledge, not a checklist of all that is possible to learn. Among Kant's most incomplete and often vague writings were contained many of his clearest insights. However, going back to my role of crystal-gazer, I'll bet my berth on the next Moon rocket that it won't be this part of Mr. Sherlock's letter that brings the poison pen letters rolling in.

It is regrettable that the basically true and important statements this letter put forth were couched in language that can hardly fail to bring an emotional as well as an intellectual response from the reader. An individual who could read and agree with Mr. Sherlock's ideas, will find himself disturbed and possibly repelled by several of the sarcastic expressions that crept in. Religion is born deep into a man; his mind may recognize its flaws, but his instincts will rush to its defense. Perhaps this is because of the identification of religion with childhood and fear that was banished by retreat to Mother. In adulthood, the meaning of the symbols or acts may be forgotten, but the emotional reaction is the same *(I fear, I pray)*.

Getting away from the by-products of Mr. Sherlock's letter, however, there are a few points that should be brought up concerning the *value* of religion, of which he seems to think little. Granted that religious fanaticism can bring actual harm to its followers, isn't this true of going overboard in practically anything else? While it seems hardly likely that sprinkling water over my head or burning candles will assure me of an eternal life, isn't it better for me to resort to a belief in an All-Commanding, rather than fight the battle of death within myself? Life is a constant strife as it is, without adding the greatest battle Man has fought to every personal load. Which do you think is harder, believing *in* God, or in something infinitely more fearsome and incomprehensible, blind chance? It's simpler to say "God created the Heavens and the Earth" and accept that, rather than to try to imagine the complex chaos of the so-called "scientific" Universe.

While this leads to the question, "Did God create Man, or Man God?" as things stand most of us will never be called on to answer that question.

Aside from the effect of mental security that religion helps to achieve, certain physical advantages have been derived thereby. While, in our present-day "freedom," it may seem we do not follow any laws without knowing their benefit to us, in the early days of religion the education level was not at a point where a man could be told: "Do not eat raw pork," or "Do not marry your sister" and be given reasons; at least reasons that would be understandable. Wasn't it simpler to put them forth as they were, as laws of God, unquestionable? (Remember what happened to people who claimed the world moved around the sun? Imagine if a man had said that little parasites infested pork. . . !)

It's well known that our religion contains phonies who are out for themselves, but, while this is regrettable, it's hardly reason to take away what little peace of mind we insects can find by hiding away under the wing of even an imaginary protector.

If this thing gets any longer, I'll have to ship it as freight. I only hope I didn't confuse the issue,

which was: *better to imagine a God and live in false security than know the truth and live with the surety of final and complete Death sitting on your shoulder.—3860th Comp. Gp., Gunter AFB, Ala.*

This is as inflammatory a premise as I have ever heard. Is it better to live in false security than to know the truth? I can think of quite a few people who would rather know the truth, no matter how unpalatable, than live in false security.

But let us on.

## AND WARMER

**by C. M. Moorhead**
**Pastor, Community Church**

Dear Sir: I read with increasing indignation two letters that appeared in the department entitled "The Reader Speaks" in the December issue of *Thrilling Wonder Stories*. The first one by Poul Anderson (Logical Positivism) wasn't so bad, but he certainly could have reached his conclusion in a lot fewer words. But for sheer, egotistical bigotry the letter (Debunkers and Boshes) by Lewis Sherlock takes the first prize! It is with the latter that the burden of this letter deals.

He starts off by saying that "John W. Snell's letter is one of the worst examples of saying nothing in the most profound terms," that he had seen for a long time. What would one call a letter that took one and three-fourths columns to arrive at the profound and momentous conclusion that *nobody knows anything?* Like a cuttlefish, beclouding the waters around it in order to escape its enemies, he has beclouded the issue with a blast of inky words which have little real content as far as proving anything is concerned.

In the second place, if he doesn't like Charles Fort's books and the illogical sequence in them, why doesn't he write something better? Let's have a book or story from him that follows his own brand of logic!

He didn't do so badly until he got his pointed nose over into religion and then he went off the deep end. All he showed there, in his profundity, was that he didn't know too much about the subject. One cannot discount Christian Theology by reading one or two atheistic books about it. If one is to reach an unbiased opinion about a subject he must read books of *equal calibre from both approaches.* He must read Christian Theology written by the best minds of yesterday and today, in order to counterbalance the atheistic writings of the best minds from that approach, and after careful thinking and weighing of material given, arrive at his *own* conclusions. To my way of thinking his concepts of God, the Christ and the Bible have been arrived at solely by reading atheistic material, to the exclusion of the other.

Most atheistic thinkers regard us who are religious minded as intolerant, but notice how utterly intolerant he is of us. He regards all who embrace Christianity as silly asses; they are to be pitied; he looks down upon them from the lofty heights of his intellectual superiority. He regards all Christian teaching as the bunk! I wonder if he ever tried to put the *Golden Rule* to work in his life? There is a passage of scripture from the Bible (I Cor. 2:14) that describes him exactly: "The natural man receives not the things of the Spirit of God for they are foolishness unto him; neither can he know them, because they are spiritually discerned."

Again, he says that he believes in people. What is he doing for them? Has he associated himself with some humanitarian group that is trying to improve the lot of mankind? Has he really made any generous contribution to societies whose proven purpose is to lift men who are unfortunate and set them on a road of self-respect and purpose? If he has not done such, then he does not even believe in people. In what does he believe? Himself? But how does he know that he is he?

Then, he took a snide poke at "preachers" in general. Did he think he could get away with that without a challenge? Perhaps he felt safe in the assumption that preachers are too narrow a lot to be interested in science fiction? All the wind-bags are not found in pulpits. Nor are all bigots found in pulpits either!

He uses the term "science" frequently as if the purpose of science were to discredit religion. The purpose of science is *not to discredit* religion although some pseudo-scientists try to make it do that very thing. For every scientist who does not believe in an Ultimate Cause or God, I can match you with one of equal importance who DOES believe in God.

I wonder what Mr. Sherlock would do if the heat were really on him? I remember there were some fellows in our division in the Pacific War Area who often held forth, whenever they had opportunity, with arguments like his concerning the validity in belief in God. Their arguments sounded very convincing too. But when the heat was on they changed their tune. When our outfit stormed some of those Pacific islands, and the Japs' murderous cross-fire mowed our men down like wheat, those very boys began calling on a God in whom they did not believe. Where were their fancy arguments then? Mr. Sherlock's weighty jargon fades into thin air in the face of man's basic urge for survival.

Finally, his letter ends on an altogether different key. He begins with a lot of bombast and noise, and then concludes with a tactic admission that he doesn't know too much after all. Why this sudden burst of modesty? Was he appalled by his own bold assertions and felt he ought to pull his punch? He said *one thing* with which I heartily agree:

"This letter is far too long and says far too little." How very true!—*Kelleys Island, Ohio.*

This is a valid viewpoint and you can make of it what you will. I question Rev. Moorhead's strongest argument, that under the stress of fear, the boys began calling on a God in whom they didn't believe. Does that prove anything besides fear?

Belief is a personal matter and discussions of theology can so easily get out of the province of a fiction magazine that I strongly recommend we call it quits. No one is going to prove anything or convince anyone else. When you

monkey with a man's beliefs you only irritate him. So let's pass on to some more hecklers.

## SOMETHING FOR THE SEX
### by Evelyn Catoe

Dear Mr. Mines: I have a few things to say to Mr. J. Wells, whose letter appeared in your December issue.

In the first place, Mr. Wells, stf is *NOT* pseudo-science. The term means false, imitation science, passing as fact. Stf is fiction and makes no claim to fact.

As for the sentence "Stf should put petty novels about individuals and their adventures with the police and the opposite sex to shame," all I have to say is that science fiction is written to entertain. Have you ever read a good fiction novel that had no human interest?

I won't bother to give my ratings because I fail to see that they would interest anyone. I buy your mag and I think that's enough comment.

However I will say that I liked the cover on the December issue. It is nice to pick up one of my regular mags and find no girls, just lots of good looking men. Something for my sex at last. I am going to start campaigning for more men on more covers (that last sentence is to show how silly the whole fight about girls versus art is, as if the cover could affect the contents).—*323 Powers Street, New Brunswick, N. J.*

This is a switch. More men on the covers! What'll they think of next. On second thought, maybe you've got something there. . .

## BEWITCHED BUT NOT BEWILDERED
### by Edward G. Seibel

Dear Sam (Mines): Disappointed, disgusted and related words aren't exactly the kind I'm thinking of right now. For months you have printed letters of mine which either kept you hopping on a griddle or grimacing. But when I send you a HUMOROUS letter which bears no malevolence, no malice, no malignancy, and is merely designed to make you smile—you junk it.

Why?

Pedantic, ponderous pieces of pusillanity are all I could find in the Dec. TWS column. MY letter wasn't there. Can't you STAND humor? Or is your mind a miserable field of gray, drab blankness? Or aren't humorous letters dignified and intelligent? I don't find those anyhow.

Well I repeat (slightly). THE JESTER IS THE FUNNIEST DAMN STORY I'VE READ IN SCIENCE FICTION. I'll keep trying until I see it in print!

And with a fond, friendly snarl I'll subside. (What's a friendly snarl?—Ed.)

Now with a cool, calm, scientific, dispassionate, detached manner, I shall proceed with my present dissection of you anent this issue. (Dec. 1951). In short, prepare to be ripped to shreds—not in vengeance, of course.

After reading your editorial, Sam, I have come to the conclusion you will provide an able sparring partner. You seem to approach subjects objectively and with a wide viewpoint. It speaks well of you since it is an indication of perceptive intelligence. I found it a particularly interesting editorial because I did grow up amid noisy engines, radio tubes and chemistry sets. For some strange reason though, I grew up trying to cross potatoes with peanuts in order to grow bigger peanuts, which I happen to like, and have been at it ever since.

But the greatest, most vivid memory I have, involves a certain term paper I once put my efforts into. I happen to have been at the time interested in rockets. Don't ask me why; I've been wondering about it myself continually since then. I needed only 2000 words and ended up with 60,000. The teacher was very cool and to this day regards me with a jaundiced eye. Personally I am no longer interested in rockets.

Tonight, feeling in the best of spirits, I hoisted your magazine to eye level. Horror enveloped me. Filling the horizon were malignant looking little green men, spewing from the belly of an over-sized monster squatting on yellow sand. Screeching with fear I hurled my glass contents case out the window before any BEMS should materialize.

I don't mean to be rude, Sam, but that cover stinks to high Arcturus. I *told* you I wasn't seeking vengeance.

On to the stories. Only a million miles? That picture of Lortrud should portray him as being more elderly. If Merwin thinks anyone can domesticate a buffalo, young or old, let him try.

As you can see, I am not waspish and irritable about my letter not being published; I bear you no malice; I leave you with no malignant feeling. I named my pet turtle after you.—*P. O. Box 445, Olivehurst, Calif.*

P. S. Have just read ESCAPE FROM HYPER-SPACE. Great Galaxy! More, man, more! I don't know who Price is, but dammit, tell him more!

Phoo, this you call being ripped to shreds? Pussy got no claws. You say we got no sense of humor, then you say THE JESTER is the funniest damn story you ever read. We PRINTED THE JESTER, didn't we? And then you lambast me further by saying I write pretty editorials. You're gonna beat me to death if you keep this up. I don't know what happened to that letter you are bewailing. If it was the one about the rolled up magazine I think you sent it to SS. I'll ask the editor about it.

Speaking of crossing peanuts with potatoes, I'll get the name and address for you of a man who is trying to cross a carrier pigeon with a parrot so the resulting hybrid will be able to sing its own singing telegrams. If your turtle dies, don't blame me.

## CYBERNETICALLY YOURS
### by Ken Scorso
### The Jovial Jovian

Dear Sam: First of all. I refuse to start off this

letter with that trite, over-abused phrase about this being my first letter to your mag, even though it is. Needless to say, I enjoy your mag no end, and I think that it is one of the best of its field. Because I have little spare time to read STF, I usually go through a mag in this manner:

1. Letter Column.
2. Look at the illos.
3. Read the short stories.
4. Then the novelettes.
5. Lastly, but not often leastly, the novel.

In this way I can usually get through the mag in short order and enjoy it more than if I had started at the first page and read through the whole mag. It works out very well.

Enough of that, now for the stories. ESCAPE FROM HYPER-SPACE was the best, this ish. I always like that sort of story. THE WANDERER'S RETURN was a close second. Third was KEYHOLE. Leinster is a good man; there's no doubting that. The rest of the stories were good, but just average. Also, I have read (damned if I know why) all of Blish's OUR INHABITED UNIVERSE series. I will make no comment on that as anything that I say will be unprintable anyway. In passing, I'd like to say that the Finlay illo was simply delicious. YAH!

I enjoyed the William Tenn story called THE JESTER way back in the August ish. I have a liking for robot stories, anyway. I'd like to see some more good robot stories in the future if you could possibly manage to squeeze one or two in. Howzabout it? HMMMMM?

I think I'll subscribe to your mag if I ever happen to have three bucks lying around somewhere. It would be well worth it.

Another thing before I take my leave, your editorial was very good this month. You seem to have the idea about it, all right, Sam old boy.—*1340 Vallecito Pl., Carpinteria, Calif.*

Come to think of it, there haven't been any good robot stories around for awhile. Will keep an eye open for one.

## AND SO TO VENUS
### by James Blish

Dear Sam: I'm writing this to comment on the remarks of "Bill Tuning, better known as Orvil Stien," which appeared under the headline "IIIII-LLLLLKKKK" on p. 138 of the December issue of TWS.

(1) Mr. Stien says there is oxygen and water vapor on Venus; I say there isn't. I stick by my statement. The staff of the Griffith Observatory in Los Angeles, H. Spencer Jones (the Astronomer Royal), R. S. Richardson of Mts. Wilson and Palomar, Fred L. Whipple of Harvard College Observatory, Gerard Kuiper of Yerkes Observatory, Henry Norris Russell, Willy Ley, and a flock of other experts all seem to agree with me. I've been unable to find any astronomy text dated later than 1920 which agrees with Mr. Stien.

Mr. Stien says that an atmosphere of carbon dioxide points toward a planet dominated by "vegetable metabolism"; he seems to be under the impression that plants breathe carbon dioxide. At my last contact with botany, however (which was while teaching freshman biology at Columbia University four or five years ago), plants breathed oxygen just like you and me and Mr. Stien. It is photosynthesis which is responsible for the $CO_2$ consumption of plants, not respiration. Incidentally, one of the end products of photosynthesis is oxygen, so a planet dominated by plants would certainly have oxygen in its atmosphere in considerable amounts, which isn't true of Venus. (This I said in the article in question; I'm afraid Mr. Stien didn't read it very carefully.)

(2) My article was about Venus, not about flying saucers. My mention of flying saucers was simply a passing remark. If Mr. Stien chooses to take everything he reads in Frank Scully's book as gospel truth, that's his privilege. I see no need to argue, however, over such an obvious hoax, especially since both Mr. Stien and I agree that the subject has nothing to do with Venus. (Another case of Mr. Stien's failing to read what my article said.)

(3) Mr. Stien accurately labels his third quibble "purely speculation," an outburst of modesty which I find a little belated. The figures which he quotes appear to have been cribbed from Ball's *Wonders of Astronomy*, published circa 1890, or from some other elementary text of the same vintage. In this connection, he appeals to Lowell, who was certainly a great astronomer, but who also has been dead for quite a few decades—probably several decades before Mr. Stien was born. Quite naturally, a lot more data has been accumulated since then, so it is no discredit to Lowell to note he was often wrong. (He was wrong, for instance, in supporting Schiaparelli's theory that Venus' day was as long as its year.)

The question which Mr. Stien addresses to me in this section of his abusive letter (as to how the surface of Venus can be as hot as I said it probably was, when the light-reflecting power of the atmosphere is so high) is a further indication that he has read only about every third word of the article he is criticising. The answer to the question is contained in the article, in the discussion of the "greenhouse effect" of a blanket of carbon dioxide, so forgive me if I don't explain it again. Mr. Stien doesn't appear to be paying attention—*Long Island City, N. Y.*

Score for Blish. But don't go away, there's more coming up. . .

## COUNTERATTACK
### by Bill Tuning
### The Seedy Solomon of Summerland

Dear Sam: AHHHH HAAAAA! I thot you had reformed, Mr. Blish. When I first started reading your article on Mars this month, I said to myself, "Ah, this boy is on the ball about Mars," and he is, except for a few gripes I have to banter about.

Temperature: Congratulations. You're absolutely right.

Environment: You're painting a rather dim picture, old chap. Sure Mars' atmosphere is thin, but you're forgetting that the human body is fantastically adaptable. An Andean, or perhaps a

Tibetan with a bit of practice could probably survive the Martian environment without all those breathing gadgets. However, I'm not foolish enough to entertain the idea that I could do it.

Oh oh! You did it again. Ray Bradbury is also one of my tender spots. What's wrong with his Mars? Sure it's scientifically incorrect. "Scientific!" To quote the master, "I don't like what science is doing to the world today. I think science is a good thing to escape from." Amen Ray! His Mars is scientifically shot, but if you disregard science, his are the best damn stories you'll find! How about Leigh Brackett? She's the closest thing to Bradbury today, and nobody leaps up and screams, "Her stories don't have no science. They ain't no good!" Leave Bradbury alone, Mr. Blish, he's a good guy. Yeh, yeh, I know, he doesn't need to be defended, but I'll still do it every time some nut like you comes along growling about his stories, I'll growl right back. Phooey on you!

Mysterious markings? Oh come now, nature doesn't make canyons as straight as a string. Look at the big ditch in Arizona.

Outside of these points I can find nothing in the article to grumble about. I think the canals were made by very intelligent Martians, but that it was done long before men looked out of their caves and wondered what the pretty lights in the sky were. Martians are a dying race and if we don't get there pretty damn quick, we won't find any of the poor creatures alive to tell the tale. But when we get to Mars, we'll probably be more interested in seeing who can grab off most of it, rather than trying to find out anything about a civilization more than twice as old as our own.

Now. On to the stories. Wow! Those Finlay illos! They are good Good GOOD! Oh, that blurb on Merwin's story. Oh that illo! (SMACK! DROOL!) All name authors this trip. Vury good Sam. Vury good.

Letter section tally ho! Where did you get my pen name, besides on the stories I sent you? I'm not using my pen name anymore, I decided that my name was as good as Orvil Stien. Besides, I need the recognition. You lose my address? I always like for people to know my address when they read my letters. Then they can send me their comments (shudder). I live in Summerland, Calif. now but in a couple weeks, I'm going to move a few parsecs up the road to Santa Barbara, The American Riviera, A Lovely City By The Sea. (PLUG PLUG.)

I read L. S. de Camp's letter. Boy, is he a card. To see him you would think him more the type like Blish, but boy what humorous stories. And that letter, I'm still laffing.

If this gets published (Ain't I naive?) and you read it L. S., write me a letter will ya'? I haven't heard from you in ages.

You, Sam, should now have in your hot little hand one of my better poems (I write sonnets like Shakespeare, as well as s-fantasy), or was that why Merwin left? Hmmmmmmm. I better quit while I'm ahead.

No address, as usual. HAVE I GOT POEMS AND STORIES OF YOURS?! They're stacked up to here! And no address on any of them. Either send me your address on the Riviera of Southern California, or come and get them before Jim Blish rends you bone from bone. (In that case kindly indicate heirs to whom you wish to leave the masterpieces.)

## AND MORE
### by Hal Clement

Dear Sir: Please pardon the inexpert typing and the paper on which this is written—it's the only sheet I could find in the apartment and it's Saturday night.

I have just read the articles on Mars written by James Blish in the December issue of your magazine, and have a number of questions in reference to it.

First: His statement that the temperature probably never falls below —50 F. seems hard to justify. While we obviously cannot get direct measures of the planet's surface temperature much after local nightfall, the estimates I have read in general run to much below —100 F., due to the assumed low blanketing power of the atmosphere.

His statement that the round of seasons occupies some four earth years is difficult to understand in view of the fact that Mars' year is less than two of ours.

The reference to iron is unfortunate. The former idea that the Martian deserts were red as a result of the removal by this metal of atmospheric oxygen collapsed some years ago when infra-red analysis of these areas matched ordinary volcanic rock rather than iron rust—see Kuiper's "Atmospheres of the Earth and Planets."

He might have mentioned that the "Flash" on Mars in the summer of 1950 (I think; have to rely on memory away from my personal library) was reported by only one observatory (again from memory) and was a visual observation. I mean no discredit to the astronomer involved, but there was no objective, permanent record.

Why should water vapor stick to low ground? Its density is decidedly less than that of oxygen, nitrogen, carbon dioxide or argon; and I know of no other gases which have been suggested as forming any considerable portion of the Martian atmosphere. I also doubt seriously that "light-absorption" by water vapor could produce dark streaks. If by water vapor Mr. Blish means the clouds which do hang low and are composed of droplets of liquid water (or more probably on Mars of ice crystals) they would be light from above rather than dark. Try flying over a solid undercast some time if you don't believe me. You don't have to visit Greenland to go snowblind.

The photographs I have seen of Martian "canals" (prints, not screen-reproduced published pictures) do not make it as mandatory as Mr. Blish suggests to assume the existence of "canals."

Concerning the dryness of the atmosphere, I am in full agreement; and I am perfectly willing to concede the possibility of life of some sort being present on the planet. Mr. Blish's general suggestion that the color changes are most easily explained by vegetation I naturally like—I wouldn't be a science fiction reader and writer, I suppose, if I didn't. I don't mean to cry down the whole article, but I would like to find out whether the points I

mentioned were considered by Mr. Blish in the light of evidence more recent than any at my disposal.—*Bolling Field.*

P. S. In KEYHOLE—since when was Lunar gravity one-eighth that of Earth? Consult any astronomy text.

## SECOND ROUND
### by James Blish

Dear Sam: Hal Clement's letter restores my faith in the rationality of man (or, at least, of some men). Although Mr. Clement's objections are largely justified, they are obviously offered in a spirit of inquiry, not furious denunciation; his note makes an interesting contrast with that of Mr. IIILLLKKK, which attempted to make up for ignorance of the subject matter by a liberal sprinkling of such epithets as "Buster Boy." . . . To answer Mr. Clement's questions:

(1) I agree that the temperature at midnight or thereabouts in many latitudes on Mars must go down to —100 F. or more. I was speaking only of daytime temperatures in the article, but I failed to say so. Anyone who would like to go out on Mars after dark may have my job editing a frozen foods trade paper; he will be far more suited to it than I am!

(2) The statement in my article about the length of the seasons on Mars is absolutely false; I spotted it myself the first time I reread the article in print, and yelled with anguish. This is what I get for calling *anything* in this field "a 24-carat fact." How I arrived at such an absurd figure I cannot now imagine. I believe it is defensible to assume that the "growing season" for Martian vegetation may be about twice as long as ours, but certainly not four times, as Mr. Clement points out.

(3) The assumption that the red color of the Martian deserts could be ascribed to iron may very well be outdated. I have no data later than Mr. Clement's to offer in contradiction; if it turns out that he is right (as I have no objective reason to doubt at the moment) the emphasis on iron in my article would necessarily be misleading.

(4) I think that the question of the soi-disant "explosion" on Mars is adequately covered by a question in the article itself: "Or was the 'explosion' just a trick of the eye?" I did not offer the reported explosion as a datum, but only as an unanswered question; if Mr. Clement thinks it necessary to emphasize that it was a unique and uncheckable observation, I can hardly object. I am already on record as having suggested that it may have been an illusion.

(5) Water vapor is a heavy gas no matter where you find it; and its density, of course, is a variable, and so can't be compared positively with the density of any other gas except under controlled conditions. Mr. Clement agrees with me on the dryness of the Martian atmosphere, and he enters no objection to my postulation that the dark areas on Mars are probably somewhat lower than the deserts; if he will then consider that under such conditions both temperature and pressure must decrease noticeably with a bare thousand feet of altitude, I think he well see how the atmosphere of Mars might carry water vapor (the gas, not clouds of discrete particles) along low ground during the Martian day. The power of the atmosphere to carry the gas, it seems to me, must decrease quite sharply with every additional foot of altitude.

This I think also answers Mr. Clement's objection about light-absorption. I cannot imagine a real, Earth-like cloud of water droplets lasting long enough on Mars to be noticeable for more than a second; the vapor-pressure is too low. It would go into true vapor immediately, in the limited, low stratum of the valley atmosphere where temperature and pressure allowed that. As for ice crystals, they are essentially like dust particles and behave as such; you find them on Mars just where you find them on Earth, floating high up above all other possible clouds, at the limits of the major atmospheric layer. Certainly they would not drift along placidly in shallow valleys.

Thus there would be no light-reflecting clouds of droplets or crystals to make the low areas seem bright. There would, instead, be a thin layer of actual water-*vapor* over the low areas during the Martian day; and any heavy gas absorbs, not reflects, light. It occurs to me that such a layer might also provide some slight "greenhouse effect."

(6) As for the canals, I did not say that photographs make it mandatory to assume their existence. Mr. Clement overstates my case. What I said was: "Some few of them even show on photographs, though without enough definition either to confirm or to controvert the details pictured in the various drawings." This seems to me to be a fair statement; and, like Mr. Clement, I have seen, and have in my possession, actual prints of photographs of Mars—I know better than to go solely by published engravings, I can assure him. My case for the "canals" rests principally upon testimony—which is, as Mr. Clement surely knows, usually far more detailed in astronomy than photography can be, and not significantly less reliable. Visible detail in planetary observation still is dependent mostly upon given conditions of "seeing," upon the freshness or fatigue of the observer, and upon his objectivity; the photograph, by comparison, is still a poor thing indeed. It can give us certain invaluable kinds of general data which the eye cannot detect (for instance, it can tell us approximately the depth of the atmosphere of Mars) but on the matter of fine detail we are still at the mercy of the untired, unbiased eye glued to the apochromatic ocular, waiting for that one fleeting, invaluable instant of good "seeing."

I'd like to hear more from Mr. Clement on these points; perhaps your readers would too.—*Long Island City, New York.*

Being now thoroughly covered with ice crystals, we are moving closer to the radiator with our old address book which, seems to us, had the telephone numbers of a couple of Martians. . . .

## NOTHING SIRIUS
### by Norman G. Browne

Dear Editor: I begin this note with these awe inspiring, attention catching words. . . . This is my first letter. . . . I am somewhat of an egotist, and seeing my rise in fandom is nothing short of sen-

sational, I decided to bring it to the attention of you and your readers. For many years I lived in a S-F world of my own. I read and collected science fiction, that was all. I wrote no letters to promags, I read no fanmags. I never met or talked to anyone else interested in S-F. I couldn't start up the ladder of fandom the right way. Oh no, the first person I ever met connected in any way with S-F was H. L. Gold. I had to hitch-hike 2,500 miles to New York City to see him. Mr. Gold in turn put me in touch with Ted Sturgeon. We spent two hours sitting in a Mexican Bar off Broadway sipping Tequila Collins and chewing the fat. Amongst our idle chatter he happened to tell me about Nolacon. So I hitch-hiked back to Canada, worked, saved up enough money and hitch-hiked down to New Orleans. Altogether I hitch-hiked 7,760 miles this summer. The purpose of it all? Welcome me to the fold. . . . I am now writing science fiction.

Well, enough about me. In looking over books on writing I find that stories usually have a pattern or formula. In looking over the letters in your columns I also find a pattern or formula. I liken your magazine to a contest and the best entries are printed in your letter columns. The letters are divided into four categories, as follows:

A—*General Topics*—

I like your magazine because . . . . (in 75 words or less) . . .

I hate your magazine because . . . . (in 50 words or less) . . .

I hate your covers because . . . . (in 25 words or less) . . .

I dislike the type of stories you print . . . . (in 50 words or less) . . .

B—*Specific Topics*—

I like/hate so-and-so stories because . . . . (25 words or less) . . .

I like/hate so-and-so author because . . . . (30 words or less) . . .

I like/hate so-and-so illo because . . . . (in 25 words or less) . . .

C—*Controversial Topics*—

I want trimmed edges because . . . . (contest expired Dec. 31, 1949) . . .

I want decent covers because . . . . (contest expired Feb. 31, 1951) . . .

I like Bradbury because . . . . (in 50 words or less) . . .

Cut out the letter columns because . . . . (in 75 words or less) . . .

D—*New Contests*—

Stop illustrating your mag because . . . .

Cut out stories, devote whole ish to letters. . . .

Print all illos in color because. . . .

If I was Editor for a month, I would . . . . (down boy, down) . . .

Wait a minute, where do I fit in? Well take your pick. . . .

1.—Due to my undeveloped powers of discrimination, I have reserved judgment on this issue.

2.—You as Editor would not have printed the stories in this issue unless you thought they were good. I am not an editor, but a lowly fan, far be it for me to criticize you. Can the finite comprehend the infinite??

Calling all Philatilfans (stamp collecting fen) I have a large quantity of postage stamps that I will be glad to trade for back issue S-F mags. Send me your want lists.—*1150 W. King Edward Ave., Vancouver, B.C., Canada.*

Him we like. Any time you get to hitch hike down to New York, Mr. Browne, we will take you out to lunch. We will even pay for you. Get your eyebrows down, you don't know many editors, I can see.

## FAN LETTER
### by Mark Johnston

Dear Mr. Mines: The December issue of TWS bodes well for the future. The letters were the most interesting I've seen in a long time. I suggest that you lop off the listings of the stories. They are useful to you but often boring to us. However, why not try to have each reader heave a bouquet and a brickbat in his letter? The best story and the worst story should receive mention.

On to Sam Merwin: the mags he edited rate with me right behind the higher priced slick quality mags and individual issues often rated higher. His stories have rated both "A" and "C" with me, but I feel that if he is free from other activities he should turn out some extremely good work. I'll be looking forward to seeing it in your mags.

Where'd you dig up Bixby? Glad to see him in action again anyway, even if he did drop the rating system for the fanzines. Will he be writing that department regularly?

(Then follows a listing of stories, which we immediately lopped off, as requested.—Ed.)

Bouquets to Miller and Leinster for SONG OF VORHU and KEYHOLE. Brickbats and a Bronx cheer to Coblentz for WAY OF THE MOTH.

Did you notice the contents page contains one glaring printing error? First I've seen you make. (Can't find it yet—Ed.)

Any Canadian fans who contact me may learn some interesting things about the Canadian S.F. Association.—*433 Askin Blvd., Windsor, Ont.*

Among our immediate associates we are considered braver than Daniel, but we would rather face lions than start dictating to our readers what kind of stuff they should include in their (ugh) letters. A bouquet and a brickbat? Shades of Merwin. Bixby will be doing that department from now on, barring accidents. Like a fan dropping in to see him, with brickbat.

## IN PERDITION
### by Richard Harter

Dear Salt Mines: As usual I turned to the letter department as it is almost always the best part of the magazine. I saw that the editor's comments on the letters was even better than it ever was, which was mighty good. Merwin was good, Mines is better.

About the letters—I'll try to answer Mr. Lever for him. First of all there is prescience—prophecy.

I refer you to the October Fate Magazine where prescience is induced by hypnotism. (What AMAZES me is that there are many easy and simple ways to test telepathy, prescience and other paraphysical attributes.) If it is actual travel in time he wants that would be a little harder to do. Of course travel in the future would be a simple matter of suspended animation—already possible for small animals by absolute refrigeration.

Travel in the past is a poser though, if possible. First you might use the theory that positrons go backwards in time. No kidding, it's a theory. Or the fact that a body in sleep can project a new body elsewhere (Look up the forgotten mysteries department in the back issues of Coronet). You could place the body in perpetual trance and have it communicate telepathically thru time and extend the consciousness by means of projected bodies responsible to the central body that is in trance. Paper forbids more on time travel.

The letters by Anderson and Sherlock, I agree with pretty much with, of course, mental reservations. But it is true that Sherlock went too far.

The stories were as usual neither great nor poor. THE WANDERER'S RETURN was done pretty well, but that blurb. A million miles, HA. The nearest star is 25,000,000,000,000 miles away; the only thing within a million miles is the moon, remember space is big.

KEYHOLE was the best of the lot and it is an idea that Leinster got the best from. More like it please.

Price and Merwin wrote the same story with slightly different plots and words. Tsk, tsk.

THE SONG OF VORHU was just what you said it would be—hard to forget. It and KEYHOLE are anthology material. Especially KEYHOLE.

STAR BRIDE was a well handled gimmick—like a polished product from a machine. That was the trouble of THE WAY OF THE MOTH, an idea of such tremendous potential is handled so inadequately. A small neat idea needs only a short story length but any idea that has a lot of potential deserves space to develop it.

Had enuff?—*Highmore, South Dakota.*

P.S. Tell Lever that an open ended Cathode tube will do quite destructive things to most matter. Like turning apples a beautiful bluegreen.

Flattery will get you nowhere and if your purpose was merely to confuse us—you did. We love sentences like: "You could place the body in perpetual trance and have it communicate telepathically thru time and extend the consciousness by means of projected bodies responsible to the central body that is in trance."

Oh, about that million miles from earth business. Look, bub, you never wrote a blurb, did you? A million miles from earth sounds pretty far, doesn't it? It has swing and rhythm too. Try saying "25,637,862½ miles from Earth an adventurer in space, etc." See? The million isn't to be taken literally, it's just a handy reference point. Like your wife's calling you and

[*Turn page*]

saying, "Where've you been? I've called you a thousand times!" Meaning two, but indicating a lot.

## NOUMENA THE CONTINUUM
### by Jack Snell

Dear Ed.: May I impose on your letter space just once more: (I realize how far the subject content lies from S.F.). Thanks for your answer Poul, as usual in any philosophical discussion, we're using different definitions.

Metaphysics, I define as: The Science of Entity. In other words, the study of the continuum as apart from the differentiations; and those characteristics defining the differentiations. (This definition agrees with the *Dictionary of Philosophy* and the original use of the term by Andronicus). This I specified by my reference to Northrup.

Your use of Transcendent Metaphysics was begging the question—Tch-tch! Thus, Peirce's Pragmaticism (which is an extension of Occam's Razor), would be a valid Methodological tool in Metaphysics or Epistimology; whereas, Positivism with its tacit assumption of the objective reality of sensory experience is not. No object-concept, as a construct of the mind in the perceptive continuum should be considered as objectively existent—not with our senses!

As regards my statements about Solipsism; please re-read them. You have repeated my thesis as a contra-proof. Where in lies the fallacy? Except possibly in the assumption of Time in the second axiom, which I believe valid since it is used as a member of a system of reference, not objectively.

Any dialectic must be based upon Axiomatic Concepts by postulation. This is an argument? Just what would "Pure" logic be?

I would define Noumena as the continuum (as do the Buddhists), Form is a matter of viewpoint, definitely subjective. Reality then, is neither subjective nor objective, but is a relationship. So, also, would I define Truth as: That reaction which, when applied to a particular perception, results in a certain perception. You will notice that this refers to an Ideal limit and is therefore outside Positivistic Fields, but is still pragmatically acceptable.

I suggest if you wish to continue (personally I'd love it), that we resort to personal correspondence. Ye Ed has been nice about it, but the discussion hasn't seemed to interest the fans enough to warrant the space.

Now, to Lewis Shylock (Oh, I know how *he* spells it!). Did you really struggle through that without realizing its intention? Have you seen your psychiatrist lately? To take a humorous letter and solemnly declaim it, I bet De Camp makes you simply wild! The next time you have trouble distinguishing between horse-play and you know what, try sniffing.

Certainly the Editors' comment was sufficiently odiferous to give you a hint. Did my ideas step on some of your twelve toes?

I don't know where your charge on the Pistic windmills of Christianity was aimed, but you need a rear view mirror. Me, I'm a pragmatic pantheist.

I strongly suggest you study the implied meaning in the conjunction of those terms before assuming that I base any arguments on supernatural or anthropopathical grounds. Not being particularly interested in Christian Theology, I have referred those aspects of your most scurrilous epistle to Dick Potter, who as a Humanist is better qualified to evaluate them.

Philosophy is another matter. Science is an organized, precise body of knowledge of known limitations and assumptions. The study of those limitations and assumptions and the formulation of theory and methodology are philosophical. You know,

meaningless little noises like Symbolic Logic, $E = MC^2$, and Maxwell's equations. If you think men like Northrup are basing years of work on personal opinions you need lots of study.

S.F. is fun with ideas, if my letter said nothing, so does most S.F., and what's so profound about it? Do you get your ideas prescribed in capsules?

By-by old dears, and Poul, please more psi-s in our spies. I love those E.S.P. stories. By the way, please send all available data on Otto Haeml! Clyde Corson has been looking everywhere for information on him. That generalized epistimology looks good!—*1730 C Street, Marysville, California.*

P.S. Sherlock, dear, I note you come from Texas, ever heard the one about the relative quantities involved in tanning with Texans' or Squirrel's brains?

Tsk, insults. If some of these ideas don't damage anyone, insults are hardly likely to be more lethal. I think you're being a little hard on Sherlock who showed no conspicuous lack of humor and who is at least as entitled to his point of view as anyone else, whether or not you happen to agree. Anyway, with Snell and Anderson battling it out in person, some of you others will have a chance to slip in here.

## THE FORM DIVINE
### by Dave Hammond

Dear Mr. Mines: This is just a letter to get me writing again. I guess that it has been about a year or so since last I wrote a letter to a pro-zine. Much too long for a fan. Your December issue looks interesting. At least, you have names I can immediately associate with good stories.

I did read Leinster's *Keyhole*—and it wasn't bad. Murray is expected to write good stories. Few of them are worth any amount of re-reading, but they go down pleasantly—once.

Of special note are the illustrations. I find no signature on the excellent cover—it looks like Bergey (The featureless world in the background, the space ship, and the "pure" colors), but yet it doesn't.

I get annoyed at these people who are constantly crusading for space ships on covers instead of girls, etc. A good cover with a girl is, to me, preferable to a good one without a girl. This phobia about the feminine form is a sign of immaturity. All right, you know why you print girl covers: to sell the mag. Most fans realize that, too. I notice, sir editor, that the readers who scream most loudly for space ship and gadget covers write letters like sophomores in high school. Not liking the female form (or being afraid to admit it) is not healthy. If the grumbling reader's voice hasn't started to change yet, I can understand.—*806 Oak Street, Runnemede, N.J.*

That's it—the issue's gleanings of words and music, songs, jokes and witty sayings. If you'll pardon us, we'll go and lie down somewhere.

—*The Editor*

# The FRYING PAN

## A Commentary on Fandom

ONLY recently it was pointed out, in an excellent little book entitled *SPACE MEDICINE—The Human Factor in Flights Beyond the Earth*, that the engineering aspects of space travel are pretty well in hand and it is high time that we turn our attention to the health and happiness of the people who are going to ride the rockets. The book then proceeded to discuss the bioclimatology of manned rocket flight, the possibility of life under extraterrestrial conditions, and related matters.

The book as a whole is a useful contribution; but, in reading and rereading it, we became convinced that something of basic importance had escaped its scrutiny. The more we thought about it, the more we wondered and worried. We buttonholed various authorities on space travel—Werner von Clarke, Willy Braun, Arthur C. Ley, to name a few—and each admitted that to him it was a new and provocative problem, and promised to make every effort to forget it immediately. The weeks dragged by; solution after solution failed to appear; we worried some more, and then some more. . . .

Until, with a sigh of relief, we heard that a group of independent English researchers had taken up the very problem which had concerned us so. (We had even thought of tackling it ourself, employing an abandoned elevator-shaft and some hormoned hamsters, but those Britishers outclassed us in every way.) We think you will all share our relief as we tell you that Research Project TIFF (Techniques in Free Fall), a group of fans not very probably stirred into activity by SPACE MEDICINE, has investigated one phase of the human factor and has successfully brought its experiments to a number of happy ends.

It was not easy. Project TIFF consumed many years of arduous and tiring labor; its inquiry into "life and love in free fall" had its heroes and heroines, for many of the experiments, as described in the current SLANT by Carl Lawrence and author A. Bertram Chandler, were of a radical and perilous nature; indeed, in several cases the participants barely escaped with their lives. (The problem under fire was, of course, one of manipulating vector quantities in the condition of no-gravity which exists in free fall; we gather that in the preliminary investigations, referred to in the example below, this lack of gravity was somehow duplicated under laboratory conditions.) We quote from Mr. Lawrence's account of one of the near-disasters:

". . . it was feared that in free fall the absence of this factor [gravity] would cause the other two factors to drift apart at the least provocation, leading to a general state of dissatisfaction and frustration . . . two of the early investigators gave considerable time and effort to a device in which the force of gravity was replaced by a spring. This line of investigation had to be abandoned when the investigators were trapped in one of the devices which was underdamped and went into free oscillation. The investigators were rescued only in a state of advanced debilitation. . . ."

Let us rise in contemplative tribute to those who have suffered so much for all of us. In fairness, however, let us not expect them to rise in turn.

Further on in the article it is stated that Research Project TIFF, after many such mishaps as the above, was terminated as an unqualified success. To which we urgently reply that it is customary, in scientific investigation, to check and re-check, to duplicate experiments. So if TIFF will only release its data, we can promise with certainty that America will do its part. To the last gasp.

## The Fan Mags

**MEZRAB, Box 246, Rochester, Texas. Editors, Marion and Robert Bradley. Published Quarterly. 20c per copy, $1.00 for six issues.**

Featured in this issue is an interesting and well-written piece on Easter Island by Fernand Roussel, whose detailed account of his experiences there in 1905 reveals an orderly memory. We were surprised and a little disappointed to learn that the island is inhabited by happy sheepherders, having always romantically pictured it as a bleak and lonely place bearing only the statues and a few ancient foot-

[*Turn page*]

prints. Stories by Lin Carter and Nanda McLeod, editorials by the respective Bradleys, a poem by Andrew Duane and some letters round out the issue, which we enjoyed.

**THE TRILOBITE, 2010 McClendon, Houston 5, Texas. Editor, M. McNeil. 5c per copy.**

A gharstly cover, entitled "Rocketmen of the Void," depicts a whopperjawed, steely-eyed character whose humanity ends centaur-like at his waist—his behind is a rocketship. He is walloping hell out of the villain, who is similarly equipped with a tin can. We find ourselves hoping that the villain recovers and knocks the hero loose from his mass-ratio, since the hero outweighs him two to one and is toting a fearsome sword to boot.

Inside, editor McNeil trembles with animus at "the filthy, creeping plague of sex interest in stf zines, pro and fan," which, he cries, "fandom must utterly destroy . . . If it does not, then stf will fall to such low repute among respectable people that when the old fans start dying off, few new ones will come in to replace them." Wel-l-ll . . . at any rate, editor McNeil certainly takes the long-range view.

He goes on to say: "We must destroy every [immoral mag], blockading, panning, and tugging at the key blocks, popularity and good publicity, the removal of which will bring the whole thing down on the heads of vile immoralists."

It is admittedly uncomfortable here beneath our desk, but at least it is safe. We have alerted our ace operatives, and have notified our distributors that shipments of our magazines approaching Houston may possibly encounter armed road blocks, consisting, we wouldn't wonder, of men with rocketships for behinds. We give fair warning that any attempt to interfere with our distribution, or lay a finger on our key blocks, will be followed by a rapid distribution of flesh and metal halfway to Coahuila. In the meantime, a tip to editor McNeill: it's nasty only if you think it is, son.

A story by McNeil and some book-and-mag marginalia complete the issue. Reproduction is good, but, as we've noted before, the contents are on the undernourished side.

You fan authors and artists—how about giving him a hand, eh?

**WASTEBASKET, 146 East 12th Avenue, Eugene, Oregon. Editor, Vernon L. McCain. No price or frequency of publication listed.**

An attractive package, with equally attractive contents. Bill Morse analyzes Bradbury capably enough; Shelby Vick goes on record as being in favor of rip-roarin' space-opera movies (h'm, how about it, Shelby—*did* you like THE MAN FROM PLANET X?); A. Bertram Chandler weeps iambic tears into his beer for the fading stf idols of yesteryear; and Norman E. Hartman concludes his series on "How to Build Your Own Spaceship" with the suggestion that you build it, try it, and let him know how it worked—if you're still around. Walt Willis (newly acquired as WASTEBASKET's co-editor), in discussing the problem of naming fanzines, offers the ultimate title: "AI . . . (the name of a three toed sloth, known for the feeble, plaintive cry which it utters while in search of its own kind)." Yuk. Others on the contents page

are Lee Hoffman, Bill Venable and Rory Faulkner. Good job all around.

**FANTASY ADVERTISER, 1745 Kenneth Road, Glendale 1, California. Editor, Ronald Squire. Published bi-monthly. 20c per copy, 75c per year.**

We could, and darned near will, repeat our previous comments on FA word for word. A nifty Morris Scott Dollens cover. Good articles and book reviews, this time by Clyde Beck (Weiner's THE HUMAN USE OF HUMAN BEINGS), Arthur J. Cox (Heinlein's BETWEEN PLANETS) and Stewart Kemble, with whose remarks on how best to go about criticizing science fiction we, like editor Squire, cannot entirely agree—or disagree. We feel that science fiction, as fiction, *should* attempt to satisfy existing literary standards; we feel also that these standards alone are in nowise sufficient for the appraisal *as a whole* of what editor Squire has so aptly termed "a literature of ideas." Oodles of book-and-mag advertisements in FA. Superior reproduction. Tops in its field; if you collect, get it.

**SLANT, 170 Upper Newtownards Rd., Belfast, Ireland. Editor, Walter Willis. Published as frequently as possible. One issue for one recent US stf promag, or 1/3, or 25c.**

In addition to the already mentioned Project TIFF report, this issue presents fiction by Kilian Houston Brunner, Manly Banister, A. Bertram Chandler, E. R. James, Bob Shaw and Clive Jackson, whose contribution we thought unusually good. Also two screwball bits by Evelyn Smyth and H. Ken Bulmer, the latter concluding, as its hero cowers gibbering with terror in a storm-lashed deserted church, with the heart-stopping words: "The stranger turned into a weremouse." Highlighting SLANT's articles this ish is the second of Bob Shaw's lectures on FANSMANSHIP, which, as you know, is the art of getting a psychological edge on anyone too small to knock you cockeyed for doing it. We quote one lovely example:

*Neofan:* "I want you to meet Mr. Ackerman."
*Fansman:* (enthusiastically) "Not HENRY Ackerman!"
*BNF:* (shaken) "No . . . Forrest Ackerman."
*Fansman:* "Oh."

And another, a variation on the Deadly Indirect Glance Ploy (whose basic method is simply, when examining a rival fanzine, "never to look at it squarely, but HOLD IT AT AN ANGLE TO THE LINE OF SIGHT! This lends an incredibly casual and uninterested air to your examination"). The variation, more of a "subsidiary ploy," is as follows:

Fansman is being shown, by a rival faneditor, a page proof of the coming issue, preferably either the LAST or FIRST page.
*Neofan:* (proudly) "What do you think of THAT?"
In utter silence the fansman picks up the proof and studies it intently for some 45 seconds. If it is an illustration he should at least once TURN IT UPSIDE DOWN. Then, and only then, is the Deadly Indirect Glance employed. At this stage

[*Turn page*]

it is permissible to utter the first sound, a barely audible intake of breath. In the resultant tension the fansman holds the page at arm's length, rubs it tentatively between finger and thumb, and drops it onto the table from a height of approximately four inches.

*Fansman:* "Good paper."

On page 25 of SLANT is an anatomical anomaly, quoted from a 1934 pro mag, to wit: "He pressed his hand against the wall with a determined eye." Which reminds us of an even older one:

*Civilian, to homecoming soldier:* "I'm glad to see you're back from the front."

Altogether, we had a pleasant hour with SLANT.

**FANVARIETY, 420 South 11th Street, Poplar Bluff, Missouri. Editors, Bill Venable and Max Keasler. Published too often to suit certain people. 15c per issue, six for 50c.**

Cover of this issue is made up entirely of NOLACON photographs, in which, to be gazed at in varying degrees and kinds of fascination, are: Fritz Leiber, the guest of honor; Lee Hoffman; Bea Mahaffey; the Hatfields, Bob Tucker, E. E. Evans, Sam Moskowitz and many others. Inside, Harry Warner reminisces amusingly upon Damon Knight's early fanactivities; Red Boggs rebuts Ken Krueger's rebuttal of Bogg's criticism of Krueger's "In Rebuttal," whatever on earth *he* was rebutting, and Richard Elsberry parodies Bradbury with free-swinging gusto and a dogged insistence on calling Martians "Martains." Also present are George Wetzel, John S. Gallagher, Ed Noble, Jr., and someone whose name is so fancily inscribed that we can't quite make it out; looks like Earl Newlin, or Newlon . . . Newton, maybe? Also several of Max Keasler's wonderful little bulletshaped whatsits. We have but one complaint: why in Heaven's name does anyone mess up a 'zine with so-called nonstoparagraphing? It wrings from us, each time we try to wade through it, the scream of a werewolf brought to childbed.

## Wind-Tunnel Technique

H'm . . . aside to Project TIFF: had you considered the wind-tunnel technique? It is based on the following formula:

a) A Kansas tornado;
b) A hen caught in the tornado, with her stern facing into the wind;
c) (result) The hen lays the same egg six times.

This can be reduced to:

@ + d = ccccc

which, equating out the conversation of energy factor, leaves only the problem of diminishing returns to be hendled.

Anthony Lauria, Jr., and Sheldon Deretchin dropped in last week to inform us that they are whipping up a regional convention, planned tentatively for July '52; some Hydra Club members will participate, and all fanclubs in New York City and surrounding areas are cordially invited to join the party, the prime purpose of which will be to muster enough votes to swing, at Chicago next September, the election of New York as the site of the '53 Con. For details write to Lauria, 873 East 181st Street, Bronx 60, N. Y. C., or Deretchin, 1234 Utica Avenue Brooklyn 3, N. Y. C.

And that's all until the May STARTLING STORIES. —*JEROME BIXBY*

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**THE NATIONAL CONFERENCE OF CHRISTIANS AND JEWS**

**Brotherhood is as practical and as fair and square as a traffic signal. It's as rugged and clean cut and it ought to be as typically American as the rules of baseball.**

***—Eric Johnston***

**Unless we can eliminate prejudice from the home, it will never be stopped in the streets.**

***—Basil O'Connor***

**Brotherhood should not be looked upon as a luxury to be preserved for only pleasant occasions. Brotherhood is itself the greatest of all realities, and the literal practice of it would be the one broad and basic solution for our worst problems.**

***—Oscar Hammerstein***

**He has a right to criticize who has the heart to help.**

***—Lincoln***

**If we in America, against our background of free institutions and economic well-being, fail to work out decent patterns of human relations, then the very memory of decency may be expunged in the whole world.**

***—Eddie Cantor***

**WHETHER YOU ARE 15 OR 75 . . . READ THIS IMPORTANT MESSAGE**

# New Sickness and Accident Benefits Include $25 Weekly Payment Feature

## Costs Only $12 a Year — Down Payment $2.50
## Ages 60 to 69 Only $18 a Year — Ages 70 to 75 Only $24 a Year

The older you are, the harder it is to get protection against financial worries that come when accident or sickness strikes. That's why the reliable North American Accident Insurance Company of Chicago has issued a special policy for men and women up to 75 years of age. It helps meet sudden doctor and hospital bills — and the cost is only $12 a year for both men and women from 15 to 59 years old . . . only $18 a year from 60 to 69 years . . . from ages 70 to 75 only $24 a year. Easy payment plan if desired.

No doctor's examination required, merely your own statement as to your present health. If your policy is in effect at age 75, you may even continue it to age 80 at no further increase in premium. ABSOLUTELY NO REDUCTION IN BENEFITS REGARDLESS OF AGE. Protects you 24 hours a day.

This is the popular, sound "SERIES 500" Limited Accident and Sickness Policy which thousands of men and women are carrying, all over the country — it pays $25 a week for 10 weeks for total disability resulting from certain specified accidents and sicknesses; AN ADDITIONAL $25 A WEEK for 4 weeks for accidents requiring hospital confinement; up to $25 cash for doctor bills (at the rate of $3 per visit) even for a minor accident such as a cut finger. In case of accidental death the policy pays $1,000.00 cash to your beneficiary. Accident benefits effective from date of policy. Sickness benefits effective 30 days from date of policy.

In addition, the policy covers many sicknesses including pneumonia, cancer, diabetes, tuberculosis, polio, ulcer of stomach or intestines, and operation for removal of appendix, hemorrhoids, gall bladder, kidney and prostate, paying the weekly benefit after the first seven days of confinement to either home or hospital.

This new policy also has a double indemnity feature covering travel accidents. You receive $50 a week if disabled by an accident in a bus, taxicab, train, subway or street car, and $75 a week if the accident requires hospital confinement. The death benefit increases to $2,000.00 if caused by a travel accident.

***Your benefits are never reduced even though you are also insured in a Group Plan, Blue Cross or other Hospitalization Insurance. So if you are now a member of some worthy hospitalization plan, you still need this additional protection. Only a small percentage of people are confined to a hospital, and even then only for a fraction of the time they are disabled. Most people — over 80% — are confined at home where hospitalization plans do not apply. Or, they are hospitalized for a few days or a week, then spend weeks of convalescence at home before they can go back to work again. The North American Policy pays specified benefits regardless of whether you are confined to your home or to a hospital.***

North American Accident Insurance Company of Chicago has been in business for more than sixty-five years, and is one of the largest sickness and accident companies with assets of over $19,000,000.00. It has paid out many millions to grateful policyholders when they needed help most. North American is licensed by the Insurance Departments of all 48 States and the District of Columbia.

Whatever your age, whether you are young or old, you need this sensible, necessary protection. Get full details about this new policy by sending for the revealing booklet, "Cash or Sympathy." The booklet is absolutely free. It will be mailed without charge or obligation of any kind. We suggest you get your free copy by mailing the coupon to Premier Policy Division, North American Accident Insurance Co. of Chicago, 830 Broad Street, Dept. 825, Newark 2, New Jersey.

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—Continued from Back Cover

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