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Some twenty years ago there came into my life a power so staggering that at first I could only wonder about it. The shackles which bound me for over forty years went $\alpha$ shimmering. Up to that time, I had been one of the world's biggest failures. Then there came into my life a power the like of which I have never known. It was the power of God.

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## A Complete Novel



# ONE OF THREE <br> <br> By WESLEY LONG 

 <br> <br> By WESLEY LONG}

Ed Bronson, scientist of this planet, battles emissaries of two less stable worlds spawned by the atomic fissure of the first atom bombl 13

## A Complete Novelet

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Cover Painting by Earle Bergey-Illustrating "One of Three"

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#### Abstract

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tical experience. tical experience.


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cse it to conduct many teste axd experimonts.

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STARTLING STORIES is growing up. If you need proof, give us a page count-you will find there are 32 -count them- 32 more pages than last issue. Commencing right now STARTLING STORIES and its companion magazine, THRILLING WONDER STORIES, will have, roughly, 20,000 more words in each edition.

This means that every copy of these magazines will contain the equivalent of one short novel, two novelets or four short stories more than it has held in the past.

A glance at the current contents page will give you the idea. You'll be getting a lot for your extra nickel.

Furthermore, this expansion will permit numerous typographical improvements, calculated to make your reading easier. SS will thus be not only a bigger book but a better one all around.
For, with so much space for editorial maneuvering, we can obtain greater variety in our stories, appeal to a wider variety of readers and, all in all, present you with a far better-balanced magazine than formerly. And we can safely promise that there will be no letdown in quality.
Our current list of writers is so large and so able that they could fill a lot more space without stumbling. And it is a list whose numbers are constantly growing.

Readers' suggestions toward enlarging SS and TWS have been steady, often ingenious and unremitting through the years. It is a pleasure to be able to gratify so many by the current jump in size. This is a big announcement of a bigger magazine!

## A Fortean Prediction

In the course of re-reading the books of Charles Fort recently, we stumbled across a prediction which made our hair stand on end. It was in "LO!" where the arch-enemy of scientific humbug was decrying specialization as the ever-narrowing highway to ultimate untruth and attempting to prove that the universe is perhaps an integrated whole rather than a scattering of suns and planets as is popularly supposed.

He wrote it some years before his death in the early 1930's and stated in support of his theory of universal interrelationships that, if Britain were ever to lose or give up India, she would be visited by unseasonably cold and difficult winters-that the climate itself might give up on her.
Well, we thought about the frightful blizzards of last winter, which followed the sur-
render of vice-regal functions in the Deccan Peninsula, and wondered.

It seems to use, as it has always, that the reading of Charles Fort should be required by all entering upon scientific careers. We don't pretend to regard his work as a factual gospel, despite the impressiveness of his documentation of unexplained phenomena. In fact, we derive from it the very impression that Fort was dead set against any manwritten gospel, including his own.

## The Search for Truth

His concern was for truth, truth in full and unabashed, not factual reports carefully trimmed to fit existing theories. His basic contention was that every important theory of science was first sneered at, then slavishly believed, then, as new discoveries rendered it obsolete, once more relegated to the ridiculous from which it sprang.

It was the claim of Charles Fort that any such theory, be it Aristotelian, Copernican, or Newtonian must be intrinsically as ridiculous during its tenure of scientific credence as it was in birth or must be in death. And, come to think of it, how can he be wrong?

An example not cited by Fort, since its disproof came long after his death, comes to mind. During World War One the antiseptic techniques of Dr. Alexis Carrell came to be accepted as the correct method of treating wounds. Yet, in the recent world struggle diametrically opposed techniques were found to work infinitely better.

The biggest windmill at which Fort tilted was astronomy. He simply refused to accept the findings of our star gazers, claiming them to be almost entirely in error. It was his claim that our atmosphere is one of the most effective distorting agents in the Universethat the bigger the lens of the telescope, the greater the distortion therefrom.

## The Closer Calaxy

He insisted that the galaxy was something much nearer and very different from what our astronomers have claimed it, perhaps an enveloping inverted layer of some kind in
(Continued on page 8)

# They Never Knew It Was SO EASY To Play 

## Thousands Now Play Popular Songs Who Didn't Know a Note of Music Before

## You, too, can learn your favorite instrument at home, without a teacher, this quick. easy, money-saving way

THINK of the fun YOU are missing! The popularity, friendship, good times! Why? Because you think it's hard to learn music. You have an idea that it's a slow, tedious task, with lots of boring drills and exercises.
That's not the twentieth-century way! Surely you've heard the news! How people all over the world have learned to play by a method so simple a child can understand it-so fascinating that it's like playing a game. Imagine! You learn without a teacher-in your spare time at home-at a cost of only a few cents a day! You learn by the famous print-and-picture method-every position, every move before your eyes in big, clear illustrations. You CAN'T go wrong! And best of all, you start playing real tunes almost at once, from the very first lesson.
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## THE ETHER VHBRATES

(Continued from page 6)
close communication with Earth. And he backs his theory with a most complete and ever astounding documentation of phenomena which astronomers, by existing theories, are unable or unwilling even to attempt to explain.
If at times his lengthy documentation makes tedious reading (it does) still the cumulative effect of his work, coupled with its author's unfailing good humor and utter lack of egotism, is tremendous. If his findings seem absurd much of the time, are they any more absurd than past theories, gravely pronounced as universal truth by scientific solons, which have fallen into the limbo of ridicule?

We think not.
His description of what really happened at St. Pierre in Martinique when Mt. Pelee wiped out that city of 30,000 souls early in this century is shocking. We have been told, those of us who have read of the disaster, that the mountain erupted without warning, destroying the inhabitants of the city with a swift and sudden attack of poisonous volcanic gases.

According to reports dug out by Fort, there was plenty of warning. The terrified inhabitants tried to flee for several days as the mountain issued a series of ominous displays, but the F'rench governor, after sending a couple of learned men of science up to investigate conditions, surrounded the city with a ring of armed guards and refused to let anyone out until the scientists rendered their verdict.
The sages were still deliberating when the gas attack came . . but in the interests of the good name of science the true story was never widely released. Scientists are like Japs when it comes to saving face, no matter how many are killed.

They should read Fort, if only to open their minds, and re-read him to keep them open, no matter how far astray his conclusion may turn out to be. Perhaps, when the longawaited space flights are finally made, they may not prove to be so far off-beam as they now seem.

## Attention, Fans!

In the July issue of STARTLING STORIES it is our intention to run a list of all science fiction and fantasy fan organizations which care to submit themselves for such listing. We shall give the name of the organization, the address of its headquarters or mailing address and the name of the officer with
(Continued on page 10)


The untrained man stands a slim chance today. Right now there are 14 million more highly skilled, experienced workers in the country than before the war.

Jam-packed schools and colleges are turning out record classes two and three times a year. The armed services continue to return thousands of technical experts to civilian life every month.

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education if you can. If not, investigate the opportunities offered by I. C. S.

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## THE ETHER VIBRATES

(Continued from page 8)
whom anyone interested can get in touch.
The purpose of this listing is to enable such fan groups to get in more widespread touch with one another as well as to inform possible new members of such organizations in their locality. We plan, if enough listings come in to make it worth while, to repeat this list annually in each July issue of SS and to run a similar listing in each December issue of our companion magazine, THRILLING WONDER STORIES
So write in-and don't be bashful if your group is small. Perhaps this listing will help it grow!

## OUR NEXT ISSUE

HENRY KUTTNER again takes over the lead novel spot in the May issue of STARTLING STORIES with one of his magnificent and fantastic pseudo-scientific stories -THE MASK OF CIRCE. This is the story of Talbot, the observer, and of Jay Seward, who is bound irrevocably to things and people of time long past-long past yet ever present, ever summoning him back to an earlier incarnation.

For Seward, in this other world, is none other than Jason, the young man of ancient Greece who communed with strange powers and beings known as gods and demigods, as fauns and nymphs and satyrs and centaurs in the course of his quest for a "golden fleece" of amazing scientific properties.

Yet all the time throughout his strange travels he is aware of himself as Seward, aware of his existence in a modern world so far removed from that dangerous and mystical world through which he must move toward his destiny.
SS in May thus offers you Kuttner at his very best, in the writing form which produced THE DARK WORLD and LANDS OF THE EARTHQUAKE to accord this brilliant young author a place in the foremost ranks of contemporary fantastic novelists.

THE MASK OF CIRCE adds another jewel to his literary diadem. In the matter of strange perils and high melodrama set against the weirdest of backgrounds, in the matter of singing suspense and ingenious, credible pseudo-scientific explanations, this ranks with the best ever written in the stf field.

The Hall of Fame reprint is also a distinguished science fiction story-this time THE MICROSCOPIC GIANTS by Paul Ernst. This story, written approximately ten
(Continued on page 123)


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# ONE OF THREE 

## Ed Bronson, scientist of this

 planet, battles emissaries of two less stable vorlds spawned by the atomic fissure of the first atom bomb!
## A novel by WESLEY LONG

## CHAPTER I: Contact!

THE bit of whitish substance fluoresced, which of course was quite natural. It also vibrated very faintly, which was unnatural. At least, this property had not been known previously-which is really saying little since the material had been compounded from artificial radiolsotopes from the big piles. All too little was known about such items and the fact that this one was vibrating ever so faintly whenever the electron beam struck it was interesting both from a scientific and a lay curiosity standpoint.

Ed Bronson blinked a bit and decided that he had made some mistake. It had ceased to vibrate.

Ed cracked the experimental tube and removed the irregular lump. It had been hoped to produce a more brilliant and higher-contrast phosphor for television screens. But if it was going to vibrate-

Ed inserted the lump of phosphor back in the tube, pumped it and restarted the whole gear.
It vibrated again, ever so faintly, against

[^2]
the bottom of the glass. Bronson listened carefully, his engineer's mind trying to identify the sound. It was not the sixteen kilocycle sweep circuit-not the one that scanned the face of the television tube, because this was not a complete set-up and there was no scanning energy necessary. It was vaguely familiar.

It came and it went, that faint vibration. Sometimes it rattled violently, other times it purred gently. Always very faintly of course-for the term 'violently' means only by comparsion.

Ed adjusted the field strength of the focusing magnet about the neck of the tube and the vibration strengthened to a notioeable degree. He juggled the controls but found he had hit the maximum or optimum response.

There was something about it. . . . It was like human whisperings too faint to be understood but not too faint to be unheard. Like the bloop-bleep of a leaky faucet that seems to be saying things about you just too quietly to be really understood. Like the imagined whisperings heard by the paranoiac.

## Ed laughed. Hearing things!

Like hades he was hearing things. It was really there. The lump of phosphor moved a perceptible amount as a peak of rattle passed. And yet. . . .

Ed Bronson uncoiled his wiry six feet from the chair and cracked the seal on the tube again. He lifted the top and squinted at the crystalline whiteness that had been rattling so maddeningly.

He went to a cupboard at the end of his laboratory and rummaged among small boxes that stood on one shelf-no two boxes seeming to be of the same size. The upshot of this rummaging was that Bronson had to spend some time repiling the boxes after he had found the contact microphone he was seeking. Eventually, however, Ed Bronson was repumping the tube.

Inside was the crystal phosphor and fastened to it was a sensitive contact microphone.

Once more Bronson keyed the switches, ajusted focus, and intensity. Then, from the speaker of the amplifier connected to the contact microphone, there oame a cacophony of noise, howling whistles, deepthroated hums, and a horde of middleregister tones. Not music, and far from it. Just random-somethings.

Yet in the background, barely audible as
such but most definitely identifiable, was the voice of a woman.

Any speaker would have ceased had she known her efforts were thus wasted. It was indistinguishable and unintelligible save for a scattered word here and there, which was unmistakably in English. Ed Bronson thought that it was like trying to eavesdrop on a conversation in a boiler factory.

HE wondered what radi o program he had tapped in on. He tur ned his radio on, and scanned the bands, even listening to the weaker stations-which, of course were far from being as ragged as this, regardless of their weakness-but came to the conclusion that there was nothing on the air that corresponded to the voice of the woman that emerged from his kinescope testing tube.

Bronson noted with questing interest that occasionally one or more of the interfering hoots, sirens and honks would cease for a moment or two. So also did the woman's voice. Ed prayed that when sufficient interference would cease, the woman would not choose that moment to cease also. He wanted to know more about this. There was more to it than met the eye.

If he could identify the speaker he might be able to establish a means of communication. Location was also important. Furthermore, if this were telephone or radio, he had a new means of receiving both. If it were telephone and it worked on any or all, Ed Bronson had a gadget that would make him the bane of all lovers of secrecy-including espionage agents, who, of course, hate penetration of their own little conclaves as deeply as they try to penetrate others'.

He -well, if it were radio he was intercepting he had nothing as interesting as a telephone tapping gadget. But. . . .
The tones dropped in volume. A shrill whistle that made vicious interference with his hearing suddenly keyed off like the turning off of a light. A booming roar ceased also and others of less importance dropped or died. The cumulative effect of this was to permit the woman's voice to come through.

It was not the perfect voice of a magnificent contralto reproduced on the finest radio gear but a cool, clear contralto, transmitted by cheap, shoddy equipment and received on something both obsolete and inefficient.

Yet is was a woman's voice. And, with the luck of the patient scientist, she was saying, ". . home? It's at Thirteen forty-seven Ver-


Virginia clapped her hands together and there was a flash of flame (CHAPTER XVI)
mont Street, Postal Zone Eleven. . . ."
And that was the first complete reception Ed Bronson heard. For, with the completion of the message, the cacophony of hoots, keenings and sirens blasted forth like a mad, insane symphony.
"I live at Thirteen forty-eight Vermont," shouted Bronson. "Across the street!"

He charged out, raced across the street and pressed the doorbell. He waited a moment and an elderly man came to the door.
"I'm Ed Bronson," explained he.
"I know you," snapped the other man. "Always gumming up my radio with your fool experiments. What do you want?"
"Is your daughter using the telephone?" he asked.
"She ain't home."
"Your wife?"
"She's with Regina."
"Well, was some woman using the-"
"Look, Bronson, I ain't got no women here when my wife ain't, see?" Now what's your idea, huh?"

Bronson looked apologetic. This was Mr. Lewis McManner and both he and his family were the kind of people-one of which seems to live on every block-who chase robins from the front yard, call the police for ballplaying boys and manage to maintain an immaculate house because it never has a good chance to get cluttered with people.
"I've been working on an idea," he told McManner, "and I seem to have picked up someone who claimed that her address was Thirteen forty-seven Vermont Street."
"You'd think this was the only Vermont Street in the world!" snorted McManner, slamming the door.

Bronson turned from the front door and retraced his steps. Despite his disappointment, he could not help but grin at himself. After all, how many 1347 Vermont Streets might there be between Puget Sound and Key West? And, were he to try mailing each a letter, someone would most certainly object loudly enough to cause Ed Bronson to explain that he had heard a woman's voice mention the number and that he wanted to meet her. He could visualize the psychiatric ward looming to receive him while they tapped his knees and inspected his brain to find out whether he was safe to let loose without a muzzle.

Yet Bronson sobered soon enough. He was an engineer. He knew that what had been done once could be done again. Perhaps the
way to get in touch with this woman was to try to tap back. At least he could listen to everything she said in the hope that she would repeat other information.

WITH a prayer Bronson separated a sizable hunk of the phosphor to work upon, while the other "sang." He breathed no sigh of relief until he had half of the original phosphor back in the tube with the works completely covered, as before, by the mad mass of meaningless hoots and catcalls. Then he went to work on the other piece. He did have a parallel set-up right on the same bench. There was something about this. . . .

During the hours that followed there were three breaks in the whistlings. The first produced only the words "nature of the situa-tion-" The second time the woman said, "-something must be done, of course, but you tell me what. I-" which also left Bronson completely in the dark. The third time, she said "-so this part of the Carlson family is going to bed!"

After which there was no woman's voice riding along with the myriad of sounds. They were as before, like a radio that has gone off the air, leaving an increased racket of background noise. It was maddening and futile.

All he had to show for her hours of telephoning was her name. Carlson.

All he had to do was to get the telephone directories of all the cities in the United States of America and perhaps Canada, then run through the listings of 'Carlson' until he hit one that lived on 1347 Vermont Street.

It might as well have been 'Smith' as far as running them down went. He could try Central City. After all, he could easily have made an error in listening.

But that was futile. Bronson sought the entire list of Carlsons and found none who lived on Vermont Street or any phonetic variation. Grumbling and baffled, he returned to his labors.

That, at least, proved more profitable. It was midnight when Bronson discovered that tapping one of the bits of phosphor caused a response in the other when they were energized by the electron bombardment from the television tube works.

From that point to vibrating the hunk of phosphor with the adapted insides of an old earphone and getting a response, took another hour of whittling, filing and working.

He discarded that method of modulation two hours later when he discovered that an audio modulation of the electron stream in the kinescope tube produced the same effect.

Then, dead tired, Ed Bronson went to bed. He'd have called the woman right then and there had she been handy, but she had gone.
Bronson was truly beat. Had he stopped to think about it he would have known that something big was in the wind. For he was tapping no telephones. He had accidentally discovered some sort of communication receiving principle and had then devised a transmitter.

His first thought on the following morning was to try the receiver. She was there, all right, and so was a hooting cry of the dissonant pipe-organings.

Bronson shrugged and fired up his transmitting gadget. "Miss Carlson!" he called into the microphone. "Calling Miss Carlson of Thirteen forty-seven Vermont Street. Can you hear me?"

Then he listened.

IER voice paused briefly, took a new tone, but was still covered by the whinings.
"Miss Carlson, this is Ed Bronson. I cannot hear you clearly because of much interference. If you can hear me, make a lilting rill with your voice. This I can distinguish among the many stable-toned notes that are coming in at the time."

The voice rilled up and down several times. Then there was considerable speech which Bronson could not understand.

The upshot of this, however, was a gradual shutting down of the hootings and honkings until the receiver was clear. Then her voice came through again.
"Mr. Bronson. I have requested silence for one minute. Where are you?"
"Thirteen forty-eight Vermont Street, Central City Eleven."
"That is across the street," she said.
"Perhaps," he answered.
"Well, it is," she said. "Unless we're in different Central Cities."
"Central City, New Mexico, eighteen miles from Albuquerque?"
"That's it. But we have little time, really, because we didn't get the clear as soon as we asked for it. They hung over a bit-the commercials, I mean."
"Commercials?" he asked. Dumfounded, he began to wonder. Commercial, in radio
parlance, meant any transmitter on the air for commercial purpose and the presupposition that this system of communications must be quite well known.

How then had Ed Bronson, an electronics engineer, managed to live through the commercialization of an entirely new field of communications?
"The commercial laboratories," she said.
"Oh? Then this is a laboratory experiment?"
"More than that-"
Bronson heard with dismay the first thin whistle resume.

He interrupted.
"Miss Carlson," he pleaded quickly, "we're going to be cut off again. Meet me on the corner of Vermont and Thirteenth, please?"
"Yes but-"
That was all. The keening, piping howl came with ear-shattering loudness once more.

Bronson turned off his gear and headed for the corner of Vermont and 13th. Let 'em hoot and howl.

He'd speak to the girl in person!
An hour later, Ed Bronson still stood there, leaning disconsolately against a lamp post in the bright daylight. A ring of cigarette butts surrounded his feet.

Whatever it was it was important and he, Bronson, had the key. All he had to do was to find the door!

B
RONSON returned home. The trouble -one of them, anyway-was that his amplifier was a high fidelity affair, capable of flat transmission of sounds as far as the human ear could hear.

That made for good music and that's what the amplifier had been built for.
So Bronson went home determined to build a series of sharp filters. First he would curtail the band-width of the amplifier until it peaked around eight hundred cycles per second, near the musical note ' $A$ ' one octave above the standard Concert Pitch ' A '.

Then he would build a set of sharplytuned filters that would cut 'holes' in the remaining spectrum where the tonal interferences came. It would make her speech less natural but far more intelligible.

Bronson needed more evidence before he did anything serious about it.

It was nearing five o'clock in the morning before he finished his job, and started to listen once more.

## CHAPTER II

The Red Sky

THE girl turned from the window, where the bright sky silhouetted her slender figure.
"How do I know where he is?" she snapped.
"Now look, Virginia," objected one of the men in the room, "there's no point in getting angry. We must know."
"I know you must, Peter," she returned. "I agree. But I don't know. Do you understand that? I don't know!"
Peter Moray shrugged. "Anybody capable of building a space resonator must have enough training to have known about it in the first place."
John Cauldron spoke sharply, "You went out to the corner as suggested?"
"I did. He did not appear. After I returned I watched at regular intervals. No one came. Also I listened carefully as you suggested. He hasn't been calling-hasn't called since about eleven o'clock this morning."

Peter Moray smiled. "Yesterday morning," he corrected.
"Don't be funny. You're the ones that have kept me up all night asking fool questions over and over."
"They're not fool questions, Virginia."
"Any question repeated too often becomes a fool question," she replied.

Cauldron spoke heavily. "We're not crossexamining you, Virginia. Please belleve that. We ask and ask and ask because it may be that something might have been said that sounds trivial, but may make large sense."

The girl shrugged. "You're entitled to try," she said. She passed a hand across her face wearily. "You've heard and reheard our conversation as verbatim as I recall it. 'And it was an experience I will not forget easily."
"Agreed," said Moray, walking to the west window and looking out. "I guess we're all overkeyed."
Cauldron grumbled a bit. "There have been a lot of strange things happening," he said. "This isn't the first."
Virginia smiled wanly but it was Cauldron who apoke next after a short pause. "And at flive-thirty in the morning, everything be-
gins to get somewhat distorted from a mental standpoint."

Moray turned from the brightness of the sky and mumbled something about life's lowest ebb occurring just before dawn.

Then he added, "Why did this mess have to happen? Blast it, everybody that knew swore up and down that the possibility was nil."
"Not nil enough," said Cauldron.
"No," agreed Virginia. "But that's life."
Moray slammed his fist down on the win-dow-sill and swore. "That's life," he echoed in a mocking tone. "Well, I don't like it!"
"Who does?" demanded Cauldron quietly.
"Can't you face facts?" snapped Moray. "Do you realize that we haven't much time left? And what are we doing about it? Where are we? Nowhere, or no further along than we were thirty years ago-exactly thirty years ago. It's July sixteenth right now, and that's-"
"You're talking like a fool, Moray," said Virginia. "Have you ever stopped to think that those of us who do not rant and rave and worry ourselves into ulcers may have faced the fact, and find it ungood? Well, there are those of us who will do what we can. There's little sense in worrying about conditions-all it does is remove you from your highest efficiency.
"When something is awry you do something to correct it if you can. If you cannot you pigeonhole it until such a time as you can solve it. Not forget it, never for a moment. But there's no sense in dragging a worry back and forth across the floor until it is draining your life's blood. As for that out there, I didn't do it."
"Good for you, Virginia," applauded Cauldron.
"No," snapped Moray. "You didn't. You were not born at that time. But you can't fold your hands and accept it-nor can you say that it is none of your business!"
"There's always suicide," said Virginia Carlson.

$A$CLOCK in the lower part of the house chimed once, marking the hour of fivethirty.

Moray returned to the window and looked at the sky, west. "At five-thirty in the morning of July sixteenth," he said, "one hundred and twenty miles southeast of Albuquerque, in a remote section of the Alamogordo air bese, a group of scientists re-
leased the first atomic fire. Thirty years later," he finished bitterly, "we have a perpetual sunrise!"

On the laboratory table, the receiver rattled loudly. They turned, as one.
"Look," snapped Cauldron quickly, "if that is this Ed Bronson character, get in touch with him. We can use any technician we can get our hands on. Any man with a brain-might well hold the key to that living cancer out there that is burning up the very earth."
"I'll put my chances on a space rocket," replied Peter Moray.
"I'd rather stop that fire out there."
"Why?" demanded Moray.
"Where would you go?" snapped Cauldron angrily. "There isn't a planet fit for human occupation and you know it. You'll either put it out or we'll all die. Not a chance for escape in any other way."
"I-"
"Shut up, while Virginia answers Bronson. He's having interference trouble-you'll make it no easier."
From the speaker was coming Ed Bronson's voice, calling for Miss Carlson and requesting an answer, for he had filters installed that eliminated the whistlings.
Cauldron jabbed Moray with an elbow. "He's a right bright fellow," he observed in a whisper.

Virginia Carlson spoke into the microphone. "You're right on the big moment," she told Bronson.
"Big moment?" he replied.
"Sure. Thirty years ago today-this moment."
"Yeah?" drawled Bronson. "And what happened?"
Peter Moray looked at John Cauldron. "Tell me," he snapped, "what kind of man could live to maturity and not know Alamogordo?"
"I don't know. I can't imagine," replied John Cauldron. "But maybe-just maybeit is the answer we've been seeking."

ED BRONSON shook his head though he knew that the girl could not see him. He had not heard Moray or Cauldron mention Alamogordo. He repeated his query.
"And what happened?"
Virginia Carlson told him, "Thirty years ago, at Alamogordo, the scientists first released the energy from the atom."
"Oh," he replied. "I didn't know it was
marked on the calendar as a holiday."
"Holiday?" exploded Virginia.
"Well?"
"That atomic fire is still burning!" snapped Virginia.
t "Oh, no!"
"Well, I'm within a hundred and thirty miles of it," she replied, "and I can see it out of the window."
"Where the dickens are you?" he asked.
"You know my address," she replied.
"Yes," he agreed. "And I went there and got pushed in the face for my trouble."
"And the people who live at your address are named Carrington, not Bronson."
"How old are you?" asked Bronson.
"Twenty-five-why?"
"Look," he said, "if that atomic fire is running out there, then how did the World War Two end?"
"They brought high officials over to see the awful pillar of fire. They didn't tell them that the atomic flame would eventually eat the earth-so surrender was a matter of expediency. Once the shooting was over all the earth turned at once to the job of putting it out. You know that."
"Nope," he replied. "It worked-as did the others at Hiroshima, Nagasaki, and two at Bikini Atoll."
"Hiro-and what was at Bikini Atoll?" demanded the girl.
"Tests-Operation Crossroads."
"Tests!" exploded Virginia. "And none of them started atomic fires in the earth itself?"
"Nope."
"Then you tell me what happened?"
"I don't know."
"You're not psycho?" asked Virginia.
"Not that I know of," he replied with a chuckle. "Though-as Pontius Pilate is credited with having said-'What is truth?' "
"Hmmm I cannot deny your right to state truth as you see it, Bronson, but be it remembered that practically every human born since the atomic fire is a mutation of some sort or another."
"So what does that make me?"
"You might be some sort of brain muta-tion-don't ask what kind-one who does not recognize the truth."
"All I know is what I read in the papers, what I see in the moving pictures, and how I feel at the moment. Also, I am no mutation. I was exactly one year old when Alamogordo took place, even supposing that it did take off with radiations that might have mu-
tated the germ plasm."
"Well, it did."
"According to you it did," replied Bronson.
"May I repeat your own statement to yourself?" she told him. "All I know-et cetera."
"Okay," he said. "And granting that our separate tales are true, then what?"

Virginia mentioned a few items of history. Both then got their own history books and started to compare closely. They agreed on everything up to the moment of the atomic bomb at Alamogordo.

And at that moment, the histories diverged.
"Nature," said Ed Bronson, "must have been perplexed. So she took both roadways. One in which the earth is engulfed with atomic flame and one in which the thing worked."
"What do we do next?" asked Virginia.
"We get in touch with the respective authorities of our worlds," said Bronson. "Alone we can do little. Together we can do something to aid you."
"Tomorrow night at seven, then?" asked Virginia.
"Right."
The contact was broken.
"And there," said Peter Moray, "is our answer!"

## CHAPTER III

## Earth Three

$H$ARRY MADDOX turned from his laboratory table as the tall, dark man entered. Maddox greeted the taller man obsequiously, but the other's reply was curt.
"They've done it, you say?" asked Kingston.
"They've done it," replied Maddox gloatingly.
"That proves it then," replied Kingston with interest. "Though it has always been a common enough theory."
"Within the past thirty-six hours," said Maddox, "there have been two transmissions. The latter one is now going on. Want to hear it?"
"Not particularly," replied Kingston. "It will be recorded for my leisure."
"Yes," nodded Maddox. His nod was toward a rather attractive girl, who was rid-
ing herd on a large wire recorder. From time to time she would reach out and adjust the volume of the recording. Over long blond hair she wore earphones to monitor the conversation directly. Kingston made a mental note that he could trust Maddox to adorn his laboratory and workshop with the most attractive human decor that he could find.

Instead of commenting on this he smiled in amusement and continued to speak. "Rather dramatic, isn't it?"

Maddox nodded. "Thirty years to the moment. That Alamogordo affair had three possibilities. It could either have gone off nor-mally-it could have started an atomic fire in the earth-or it could have fizzled. And so, thirty years later, the three temporal possibilities are meeting."
"No, my dear Maddox," said Kingston with the air of a savant correcting a student who was not too careful of his facts. "Just two of them. We sit by-remember?"
"I know," said Maddox, rebuffed.
"Remember-and never for a moment for-get-that the possibility of the Alamogordo bomb starting an atomic fire in the earth was a remote possibility. That means that the tensors which maintain that line of temporal advancement are very shaky.
"Time, you know, consists of following the Laws of Least Reaction, which simply means that in any reaction wherein a number of possibilities occur, that which will happen with the least energy will take place. This is statistically true, and need not hold for specific instances.
"Now," Kingston went on, enjoying his role of lecturer even though Maddox fiddled impatiently because he knew it all before-hand-and besides, the blonde was half-listening, though alert on her recording job. "Be it always remembered that the chances of the Alamorgordo Bomb being a fizzle were as remote as the other case.
"Ergo, Maddox, our own world hangs on a slender thread of reality. We have as much need to escape from this time-slot as they whose earth is burning with atomic fire. For only in the time-slot where the Alamorgordo Bomb behaved according to principle are the time-tensors heavy enough to maintain it."
"Yes, your Excellency," replied Maddox.
Kingston nodded. "You are a lucky fellow, Maddox. I came as soon as I could get away. I shall remain here until we can go through and take over."
"Sir, a question." Maddox knew that he


Bronson tried desperately to fight off the thugs (CHAPTER XVI)
must use deference at least until Kingston climbed down from his tall horse. "What happens when, as and if they start an atomic fire in Earth One?"
"They cannot, save by sheer chance of almost impossible mathematical odds," said Kingston. "Besides, they hope to move in-or will as soon as they learn the truth. No man burns the home he hopes to own in the near future."
"But what will happen?" asked Maddox. "That expectation is far too deep for me to follow."
"Men-all men-are inclined to feel sorry for the trapped," said Kingston. "In some cultures their sorrow is shown by killing the trapped to remove them from their misery. In other cultures, the trapped are aided even
though they may eventually turn against their liberators. Once the truth is known to both worlds, those who are in Earth One will be moved to aid the trapped ones in Earth Two.
"We shall aid them as we did before by transmitting to Earth One more samples of the space-resonant radioisotope to contaminate their scientific works. There will be a gaudy search for them once the truth is known, you know. Anyway, those on Earth One will undoubtedly admit the trapped ones from Earth Two."

MADDOX shrugged. "No dice, yet." "Don't be stupid. Those on Earth Two are a race faced with death. They'll send through their mutants, their death-
dealing types first. That will decimate Earth One and leave Earth One in the hands of Earth Two. Follow?"
"So far, yes. But where do we come in?"
"We come in shortly. Ninety percent of those remaining on Earth Two are mutants from the atomic fire or considerably older than thirty. The ninety are almost certain to be-if not sterile-then not cross-fertile with the rest of the mutant race. Each will have gone mutant in some fashion different from his fellow.
"All we need do then is to sit and wait until the race dies out-another thirty or forty years. Or, better, depending on the circumstances following the eventual battle we go to war. We shall win, for our people have not lost much. At any rate we're permitting Earth Two to do our cleaning-up for us."
"Unless-" began Maddox, then paused. He knew that if he advanced a theory unasked it would be scorned. However, were he to make some leading statement and then disavow it unuttered Kingston would demand that he complete it whether he thought it right or wrong.

Kingston did, which was an excellent proof of the theory that it is a good thing to know the nature of your fellow man. "Unless what?" demanded Kingston.
"It was but an idle thought. Who fights more fiercely-he who has lost his home and fights for another or he who protects himself from the one who would dispossess him?"

Kingston laughed nastily. "Little difference," he said. "This is rigged so that no matter what, a fight will ensue. It is always easy to lick the survivor of a tough battle."

Maddox shrugged. "Just remember that you're not fighting aliens, but you-ourown kind!"

Kingston nodded. "That," he said succinctly, "is why I know them so well."

Cauldron looked at his watch. "Two hours," he said. "Time enough?"
Virginia looked concerned. "He didn't state whether he'd been asleep lately," she said.
"Unless he's a complete screwball, he'll work days and sleep nights," observed Moray. "Even supposing he works at home, he'll be arising about noon at the latest and hitting the hay about three-odd. Excepting when something was really in the fire like
this receiver of his. I predict that he hit the sheets after we closed and is now pounding the pillow at a fine rate of speed."

Virginia smiled uncertainly, turning back from her communicating equipment. "He doesn't answer," she said.
"Can you locate his phosphor?" demanded Cauldron.
"I have."
"Then try," snapped Moray. "Aid! Help!" he sneered, "We're in the way of losing our very lives, and what we need, we take!"

Cauldron nodded. "Moray-you first. If Bronson is still in evidence clip him. If not we'll go ahead and do whatever is necessary. We can't take too long. After all-"

Moray nodded. "Ready, Virginia?"
"Ready."
Virginia worked over another bit of equipment in her laboratory. Moray walked over easily, smoking a last cigarette leisurely until Virginia turned to him.
"The focal volum es are resonant," she said. Then Moray seated himself in the chair before the equipment and, as Virginia started the machine, it began to transmit Pete Moray from one world to the other.

ITT WAS not especially spectacular. No flashing lights or flowing aur ae of color. Moray's body, still breathing, still living, began to be less solid. At one time Moray lit another cigarette.

A bit of the cigarette smoke entered Ed Bronson's laboratory. The amount was that percentage of the transmission that had been accomplished.

There, before the big kinescope tube in Bronson's laboratory, the air was beginning to show the vague outlines of a figure, seated on a chair. This figure thickened gradually as the random atoms in Moray's body passed over.

A half hour passed and Virginia told Cauldron that the transmission should be about half complete. Moray's body could be seen through faintly-not that any of the internal organs were visible but as if he were a wraith.

Then the halfway point came. The floor in Bronson's laboratory was lower than the floor in Virginia Carlson's laboratory-with respect to their transmitters and receiversand Moray and his chair dropped several feet on both sides. Moray seemed to be unmindful of the fact that the hard floor of

Virginia's laboratory was about where his stomach was.

A half hour later, there was little of Moray left on Earth Two. Most of him was on Earth One!

As the final molecules came through the space resonator Moray heard a noise. Frantic, he turned to see but could do nothing until the last of him was complete. The noise resolved itself to footsteps, and then the door opened and Ed Bronson strode in.
"Smoke-" he mumbled sleepily, then, "-who the heck are you!"
Moray was complete. He leaped to his feet and clipped Bronson viciously with the side of his hand. Bronson dropped, stunned, dazed, but not unconscious. Deftly, Moray found a roll of tape, bound Bronson's ankles and wrists, slapped a bit of tape across his mouth.
"Aid?" sneered Moray. "Promise us aid, all right. Fifty years will pass while the idea is being thrashed out in Congress or in whatever international organization there is here. Behave, Bronson, and you'll live. Help usunderstand? If you don't it's-" Moray drew a forefinger across his throat.

Another figure started to form-vague and indistinct-and Moray lifted the taped man across his shoulders, carried him upstairs, dumped him across his bed and left him there.

When he returned to the laboratory, Virginia was beginning to solidify. Moray seated himself and waited, smoking Bronson's cigarettes and fortifying himself with a drink of Bronson's liquor. Moray smiled, but his humor was bitter.

How to marshall an army? It took an hour to get one person through-to pass the six or seven million still living in Earth Three would at this rate take six or seven million hours-a mere eight hundred years if you didn't bother with the extra leap-year days or take Christmas off.

TII ME passed slowly and it was the full hour before Virginia came through completely and arose from her chair.
"Collect Bronson or kill him?" she asked.
"I should have killed him," said Moray.
"Not at all," replied Virginia. "Even though this is quite similar to our world remember that thirty years of time separate us-and thirty years each of divergent development. We need someone to show us our way around."

Moray shrugged. "He might guess about this factor?"

Virginia shook her head. "No," she said with finality. "He's just beginning to think about the space resonator. Look at that pile of haywire junk! He's downright dumbfounded at the idea of communicating over a lump of electron-bombarded radioisotopic compound.
"To consider the transmission of matter from one volume of focus to another is an idea beyond concept. And-no doubt-radioisotopes aren't dished out as easily here as they are back there."
"Here, there, whither?" grinned Moray. "Let's call this Earth One because it is going to be here long after Earth Two has dissolved in atomic flame."
"Okay. So we've got this station first. We've got to get enough radioisotopic phosphor passed around Earth One to make wholesale passage possible. You run this station, Moray, and I'll stand by to act as a front."
Moray looked at Virginia closely. Slender, blonde and possessed of an ethereal and almost violent beauty, her personality and looks could and would forestall much idle questioning. He nodded.
"You keep out of sight of Friend Bronson," he said. "It might be handy to have you for a-a face card."

Virginia grinned. . . .
Ed Bronson had a splitting headache and a crying pain in every muscle. He had been lying motionless. It was all he could do against the adhesive-taping job done by Peter Moray. His tongue was thick and furry and his very soul cried for water. He could make no sound for the tape covered his mouth.

Angrily, and resentfully, Bronson's temper flared. He set his muscles against the tape about his wrists and strained. He tried the tape about his ankles. Both were wound many times with the heavy tape which would not be torn.

A twisting strain succeeded only in abrading his skin until the flesh was raw and bleeding. With fading hope he prayed that the blood would soften the tape and thought about rubbing himself raw even more so that the further flow of blood might aid.

He gave that up when he saw that the tape was of the waterproof variety. All the soaking in the world would do little good.

He rolled from the bed onto the floor, eas-
ing the thud by dropping taped feet first and then angling to knees, turning to land on his buttocks and then unfolding as gently as he knew how. He made it with no undue effort. Then he rolled across the floor to the door and, turning, he caught the hinge-butt under the tape at his wrists where tape and wrists made a small triangle.

After many minutes, Bronson succeeded in weakening the tape and then, hooking the tape firmly over the hinge, he tore it loose. To remove the tape from his mouth and from his ankles was but a moment's work and then Ed Bronson was free to act!

Quietly, he dressed. Then, using the utmost stealth, he stole down the stairs and out onto the street. It was midmorning.
Nodding amicably to Lewis McManner, who scowled back across the street, Ed Bronson headed for police headquarters.

## CHAPTER IV <br> "What Fools-"

ED BRONSON thought it out on his way to the police station. Man was an impossible mixture of altruism and selfishness. Man was inclined to give freely to those who were needy-but would fight like fury to withhold the very smallest of his possessions from the avaricious grasp of those who would wrest them from him by force.

As a world requiring pity, aid and mercy, every effort would be bent towards that end, even to the job of making room for them in an already crowded world. But they had entered like bank robbers or claim jumpers. Their own world lost, they intended to abandon it, pirating any other world they could.
The brotherhood of man collapsed at that point and became a brotherhood of hate. Tolerance and mercy and willingness to offer succor must be forgotten when the needy become vicious. Biting the hand that feeds is an old platitude which still holds true.

So Ed Bronson knew that, regardless of their wretched situation, they must be stopped. This was invasion with capital letters. Even though many of them must be direct descendants of people in this world, invasion meant war! Even worse than civil war was the brother against brother, man against man, war of survival.

They—and Ed Bronson paused. 'They' was an indefinite term. 'They' should have some nomenclature for purposes of identification. Were the invasion from another planet, 'they' would have a name.

Were it merely an earthly war, country against country or political clan against political clan, both sides would have names. But here was a case where it would be one earth, one world, against another worldidentical save for a trick in time that had split them apart.

Bronson needed a name and he needed it quickly. He reasoned and came to the conclusion that the 'other world' should be called Earth Two because it was not long for living. Once it was destroyed by its own fire this world would revert to being 'the' earth. Until such a time as differentiation became unnecessary he would call the two worlds Earth One and Earth Two.

Thus, independently, did the people of three almost identical earths arrive at the same conclusion. Earth One was the original, where the Alamogordo Experiment had been successful. Earth Two was where the mil-lion-to-one chance of starting an all-consuming atomic fire had actually happened. Earth Three was where the Alamogordo Experiment had failed.

Ed Bronson and the folk from Earth Two were still to learn of Earth Three and it was only sheer reasoning that made all three systems of nomenclature congruent.

So by the time Ed Bronson located the police department he was prepared to give a coherent story. He asked for the captain in charge.
"Cap'n Norris is busy," grumped the desk sergeant. "What's the matter?"
"My home is being invaded and-"
"Well, you don't need the captain for that," snapped the sergeant. "Joe! Eddie! Get the wagon and go with this here-what's your name, mister?-and see that the guys that broke into his place are canned!"
"I'm Ed Bronson," explained Ed. "But-"
"That's all right," grunted the sergeant. "Joe and Eddie'll take care of you!"
"But you don't understand," said Ed patiently. "These are invaders from another world."
"Invaders from-what?" asked the sergeant, doing a double take.
"They're just the beginning," said Ed. "If you manage to grab them others will be coming."
"Eddie-Joe! Forget it. This is a Number Seven deal."

JOE and Eddie looked at Ed Bronson with an odd glint in their eyes. The sergeant looked down across the desk and said, "Now, Mr. Bronson, suppose you come with me to the captain's office and we'll talk to him."
"That's fine," said Bronson. "You see, I'm not sure of what to do about it all."
"Captain Norris will be able to help you," said the sergeant. "This way."

He came from behind his desk and led Ed Bronson to the hallway door. He opened the door and stepped back, permitting Ed to go first. Ed found himself in a short hallway and started down it uncertainly. The sergeant followed him until he reached the proper door.
"In there, Mr. Bronson," he said.
Bronson did not make particular note of the fact that the desk sergeant had at no time been with his back to Ed. He opened the door and found himself facing an elderly wise-looking man who had the appearance of having seen, heard, and experienced, either first-hand or vicariously, every item of trouble, grief and $\sin$ in the list.
"Captain Norris, this is Mr. Bronson. He has a bit of trouble. Thought you'd best hear about it."
"Sit down, Mr. Bronson, and tell me about it," replied Captain Norris easily.
"Well, sir, in the first place, I am an electronics specialist. It's-"
"A scientist of some sort, is that it?"
Ed nodded. "Most of us shy away from the name 'scientist' but that's about it," he said.
"So you're a scientist?" smiled Norris.
"Yes. And I was experimenting on a bit of radioisotopic phosphor, hoping to make a better, more brilliant television picture."
"Has this all got to do with the people who are breaking into your home?" asked Norris.
"Yes. That's how they got in."
"I see. Then go ahead. No, Sergeant Foster, you stay because you may have to do something about this and it is best that you get your story first hand. It'll save time. Now, Mr. Bronson?"
"Well, under the combined forces of the magnetic field and the electronic bombardment the phosphor vibrated. I half recognized the vibration. It was like a very faint whisper in another room that you can't quite
understand-but you know that someone is whispering.
"So I went to work on the phosphor and used a contact microphone on it, and got in touch with some woman, who gave her address as across the street from my home. When I went over there, I discovered that it couldn't possibly be correct. Later I refined the thing a bit and learned that her name was Carlson. Then I built a means of talking back to her, and I learned that she was not on this world at all. It was-"
"Not on this earth-but talking American?" demanded Norris.
"Yes."
"Do go on," said Captain Norris, putting down his pipe and leaning forward a bit.
"Well, you see, Captain Norris, there were some of the Manhattan Project physicists who believed that there was a chance that the atomic explosion might be strong enough to start a fission train in the earth itself. In other words, they were afraid of setting the earth on fire atomically. This was a possibility, and it seems that we now have two worlds, each following the natural chain of events pursuant to the two different possibilities."
"Very interesting, Mr. Bronson. Please go on. There must be more."
"After learning this, we decided to do what we could to alleviate the difficulty. I went to bed. In the night-or rather while I was asleep, they used some means or other to pass through from one world to the other and one of them clipped me and taped me up. He told me that they were going to move in on us-to displace us. I escaped and came here. Something must be done!"
"Indeed!, Something must be done indeed," replied Captain Norris.

IBRONSON took a deep breath, and said, "I'm glad that I had this chance. It was a heavy weight on my mind, knowing that this was happening and I was the only one in the whole world that knew the truth."

Captain Norris nodded. "I trust that you are feeling all right now?"
"Of course."
"We'd better get you to a doctor, Mr. Bronson. Those wrists look inflamed."

Bronson looked down at them. "Now that this affair is in the hands of authority," he said, "I think I can take time off to see a doctor."
"We'll take you to our doctor," said Captain Norris.
"I have my own," said Bronson.
"We-insist!"
"But-"
Norris smiled genially. "You'll like our doctor," he said. "He's such a nice congenial fellow. Everybody likes him. Now-"
"What is this?" demanded Bronson.
"Take it easy," said the captain, "it's just routine. Everybody who gets hurt in the course of committing a crime or being victimized in such is always treated by the official medical department. Just a matter of establishing legal medical evidence, that's all. Now relax, Mr. Bronson, and come along. I'll have the boys take you to the hospital."
"Hos-?"
"Routine. The doctor works for us, Mr. Bronson. Therefore he has no office hours. Logical?"

Joe and Eddie treated Ed Bronson to a wild ride through the city streets with the siren on full. They slid to a stop in front of a squat, dirty limestone building and they escorted him in-convoyed him in, to be exact, for one went in front and one followed up the rear.
"I am Doctor Mason," said a white-clad man, meeting them in the corridor of the building. "Captain Norris told me you'd be coming."
"Just abraded skin, doctor," said Ed, showing the doctor his wrists.
"We'll take care of that instanter," smiled Doctor Mason. "Meanwhile, what's this tale you were telling Norris? Something about hearing voices? Threatening voices?"

Bronson recoiled a bit.
"Now, relax," said Mason.
"Do you think I'm crazy?" asked Bronson sharply.
"Of course not. You're not crazy, my boy. Just tell me-"
"You-"
"My friend, the symptoins of paranoia are simple and easy to determine. The hushed voices, in the earlier stages, merely talk about the victim. In a later stage the voices threaten. In still a later state the hushed voices take physical being and all too often it is someone entirely innocent of any malice.
"Now this tale of people from another world, Mr. Bronson, must be faced for what it is. You are not crazy, my boy. Merely ill -no worse than a bad cold or influenza, for
instance. But you are ill and you must be treated."
"Treated?" exploded Bronson angrily. "Treated-for an imagined mental ailment when the earth itself is in danger of being invaded?"
"The earth is not in danger," said the psychiatrist firmly. "And-"
"I will not be-"
"Violent, too," said Mason with a solemn shake of his head. "Normally, we try to gain the patient's confidence. But in advanced cases of paranoia, they will resent even altruism. Everything is suspected of plot. Now, Mr. Bronson, whether you believe that this is for your own good or not, you're coming with me. Will you come quietly or shall I have some orderlies bring you?"

Bronson shook his head and turned to go. He walked into the waiting arms of Joe and Eddie, who subdued him easily because they were well trained in the art of handling men. Mason waved them on, and Bronson walked with both arrns in hammerlock behind him. He could either walk or have both arms dislocated at the shoulder.

Mason spoke to the policemen. "The thing that makes psychiatry tough is that the patient likes himself the way he is-just as all men do, really-and resents bitterly any suggestion that his personality be changed."
"What do you intend to do?" asked Joe.
"Electro-therapy," said the doctor in a decisive tone.

Bronson writhed in both physical and mental anguish. He, the only man on earth that realized the danger, being dog-walked into a cell-accused of the crime of warning the earth of its fate! Outnumbered, overpowered and disbelieved!

## CHAPTER V

Head Start

LEADER Kingston shook his head. "Bronson is dangerous to us," he said. Maddox nodded. "If his tale is believed Earth One will arm against invasion."
"Correct. Properly to save us trouble the invasion must take place against small armed odds. Otherwise, instead of our finding a world decimated and wearied by war, we'll
find a world with its wits sharpened and its anger high."

Maddox turned the focus knob to readjust the image that had fuzzed a bit because of a varying line voltage. He pointed to Bronson's image, struggling against the policemen.
"He's in a fix right now," he said.
Kingston nodded dubiously. "But he'll not remain there," he said. "Bronson is suspected of being paranoid right now. Any man coming to high authority with such an unbelievable tale of alien entities or timedivided worlds would be suspected of insanity. But before anybody tries to cure him, they will give him their most extensive tests to prove or disprove his sanity.
"It is a fundamental principle that no man need be subjected to treatments or cure that needs them not. It is a violation of human integrity to attempt to cure a man of delusions who has no instability. Therefore they will apply the last word in checks and tests and discover that Bronson is not insane.
"Once they discover his stability they will admit the shadow of a doubt. Only the completely insane will not admit their error or possibility of error. An honestly sane man will admit-however grudgingly-the possibility of anything, even to alien entities and split time-continuua."
"Then-?"
"Then let them listen but once to his flanged-up space resonator. His is a fine spectacle, you admit-about as neat and as efficient as the First Radio Receiver. On such, many people are making many transmissions of all sorts. Obviously, Maddox, the state of the art is higher than the technical efficiency of Bronson's gadget which to men of science will mean that there is something to Bron-
son's story. Follow?"
Maddox nodded. "The men who know will have sufficient knowledge to evaluate the negative evidence. They know of no such technique."
"Exactly," nodded Kingston. "Precisely. This we must stop!"
"This we can stop," said Maddox.
"How?" demanded Kingston sharply.
Maddox made a wry grin. "Watch," he said. He turned to the kinescope screen once more and watched Ed Bronson prowling the lonely cell. . . .

For the thirtieth time, Ed Bronson paced his tiny cell. It was hopeless. Everything mobile was too large and soft to use as tool or weapon-for either egress or self-destruction. His clothing had been removed forcibly and Ed Bronson seethed angrily, dressed in only his skin.

He realized that he had been a fool. Had he been less violent he might not be so well incarcerated. He should have known that no amount of physical struggle would get him anything. After all he had striven against greater numbers of men who were all trained in the art of handling men possessed of the strength of the insane.

Bronson had only the strength of the indignant, which was far from the unreasonable power of the insane. With the use of a small amount of foresight, Ed Bronson knew that he might have been in a room less bare, perhaps one in which the door had not been bolted, barred and locked.

Bronson, it must be told, was not aware of the fact that the men who held him were also used to prisoners possessed of the cunning of the insane. No amount of cajolery, honest protest, supine acquiescence or will-
[Turnpage]

ing aid would have made them do other than lock, bolt and bar his door.

What Bronson needed was a friend. . . .
Maddox smiled with grim humor. "We cannot silence him now."

Kingston nodded, his face clearing of its slight frown. "Good man," he breathed.
"Nor," said Maddox, looking at the cell depicted on the kinescope tube, "can we aid him to escape."
"To kill him inside of that room would most certainly prove to them that enough of his tale is true to make them suspicious. Even to open that room and let him out will prove to them that there is more than the agency of a single man at work."
"In other, terser words," grunted Maddox, "he has placed himself in a position where he has life insurance-only in the name of Earth Three."
"And you see to it that he stays alive, suspect and helpless!" snapped Kingston.
"That I shall do," nodded Maddox. "That I shall do!"
"Unless, of course, he is threatened by death with both killer and motive indigenous -or apparently so-to Earth One."

Peter Moray turned to Virginia Carlson and shook his head. "Won't work," he said.
"Why not?" she asked.
Moray explained. His explanation was almost identical to that of Kingston and Maddox. To hurl a man into an asylum for hallucination is all well and good. To protect society, for any number of reasons all directed at the protection of society, from the maniac or to protect the maniac from society is sound.

Yet no man can be incarcerated very long if he is sane and wants to get out. It is as difficult for a sane man to fake insanity as it is for an insane man to fake insanity.
"So what do we do now?" asked Virginia.
"We should have eliminated him at once," snapped Morey. "Confound it, I was sleeping. I thought he might be useful."
"You were wrong," she said. "It seems to me that we might as well give him the works. I'll go down and see that he is taken care of."

蓾ETER Moray nodded. Bronson had seen Moray but had never seen Virginia. In fact, Bronson knew only Virginia's last
name. That was a help. Also, Virginia was a very good looking young woman and the power of a beautiful woman who speaks with certainty is great. She was also a capable calculator and could plan her campaign as she went along. Moray nodded, and Virginia headed for the asylum.

In her handbag, Virginia carried a small automatic. Bronson was a threat. The threat must be eliminated. The lover's quarrel perhaps or, better, he was in the asylum for paranoia. Why not have him attack her? Self-defense is a good alibi and her story would be strengthened by the doctor's decision. She smiled cryptically.

Supposing she were convicted of murder in the first degree and sentenced to the gas chamber? By the time the trial came to its end, the invasion would be ready and the first act of the men of Earth Two would be to rescue Virginia from her cell. She had everything to gain, nothing to lose by acting -and there was an entire world dependent upon her.

Confidently Virginia opened the door of Bronson's house and headed down the street. It was her first venture outside along the ways of Earth One.
In the morning, from her home, there were two lights in the sky, one a disc rising in the east, one a blinding glare that rendered the disc ineffective. Albuquerque never really knew night nor had it during the course of Virginia Carlson's life. Here, however, there was but the shining sun and Virginia found the streets a bit sheltered, shadowed, compared to the streets of her home.

But-the thought came to her-this was her home! She walked along the same street as the one she lived on. She looked across the street from Bronson's front steps and saw her own number there. It was a different house but none the less it was her number. It was sandwiched between two other houses whose outlines and architecture she recognized.
The street light was there, recognizable, though this one was not the remaining remnant of the pre-Alamogordo era. The one in her Albuquerque had not been used in the course of her life, though it had not been removed.

The street-car line was still on the next corner, and the cars that ran might have been the same-could they have been? Interested, Virginia waited until one came
along and, though she could not be certain, it seemed the same.

It was a matter of interest to find out whether the same cars plied the same tracks in two different time streams. This seemed at once paradoxical and quite possible, for Virginia had seen both her own street address with a new house on the location, and the houses on either side which were older than Alamogordo and recognizable.

Virginia walked on slowly, a number of things running through her mind. Even though the city seemed the same, there was quite a difference. The population was thick here, not thinnned out by radiation-sterility. The people were smiling and unafraid. On no face was that look of stark wonder and fear that never left the faces of the people of Earth Two even though they had been born and bred under the blinding light of the Alamogordo Blow-up.

Nor were there the mutants.
That was what made the most difference. In her life and counted among her friends were strange biological forms, often unhuman. There was, for instance, a fellow called Thomas Lincoln whose eyes grew on stalks and was quite a man at work on large machinery because he could see deep within the machine without having to rely on mirrors or the sense of touch.

His eyes, when extended, could either assume the proper distance for perspective, could narrow or widen the angle of per-spective-and his mind, trained over the years, made due allowance so that he knew and accepted these differences.

There was Greene, the man whose hands had a palm on either side and whose fingers could bend to make a fist on either the inside or the outside of the arm. This might seem good, but it presented a lack of firmness. Greene's hands were far weaker than Harrison's, whose hands had but three fingers with twin thumbs on either side, making the hand symmetrical.

HER girl-friend, Edna, secreted pure metal instead of pigment and her skin and hair had a metallic sheen that was rather beautiful. In a strong light, Edna's skin and hair were almost luminous, like iridescent paint. There was the fellow that lived on the corner-Virginia never knew his name-who had a double knee and elbow. This made for physical instability.

There were others. Some were interesting from functional standpoints, some were interesting from banal standpoints. Others were just horrible and many were viciously dangerous. But many of them were her friends. Virginia had grown up without one iota of prejudice regarding the shape of a man's body, the color of his skin, or the nationality of his father. For in a life where few men were as simply mutated as to have a mere skin coloration, all of the former prejudices were so minor in the face of the acceptance of the more violent differences that to accept the latter meant complete disregard of the former.

This world contrasted sharply with Virginia's world. To see people walking freely in the streets, pursuing their normal life, was puzzling. Virginia, born in the glare of Alamogordo, under a culture that had devoted itself completely to one main idea or to the secondary or tertiary support of those who pursued that idea, this freedom was inexplicable.
In Virginia's world, there were two classes of people-those who worked directly on the problem of saving their world in one way or another and those who worked to support those who worked on the problem. Farmers produced so much, by law. Book dealers sold so many kinds of books, produced by printers and publishers who did exactly what was needed and no more. Entertainment and relaxation was far from spontaneous.

People did not collect at random and throw a party on the spur of the moment nor could one decide to go out and buy a magazine and read it instead of cleaning out the basement. Though it was admitted as such,-it was an emergency dictatorship, with the Alamogordo Blow-up as main dictator. Regulation was the order of the years.

Earth One was, to Virginia, completely unregulated. Women walked along the streets idly, looking in windows and smiling at men. The sign "Bar" intrigued Virginia. She was no stranger to the potable qualities of alcohol, but the concept of an establishment directed at the sole idea of selling drinks had not occurred to her.
This-recall-was Virginia's first experience in living in a world not harassed by fear.

She paused at a window showing an assortment of dresses on well-made forms. In her world, Virginia was a good-looking woman
and dressed as well as the next.
In contrast to a world where much time and energy was directed at luxury instead of the sheer, vicious necessity driven of hope and despair-in a world where the accolade of young womanhood is to be permitted her first trip to mother's beauty salon and thereafter make obesiance regularly-Virginia, a beauty in her own world, knew that here she was as conspicuous as a tall telephone pole in a snowbound prairie.

She knew because the window before which she stood reflected her own handmade dress against the luxurious mannequin inside the window.

Moray had been correct in his assumption that a beautiful woman could get away with more than a plain one. His only mistake was in not judging alien demands for grooming. And yet it was not a true mistake. It was rooted in sheer ignorance.

Virginia wondered. Money? Coinage does not change very often. But the few coins she had in her bag would not cover the two figures to the left of the decimal pointiffing and providing that they were still good.

There was, on her right hand, her mother's diamond. On her left wrist was a wristwatch of quite ancient vintage-Virginia automatically called it "Pre-Blast"-which might bring a few dollars.

Virginia turned from the window and went across the street to a pawnshop. She emerged with a handful of greenbacks, recrossed the street and entered the ladies' shop. With satisfaction Virginia noted a beautician's place next door and, though rather questioning of the nefarious arts that might go on behind the curtains, Virginia was determined to compete with her contemporary girl-friends on an even basisperhaps with a fair head start!

## CHAPTER VI

## Sprung by the Foe

[^3]not the planner's lot.
"What's cooking?" he asked Cauldron.
"We're putting on a security silence on the space resonators," replied Cauldron.
"Why?"
"Whether they think Bronson insane or not, whether he lives or dies, we must see that there are as many bits of radioisotopic phosphor in Earth One as possible."
"Yes, but-"
"Bronson may be judged insane. However, give him a chance and he will demonstrate the space resonator. If he should pick up an Earth Two broadcast or even a molecular pattern it will lend weight to his tale. On the other hand, Bronson will be given credit-sane or otherwise-for the invention of a new level of communication.
"When it becomes known that gross matter can be shipped across space with the same scientific concept people will rush madly to develop and build delivery sets."
"I get it."
"Sure," replied Cauldron. "It's easy enough. Tell Virginia-"
"She's gone already. She left to take care of Bronson."
"Oh blast! Look, Moray, how are people dressed there ${ }^{9 *}$
"Why-I wouldn't know. Bronson was in pajamas when I intercepted him and it's just barely morning now. I've not really been' out yet."
"You should have taken time to get Virginia fixed up as close to one of the women of this world as possible."
"Why?"
"Because she'll be less conspicuous," said Bronson. "If they get to peering into Bronson's mind they'll come to the conclusion that he isn't as mad as his tale sounds. Give them one overly-conspicuous character to look at and they will definitely begin to think loud thoughts."
"Well, why shouldn't Virginia get along?" demanded Moray.
"You're a young squirt," snapped Cauldron shortly. "You weren't around before the blow-up. You haven't the vaguest idea of how much time and hard money was spent by women on the luxury of appearing beautiful. That has been curtailed on Earth Two by necessity and emergency. But I'll bet a tall hat that they are still shelling out plenty there. Is there a telephone book handy?"
"Yeah," said Moray.
"Then crack it to the classified section and tell me how many pages there are of beauty shops, beauty salons, beauticians, or whatever they're called."

Silence ensued for several minutes and then Peter Moray returned and gave Cauldron the answer.
"You see?" replied Cauldron. "You have no idea of how life is lived when there is no cause for fear."
"So-"
"Then our friend Bronson is no longer needed?"
"Nope. They'll get along without him, now. What worries me is that the psychiatrist may get to work on Bronson long enough to establish a reasonable doubt in their minds."
"Even so," said Maddox thoughtfully, "we're stuck. Supposing we were to kill him? It's obviously impossible in that room. It is equally impossible for him to escape nor can we arrange it."


There was Ed Bronson-whom she believed she had sent to Earth Two (CHAPTER XI)
"So I'd feel better if Virginia were heading for that place in something better than a hand-made dress of reclaimed cloth, a selfdone hairdo and flat-heeled slippers. Besides," he chuckled wryly, "it would help her morale no end."
Harry Maddox turned from the hapless spectacle of Ed Bronson and shrugged. "He's safe," he said. "Now what?" . . .

THEY'VE gone into a security silence," said Kingston. "As we expected."
"What we need is a person who might be quite willing to murder Bronson in cold blood for the sake of murder itself-or even better, for some mundane motive."
"What about the characters from Earth Two?" suggested Maddox.
"Let's find 'em," snapped Kingston, apparently struck with an idea.

Maddox had little trouble in locating Moray. He looked in on Peter Moray for a moment, and then went in search of Virginia. Virginia, apparently, had disappeared.

It was quite impossible to search every possible place in Albuequerque for a glimpse of Virginia and, after covering the pathway to and from Bronson's cottage to the police station and thence to the police hospital, Maddox gave up and returned to Moray, who had stopped speaking to Cauldron. As Moray turned away from the equipment, the telephone rang, and he went to it, wondering.

Moray lifted the phone and said, gingerly, "Yes? This is the Brons-"
"Moray! This is Virginia. I'm going to dig Bronson out of the clink and bring him home. You hide or at least lie low. Follow?"
"Where are you?"
Virginia named an address.
Kingston snapped, "Get that addressquick. Know where it is?"
"Heck," drawled Maddox insolently, "This is the same Albuquerque. Sure I know the address."

The video screen showed a blur, and settled on the showroom of a ladies' apparel shop. Virginia was just hanging up the telephone and Maddox whistled.
"Knockout," he said succinctly.
"She got the works," grinned Kingston. "Thanks to her we can watch."
"Well," said Maddox thoughtfully, "there goes your party with murderous intent, and quite worldly too."

Kingston nodded. "That automatic in her bag isn't an unaccustomed weapon," he said thoughtfully. "And she can and will claim attack. Self defense. . . .

Clad in a printed silk that graced her svelte body caressingly, with the sheerest of hose, the seams of which ran die-true down from the hem of her dress to her sandalshod, tiny feet, Virginia Carlson of Earth Two was well on her way to being the most fetching woman in three worlds. Her hair had been coiffed to perfection and her face had been made up by an expert.

Virginia looked soft and sweet and perfect. She was a sight that made men turn to watch but not to whistle because she radiated some quality that rendered the wolfwhistle a definite insult.

Then, patting the automatic confidently, Virginia turned down along the street once more and headed for the police hospital. Though she could not know it, the plane of focus of the video resonator followed her. Maddox and Kingston were watching her as she went.
"Once this is finished," thought Virginia,
"I shall enjoy living like this!"
Her feet, unaccustomed to dancing, did a pointless little step. Her eyes sparkled, iris wide even in the morning sunshine, for Earth One had no eternal light in the sky to keep a dazzling brightness day and night. She pirouetted once and the sleek silk frock whirled and clung to her legs. As she stopped, the weight of the automatic in her bag hit her and reminded her of a job to be done before all this could be hers.

Bronson must be stopped-somehow!
Virginia knew how.
With a fetching smile on her face Virginia entered the police hospital and asked for the police physician. Doctor Mason came and was a bit set back by the obviously high quality of his caller.
"You're-?"
"Virginia Wells. I'm a friend of Mr. Bronson."
"Indeed? A peculiar case, Miss Wells," he observed gravely.
"Not at all," she said with a smile. "Mr. Bronson, as a hobby, has been writing fiction and we got into an argument as to whether high authority could hear a rather bizarre tale without thinking the story teller was insane. I won."
"So that's it," grunted Doctor Mason. "He sounded sincere enough to me."

Virginia shrugged shapely shoulders and hurled at him the dazzle of her smile. "After all," she said in an entrancing contralto, "he is a successful author even though he doesn't work at it one hundred percent of the time. He should be able to concoct a story that would hold water, and he should be convincing. Why, that's his business!"
"Um."
Mason left the office for a moment and came back with Bronson at his heelsdressed.

VIRGINIA gave Bronson a warning look and then laughed at him. "Like spending the night in the clink, Ed?" she asked brightly.
"No!" he snapped.
"You needn't have," she said with a smile. "All you had to do was tell them the truth. Why, they'd have thrown Orson Welles into jail for the Martian Invasion if he hadn't been famous."

Bronson started. The Orson Welles affair had taken place a long time ago-before either of them were born, in fact. This
rather glorious girl was trying to tell him something.
"Yeah," he drawled, stalling for time.
"All right, so you lost," she told him. "And now, if you don't have to stay here for playing pranks, we can go on home and write it up."
Bronson looked at Mason. Mason shrugged. "What's the pitch?" he asked. "As for me, no-we don't want you though I'd like to have you reprimanded for wasting time."
"Come to think of it, Doctor Mason, how should a man try to tell high authority of some impending form of outrageous doom?" asked Virginia.
"Why-" stammered Doctor Mason, "I-"
"Yes," snapped Bronson angrily. "Tell us!"
"Why?"
"Because," said Virginia, sweetly, "some day someone is really going to come up with invaders from outer space or some other unbelievable little item and, while the big bright brass is psychoanalyzing the discoverer, the invasion or the doom will take place.".
"Why-I'm-"
"Forget it, Mason," said Bronson. Then, because he was completely unaware of his visitor's name or anything else about her save that she knew something that prompted her to ald him, Bronson turned to the girl and held out an elbow.
"May I escort you home, Madame Pompadour?"

Virginia smiled at him with exaggerated enticement. "Only if you want to be Benjamin Franklin, dear."
Doctor Mason stood up and hurled the door open angrily. "Get the devilout of herel" he snapped. He was still looking for a fine vooabulary when they left. Once outside and on the street beyond, Ed Bronson paused.
"Now," he said seriously, "what in the name of eternal sin is this?"
"I had to get you out of there," she said. "I'm glad you are sharp enough to follow suit."
"You can be glad that Mason did not choose to question me about you," snapped Bronson. "I'd have denied you deeply."
"All a part of your tale to convince," she smiled. "I'd have forced it into the openforced Mason to let us meet. Then we'd make out."
"Fine, fine," he said with a bitter grin. "Just tell me what the score is right now."
"I happen to know that you are right," she told him.
"But-"
She nodded. She explained at length that she had been tinkering in her cellar and had come in with something that had permitted her to hear his half of the initial discussion with the girl named Carlson.

She paused at that point and grinned at him. "Just to keep the record clear," she said, "I'm Virginia Wells."
"Well, Miss Wells, I'm grateful. But what does a girl like you find interesting in tinkering in the cellar?"
"You call me Virginia like everybody else," she told him. "As for tinkering in the cellars, when has a woman's appeal anything to do with the liking for science-and furthermore I might even resent the phrase 'like you' that was hurled at me. Do you think anybody that looks like this must necessarily be completely vacant above the ears?"

Bronson smiled. "Not every girl," he said with a sour smile. "But the percentage assays high."

Virginia took a deep breath. Thin though her story was, he'd accepted it for the nonce.
"Where do we go from here?" he asked. "I want to reason this thing out."
Virginia smiled tolerantly. "My equipment isn't very good," she said. "I'd like to see yours."

Bronson smiled. For hours he had been itching to show someone the equipment and this was his chance. He was going to take the opportunity regardless of where the chance came. Virginia had known that too!
The girl tucked a slender hand into the crook of his elbow. "Let's go," she said with a bright smile.

Bronson nodded and they started toward his home.
He walked easily, she thought, neither too fast nor too slowly. His stride seemed to concide with hers so that the periods of out-of-step walking were minimized. They were not nonexistent, for Ed Bronson was a tall, long-legged man and, though Virginia's legs were long and slender, she was not so tall as Ed Bronson by seven inches.
"I might suggest," said Bronson thoughtfully, "that we can do a bit of talking while we collect us some lunch. Me-I'm hungry."

Virginia paused. Visiting a restaurant was another thing that was seldom done on Earth

Two, excepting by those who found it essential. This she viewed as another luxury and she wanted to try it. On the other hand, she had too thin a story prepared regarding her 'experiments' with the space-resonant crystals of radioisotopic phosphor, of her listening to Bronson and his subsequent rescue from the asylum.

Yet-Virginia shrugged slightly-she could probably handle this. Besides, she could learn more of Earth One were she to visit with Bronson.

Virginia nodded and smiled at him. Bronson paused in mid-stride and turned toward a small restaurant he knew. Inwardly he chuckled to himself. It was not always that a woman rescuer, fellow scientist and friendindeed was so very delectable. Bronson was proud to have such a woman in his company.

## CHAPTER VII

## Transfer Arranged

THE automatic computer in the laboratory of atomic physics at the New Mexico University on Earth Three was a vast thing that encompassed many acres of wiring, tubes and memory-storage circuits.

It had been working silently-save for an occasional click-for an hour, which was a pointed commentary on the depth of the problem presented to it, since its usual time of operation was startling in its brevity. It was, without a doubt, the great-great-grandfather of all automatic computers and even it was forced to mull over the problem.

Leader Kingston and Harry Maddox lounged before the massive control board, smoking and watching Virginia and Bronson on a small remote-presentation kinescope.

Finally the machine emitted a series of typewriter-like clicks and a sheet of paper emerged from the slot. It bore a complex equation that Maddox took and pored over.

Kingston waited quietly, for he knew that Maddox was far more capable than he at interpreting the equations. Any interference would interrupt Maddox, ruin his train of thought and require more time in the long run.

Finally Maddox looked up and smiled.
"It seems so," he said.
"There is no definite proof?" demanded Kingston.
"Time and the future are both based upon the laws of probability," replied Maddox. "That these three worlds do exist side by side by side in time is certain-that they might have existed at any time before they did start was a matter of probability. Anything is probable, you know. That we live is a most certain probability, yet that we will continue to live is less certain."
"You're talking in circles," snapped Kingston. "Get to the point!"
"Sorry, I must sound vague. You see, Leader, I've been thinking about this for some time and therefore I am inclined to think over the well-worn thought-trails swiftly and in considerable elision. However, according to this equation, the fact is this. The spacial continuum is strained by the unnatural presence of three congruent pathways through the present time.
"As we know, only the most probable of these will continue to exist. That-unfortu-nately-is Earth One. The Alamogordo experiment on Earth One was the most probable, of course. Obviously Earth Two is destined to die soon, leaving but Earths One and Three.
"But," continued Maddox thoughtfully, "we have posed the problem and the machine here reasons that we are correct."
"Then we need not undergo all the strife in order to survive!"
"Obviously not. Once the pathways through time are no longer strained by multiple existences the strain will cease. In other words, once we-Earth Three-are the only true survivor the strain will cease and there will be no fear of our demise."
"Then all we need do is to eliminate One and Two-and then," Kingston grinned, "Earth Three becomes the only one?"
"Three becomes One," nodded Maddox. "Now-"
"Now we figure out a means of destroying Earth One utterly."
"Simple," said Maddox. "All we need do is to rotate a bit of the core of the Alamogordo Blowup from Earth Two to Earth One."
"Might be less simple than we think," said Kingston. "Remember that the fission train in the earth itself is indigenous to Earth Two. Since it did not happen on Earth One
is there any reason to suppose that the earth of Earth One will support an atomic fire?"

MADDOX shook his head. "When the bomb was tried-I nearly said 'went off' but it didn't here-the temporal strain broke into three paths," said Maddox. "The three important possibilities took placeobviously because there was a huge question as to which of the three possibilities would emerge as the successful outcome of the aff air."
"I'm no believer in the Great Destiny," said Kingston.
"Nor am I," said Maddox. "Yet it is true that the most fit do survive. Obviously, Earth Two and its atomic fire is far from the most fit. Earth One has dropped into a lulled luxury-loving place where the serious facets of life are ignored. They are unprepared to enter any form of strife to survive. We-Earth Three-have developed ourselves and our science greatly and in any strife we are best fitted to survive!"
"All right, it sounds logical," snapped Kingston. "But how do we prove it without arousing suspicion?"
"We can rotate a bit of the core of the Earth Two atomic fire to this earth," said Maddox. "Once we establish the atomicallyinflammablequalities of Earth Three, we can safely assume that Earth One will be the same. Remember," said Maddox with a grin, "on Earth Three the Alamogordo Bomb was a dud-it didn't even fire!"
"And then what?" sneered Kingston. "It seems to me that your suggestion is the beginning of the end."
"Not at all. Once we establish the possibility beyond a doubt, we can so very easily
rotate the hunk of atomic fire back into Earth Two again."

Kingston thought for a moment. Then he nodded. "We must move lightning fast," he said sharply. "Because I will hazard a bet that Earth Two considered the idea of getting rid of their atomic fire by sending it through the space resonator. And rejected it because their own Earth Two was badly treated by the original fire. After all, there's no use in staying with a partly ruined, semi-radioactive Earth Two when Earth One, complete and unharmed, lies like a ripe apple for them to pluck."

Maddox nodded. "It will have to be quick," he said. "For either one of them is quite capable of turning the stuff this way once they suspect."

Kingston turned to the kinescope screen and scowled at Virginia and Bronson.
"There," he said, "are two of the four or five people who have within their grasp the truth of the matter-and they are the two who have sufficient imagination to reason it out!"
"And once she kills him that will leave only her!"

Maddox nodded idly and began to set up equipment, saying, "No time like the present."
"For what?"
"I'm interested in knowing whether the atomic fire will burn Earth Three as well as Earth Two."
Kingston shrugged. "Y'know," he said quietly, "if it does ruin Earth Three nothing says that you and I can't pass over ourselves anyway."

Maddox smiled. "Indubitably," he agreed
[Turn page]
dryly. It was quite obvious that Leader Kingston had given him nothing new in ideas.

UNLIKE the slow space resonator of Earth Two, the ones used on Earth Three went with lightning swiftness. They were smaller, more efficient, showed a deeper grasp of the art and the principles involved. Maddox picked his collection of equipment up and headed for the door.
"What are you going to use for a focal volume?" demanded Kingston. "You have no focal point."
"Won't need one," smiled Maddox. "That's a true atomic flame. As in the sun there will be minute traces of all elements contained therein and all we need is a trace. For like the sun, Earth Two's atomic flame is both building up and tearing down all elements possible. Come on-I'll prove my point."
For a brief time, Harry Maddox drove like a maniac through the air in his atom-powered speedster. Leaving behind it the whistling scream of its supersonic passage from Albuquerque to Alamogordo, the fleet craft made the passage in minutes. At the site of the original, Maddox landed.
There on the desert was the steel tower that had held the Alamogordo Bomb before its trial. On Earth One there was but a shallow depression of broken green-glazed sand. On Earth Two there burned a pillar of atomic fire for miles in radius from this very spot. Here Maddox set up his space resonator.
Then, sensibly, he urged Kingston back into the speedster and raced away, ten, fifteen miles. Then in his speedster Maddox pressed a button.
Behind them on the desert a burst of intolerable light, like a million suns compressed into a minute sphere, cast its instantaneous glare across the face of the earth. Like an expanding hemisphere of pure sunflame, it dinned against the very substance of space and hurled its terrible energy outward.

Thunder came then and the still-intolerably bright explosion flashed in multicolored burgts as the shock wave started to rise. Up and up and up into the stratosphere rose the towering ice-cap to roll into a cauliflower shape.

And then up through this bursting-white cloud there darted another pillar of sheer flame-energy, to rise above the first and to
go on up into the very upper reaches of the atmosphere.

Standing aghast, Kingston and Maddox watched the scene with horror. Minutes passed before they could speak, and then it was with bitter fear.

Maddox pointed to the ground below the towering pillar of cooling hell. There was a sunlike flame there, burning more brightly by the second. The ground rumbled faintly and, upon the ground at their feet, two shadows were cast which added to the complete unearthliness of the scene.
"Now?" demanded Kingston.
"Not now," growled Maddox angrily. "Our equipment was utterly destroyed in that blast."
"Then we lost?"
"No. All we need do is to return and prepare a radio-controlled speedster to carry another space resonator into the near-scene. Then we can send that pillar of hell back where it came from."
"Think you'll have any trouble?" worried Kingston.
"Nope," said Maddox. "I've been thinking about this for some time. We can do it!"
"Then how are we going to transfer a good bit of that flame to Earth One?"
"I won't mind going over," said Maddox. "I'll see to it that Earth One gets a goodly dose. In fact, I think it might be a good idea to set up a relay system to bring bits of it through and send to other parts of the earth at one time. We can set atomic fires all over Earth One within a matter of seconds."
"Might restart several on Earth Two also," suggested Kingston. "Nothing like speeding things up a blt."
Maddox nodded, but there was a worried frown on his face. "There's one thing I don't relish," he said. "So far as we know, the only bit of radioisotopic phosphor containing the resonant element lies in the laboratory of Ed Bronson on Earth One."
"That's your only doorway?"
"To Earth One, yes."
"Then-"
"Then we return to our vantage point and watch. Sooner or later they will leave that set-up unguarded and we can get through to place other focal elements at a safer place on Earth One."
"Well," smiled Kingston, "once Virginia Carlson gets rid of Ed Bronson they must
sooner or later leave that place unguarded and we can break in. Let's go and wait."
"And also prepare the drone to return that pillar of hell back to Earth Two." said Maddox with a bit of mild concern.

## CHAPTER VIII

Halfway Mark

UNMINDFUL of his danger-both immediate and future-Ed Bronson sat and watched Virginia with admiration. Their initial talk had been sketchy. All Virginia knew was that she had been working on equipment similar to his and had heard the same things he had-including him.

Her information was less complete than his, for Virginia was not equipped to tinker up a complete set of filters to tune out the interferences, so she said. Only Bronson's voice came through clearly enough to be understood. Yet she was aware of the danger and felt that she must help.

And that was that so far as she was concerned. As to what track to follow, Virginia professed ignorance. She suggested that they eat and then go to Bronson's laboratory and work on the stuff.
"And what do we do about them?" he asked.

Virgina blinked. "You're certain it was they?"
"He told me so."
"Then there's just one."
"There may be more," objected Bronson. "Perhaps we should forget my place and go to work on yours."

Virginia blinked inwardly at that one. Naturally, Virginia could not take him to her place for she had none. There had to be some way.
"I suggest that you and I go in very quietly," she said. "If the house is infested we'll go to my place. If it is clear, even temporarily, we can go in and steal the phosphor."
"Better," grinned Bronson. "We can conceal it in a steel safe. I have a hunch they can't get through it then."
"I wouldn't know," said Virginia. She did know, however, that Peter Moray would not
be in evidence since she was bringing Bronson back with her. "But you have a good idea. It'll do them a lot of good to try coming through if they end up in a steel box.
"Besides," she said thoughtfully, "it is better to try. I'd hate to think of them coming through unguarded. We owe it to the earth to try and stop them."
"That we do," nodded Bronson. Then he ceased to think about it since it had been settled. He preferred to watch Virginia.

She was a beautiful girl-one of the most beautiful women that Bronson had ever seen. That alone won his admiration. But what brought his real commendation was her attitude. Bronson had known other beautiful women before and most of them were inclined towards a selfish narcissism because of the round of admiration they got from every male.

This gave them an egotistical attitude that repelled Bronson, for he knew with some disdain that their attitude was born of the actions of his own sex.
Virginia had none of this false sophistication. She was readily and honestly pleased with things as they were and with Bronson's offerings. To add to that Virginia was clever and intelligent and could, without straining, discuss several subjects that the average beauty wouldn't bother to strain her vapid mind on.

Bronson could not know it, of course, but Virginia's attitude was mostly naiveté. Seldom before had she spent an hour in luxurious surroundings with nothing to think about or to do but relax and enjoy herself. Not that Virginia had forgotten her basic job-but at least here was the offering of relaxation in an atmosphere completely devoid of the constant gnawing fear.

The light in the sky was not there.
Then, too, Virginia was capable of pigeonholing her mind. Though she intended to eliminate this man as a factor in the safety of her world's people she saw no reason why she should not enjoy herself first. Looking about her in the restaurant she saw many other people enjoying life. This itself was unlike Earth Two and it offered Virginia a point for jealous desire. She wanted this kind of life-without-fear. And it was within her grasp!

I
N her world many were mutants that repelled the mind. Here there were none.

The man opposite her, who toyed with the silverware idly was a fine specimen of humanity. The waiter, the cashier, the hatcheck girl, the major-domo, the customersall were whole and healthy.

Virginia looked about her at the thickly peopled restaurant and mentally compared it with a place in her own world. Idly she replaced the elderly gentleman at the table opposite with a gnarled, seven fingered monster-and the boy-girl couple beyond with a pair of uglinesses.

The waiter instead of being well-dressed and polite was misshapen and clad in remnants of a once-great civilization. Starch wasted on a shirt, as well as the time wasted in preparing it, was unthought-of in Earth Two. Few of the men in Earth Two would look so polished and at ease in the formal trappings.

Bronson made motions to leave and Virginia arose to follow. From his pocket he took money instead of a ration card and he left a generous tip for the walter. A smiling doorman opened the portal for them.

Once on the street Virginia was again impressed by the people. Then there were the theatre on the corner, the stores and the shops selling anything and everything that men and women would buy.

The automatic bumped Virgina's hip as her bag swung, and the contact hurt-more than physically.

Walking beside this tall man Virginia considered the situation. In her bag was the means of replacing the people she saw in this street with a high percentage of misshapen bodies of her own world. To-eliminate this scene of physical health and mental good-will with the warped bodies and minds of her own world.

Virgina saw her own reflection in a shop window. She was shapely and well-dressed. She knew that without egotism-it was obvious fact. She was more like this world-fitted better into this scene than into the world on which she had been born.

An age-old urge rose in her. She had shied away from marriage because of fear and distaste. Too many of her friends she had seen in mental agony because of mutant offspring. Now she was presented with at least an opportunity of a life that would be normal. What had she on Earth Two but unpleasant memories for all of her life?

Perhaps it seems a sudden ohange. Yet a mind suddenly shown a way toward happiness will often swing as swift as a pendulum from one attitude to the opposite. Perhaps the only reason that Virginia had not followed many of Earth Two's people into the madness of fear was because she had been born to the insoluble threat of the Alamogordo Blowup and had never been forced to change from freedom to fear.

Many another on Earth Two had seen the eternal flame and had gone mad, knowing its threat. Virginia, born after it started, had never known anything else. So now Virginia viewed a world built like her own, but one devoid of fear and populated heavily with healthy, happy people.

Why go back? Why change this? She could blend very well with this environment. Her woman's instinct told her that she could and by very little trying.

There was but one great fear. This man who walked beside her knew the facts of Earth Two. He also stood to learn about her. It presented her with a quandary. To make her future secure he must be placed in a position never to learn the truth. On the other hand she needed his aid to forestall the invasion from Earth Two if she were to enjoy the future of Earth One as she now saw it.

Virginia wondered whether she could work with Ed Bronson long enough to give him the particulars of the space-resonant techniques -and still keep him in the dark regarding her own part in it. Once the threat of invasion was gone there was no doubt in Virginia's mind that she could lose herself here on Earth One.

In fact, the proper thing to do was just that-tell him the truth and she would be forever suspect.

NHEN there was the other problem. She was supposed to have an apartment, a house or something equipped with a basement in which to work. He'd be wanting to see that sooner or later. How to forestall him on that required thinking.

Once he knew that it required the presence of the proper elements in the space-resonant series to effect the transfer of material, he would demand the opportunity of sealing up her bit of the stuff in order to forestall the invasion of the vanguard from Earth Two.

From a technical standpoint, Virginia knew that the operation of the space-resonant science required the presence of the spaceresonant elements. Even though she knew nothing of Earth Three and its highly advanced techniques which permitted the operation of a view-and-voice-operated mechanism without the presence of the elements in the area of transmission, Virginia was correct in her assumption that no passage from one time-zone to the other was possible without a critical mass of the ultra-rare transuranic elements in the receptor-zone.

Having used the technique for many years Virginia and the rest in Earth Two could be certain that the only critical mass of these rare elements on Earth One was in Ed Bronson's laboratory.

So, the first thing was to protect herself, to isolate herself on Earth One and to seal up forever the passageway. All Virginia had to do was to break up Ed Bronson's mass into subcritical sizes-and then to keep all other discrete bits of the space-resonant elements from being collected for a period that surpassed the possible time required for the final death of the ill-fated temporal division-the end of Earth Two.

Impulsively, Virgina opened her bag and handed the automatic to Bronson.
"Here," she whispered, "this may help-if they're still here!"

It was hours later. Bronson's re-entry into his home was careful and stealthy but unproductive, for Peter Moray had gone back to Earth Two to await developments. Virginia knew this and was prepared for the lack of population in the Bronson home. Once the place was known to be free of invaders Bronson relaxed.
"Me," he said with a yawn, "I'm tired."
"I don't suppose you got much sleep last night," smiled Virginia.
"Darned little," he agreed. "And I'll get less until we figure out something to do with this equipment of mine. Obviously it does not require energization to permit the effect."
"Why not seal the thing in a metal case of some sort?" suggested Virginia.
"Think it might work?"
"Maybe. At best, if you shield it well and keep it canned up, you can be certain that anybody that comes through will emerge in a dark, confined place."
"Not necessarily," said Bronson. "Radio
waves often disregard things like shields and closed rooms. And, if I recall correctly, that feller who came through and clipped me was parked out on the middle of the floor some ten feet from the crystal."
"If you're tired," suggested Virginia, "why not take it easy? You take a snooze and r'll keep watch. You'll think better once you've had a bit of rest."
"But what will you do if-"
Virginia smiled. She went to Bronson and touched his hip pocket with the back of her hand. Ed nodded and took the automatic out of the hip pocket and handed it to her.
"I can't cover eight shots with the ace of spades," she said, hefting the gun, "but I'd not miss an invader."
"I'd like to clip a few of them myself," grunted Bronson. "First I'm up all night. Then I'm clipped by one of them after only a short few hours sleep; then the trip to the asylum, and now home. Yes, Virginia, I've had all too little sleep. You'll be all right?"
"Definitely," she told him. "From here on in, I'm unafraid-and in high confidence."
"Wake me in three hours," he told her. She nodded.
He left, heading toward the bedroom. Virginia found a book and read it quietly, keeping a weather eye on the space resonant crystal in the experimental kinescope set-up. A half hour later, Virgina put down her book and tiptoed into Branson's bedroom. He was sprawled on his back in the deepest of slumber.

Virginia went back to his laboratory and began to work on his gear. It was late afternoon when she finished, which was quick enough considering what Virginia had accomplished. It was her field of science, this space-resonant technique, and Ed Bronson's laboratory was rather complete.

So simple, Virginia's plan. Setting a timer to reverse the equipment after a pre-calculated time, Virginia composed herself on a chair and waited. Again, her body faded bit by bit as she passed, molecule by molecule, from Ed Bronson's laboratory. At a short interval beyond the halfway point where Virginia's body sank into the floor, the machine ceased its operation.
Wraithlike, half of her in each world, Virginia was physically powerless. But she knew that her equipment was working. The window of Ed Bronson's laboratory bad a

## strange appearance.

It was not quite like the mixed-image Impression received when viewing different scenes simultaneously with the separate eyes. It was more like viewing through a stereoscope, with one side taken in bright sunlight and highly illuminated while the other photo had been taken by moonlight. Also there had been years between the taking of the two because things were not exactly the same.

Of course, Virginia was not viewing one scene with each eye. The process of transmission was not a passage similar to walking through the door. The molecular transfer took place at random, a molecule from here, a molecule from there.

So Virginia viewed the scene in a truly indescribable state. Each eye saw the same scenes-a mixed, foggy montage in poor register.

But the illumination in the afternoon sky was unmistakable as Virginia looked at the window that existed simultaneously in two woylds. She smiled to herself as the equipment in Ed Bronson's laboratory reversed automatically and started to return her to Earth One.

Virginia had been halfway home. And her plan was halfway complete!

## CHAPTER IX

## Ill Wind

T$N$ the sky, high, high up-a stubbywinged drone circled above Albuquerque thrice. Then it streaked away from the oity and headed toward Alamogordo. The pillar of fire was vicious and intolerably bright and it silhouetted the fleet dronethough no one could stand to watch the scene, regardless of the thickness of his eyeglasses.

To all intents and purposes the drone vanished.

But on the viewscreen in Harry Maddox's laboratory the pillar of fire grew, expanded into the entire screen, covered it and made steering ambiguous until Maddox dropped the nose of the fleet little craft so that the fleld of view included the base of the atomic flame.

The drone arrowed on and on and then came to a machine-made landing a few thousand feet from the base of the flame. Maddox worked swiftly now, for the heat of that devilish fire would ruin the equipment in all too short a time. The equipment went to work.

Then, like the snuffing of a candle flame, the scene went dark. The pillar of fire disappeared and there was a thunderous roar as miles of tortured air raced in to fill the vacuum created by the sudden absence of intolerable heat.
The thunderings shook the city of Albuquerque and the buildings rattled.
In one of the homes Ed Bronson was shaken into wakefulness. He was lying on the floor which was hard though not cold.
He awoke dully. He felt the floor and had a quick impression of having fallen from bed. Grinning sheepishly, Ed Bronson stood up and turned. There was no bed!

The thunderings diminshed slowly and Bronson shook his head in wonder. It had not been thunderstorm weather earlier this afternoon. But there was no bed!
"Virginia!" he called, running from the room.
His house was empty of people. In fact his house was refurnished completely. That fact he accepted dully, wondering what had happened and why. It was too great a concept for him to grasp at once. He stared dully at the strange rugs, chairs, appointments. He went into his laboratory-

And found a complete nursery. In one corner was a crib but the infant was missing. It had been used recently, for the bedding was warm-and a bit damp.

Bronson's mind whirled. Strange-strange. But not too strange, considering. If they were capable of sending some of their cohorts through the veil that separated the two worlds, it was equally possible for them to reach forth and grab someone from the other world.

Bronson cursed angrily.
He left the house quickly because he knew that, regardless of how he had come here, he was an interloper. Bronson assumed that any of the enemy who might be reaching for him-probably to prevent his forestalling of their efforts-would not merely slip him through the barrier and let him run looee.

Whether something had gone awry in their
transmission plans he did not know, but he guessed that something had interfered because no man attempting to grab an enemy would do other than to grab quickly and keep him under supervision.

So Bronson left the house quickly.
He was an interloper-and, though helpless to do anything but run, he was infinitely better off with his freedom than in capture, jail or, more probably, death.

Killing him on his own world would bring about the rather complex problem of disposing of the corpse. While this is possible, it is difficult to dispose of such a high degree of absolute contrabrand in a civilization with which you are not over-familiar. So some lucky accident had brought Bronson into this ill-fated Earth Two in a residence instead of the laboratory or military establishments of the imminent invaders.

AUTSIDE, Bronson knew that something was wrong. He wondered what it was. It was vague, something that was missing from a mere sketchy description but something rather important from a secondary$n$ was it primary-viewpoint, something that did not jell.
It was late afternoon. The sun was setting in the west. But there was no pillar of atomic fire in the sky!
The Miss Carlson of Earth Two had said that all of Albuquerque was illuminated by the vastness of the pillar of incandescent flame that reached from horizon to the sky. Where in the name of thunder-
The whirling madness spiraled in Bronson's mind with the never-ending round of who, what, why, when and where. And driving that engine of madness was the ever-present and ever-growing fear that the earth he knew was threatened with death-while he could do nothing but stand by and watch it die.

And join it . . . .
The light disappeared like the snuffing of a candle, and Maddox turned to Kingston with a grim smile. "That's that," he said.

Kingston nodded affably. "Now all we have to do is to complete our plans."

Maddox shook his head. "Remember that the stuff in Bronson's laboratory is the only supercritical mass on Earth One. We can see through, of course, but without that focal point we cannot cross over." He turned and left the drone-control room, walking down
the corridor towards the other laboratory with Kingston beside him. Kingston was silent for a moment.

Then he nodded in self-satisfaction. "I'll send through a corps of guards to protect it until we need it."
"Better yet," said Maddox, "send through a couple of tectnicians to separate it into subcritical masses until we need it. Then we can prevent Earth Two from crossing."

They turned the corner of the hallway and entered the orginial laboratory. As they did so, Kingston caught the sight of the viewscreen and stopped short, his jaw dropping. On the screen was the view of Bronson's laboratory. Virginia was sitting idly in a chair watching the equipment.

Her attitude was not one of complete relaxation, nor was it one of deep intent. Maddox and Kingston knew at once that Virginia was waiting while the equipment ran automatically.
Maddox leaped to the controls of his viewer and followed the cone of energy from the cirystal to Ed Bronson's bedroom. There be saw the reason for the work. Ed Bronson's wraithlike body was in the last stages of its disappearance from Earth One.
"So," snapped Maddox. "That takes care of him!"
"Rather clever, too," said Kingston, admiringly. "That's getting rid of a body without fuss or bother or corpus delicti arising somewhere to confront- My Lord! What's she doing?"

Virginia, having seen the equipment come to its end of operation, had run into the bedroom to check on whether Bronson had been transmitted. Maddox had followed her back to Bronson's laboratory and Virginia was opening the tube. She removed the crystalline mass and carried it to the toolbench. Here she placed it on a two-foot slab of mild steel used as a surface plate and was reaching for a hammer with her right hand while her left hand groped for the cold chisel.

Kingston's question was hypothetical. Both men knew what Virginia was about to do.
"Quick!" snapped Kingston. "Stop her!"
"Check!" grunted Maddox, his hands leaping across the control panel.

From the crystal between chisel and surface plate came the beam of invisible energy that enfolded Virginia in its grasp. Unlike the slow process of her own machines,
the highly efficient techniques of Earth Three effected the transfer in a matter of milliseconds.

Virginia felt the wrench of a twisted spatial continuum, felt the change as her body adjusted in level and knew briefly that somehow something had gone terribly wrong. The scene before her eyes changed like a flashover in a moving picture and she faced Maddox and Kingston.
"No you don't," said Kingston roughly.
It was quite wrong. Her trained mind told her that in an instant. Her first brief fear had been that someone from her own world had interrupted her machinations and had grabbed her to prevent the completion of her plans. That would have been quite logical.

But the time interval had been too short. That proved to Virgina that it was not of her own world, for had there been any acceleration in the transfer process, she would have been notified. It was-to her logical mindquite improbable that such an advance could have been made in the space-resonant techniques in the course of the few short hours during which she had been absent from her own laboratory.

Therefore, she reasoned, there was more to this than met the eye.

$\pm$HE recoiled before the men. Maddox smiled sourly at her and Kingston gloated. "Going to reduce that crystal so that no one could follow you," said Kingston.
"Where-"
Kingston smiled with self-gratification. He felt grandiose enough to gloat a bit more. "This," he said expansively, "is what we term Earth Three."
"Three?" she echoed hollowly.
"Some very brilliant people," chuckled Kingston, "reasoned that there was the possibility of two outcomes to Alomogordo. But they never even considered the possibility of the bomb failing completely. This is the world where the bomb failed."
"Failed!" said Virgina, completely overwhelmed with the implications. Her tone was hollow, almost a psychopathic parroting of Kingston's words. "Failed but . . . ." she was incoherent.

Kingston smiled again. "After all," he said, "the Alamogordo Test was made to determine whether or not the bomb would actually work. Even the finest brains of the day were
not certain-and there was the possibility of failure."
"But-"
"Here we are," said Kingston simply.
"But if there was failure?" said Virginia falteringly, but with gaining confidence. "how is it that you are so very well advanced?"
"The failure of the bomb was temporary. A later model worked. But in our world science is completely free and untrammeled. Unlike your world, Virginia Carlson, where science is deeply regulated and directed at one and only one idea, our science knows neither bonds nor interference.
"If you ever get outside in our world you will see atomic power in its fullest use. You will see advances made that are and will always be impossible in any system where a man or a group of men can direct in any way the course of science."

Virginia nodded glumly. "I know," she said. "I've always known of the openings into fields of science that might lead to great things but they were closed because of the necessity of pursuing the one idea toward our future."

Kingston nodded. He admitted the unhappy fact but his own position was none too certain-or had not been until recently.
"If your world is so excellent," asked Virginia bitterly, "why . . .?"
"The time is approaching when only one future can remain," said Kingston. "No one but an utter egomaniac would consider that the entire universe is regulated for the benefit of mankind. We have yet to make a real attempt to reach the other planets. Have you ever considered the rather impossible proportions of this temporal fission? I doubt it.
"Is, for instance, there a complete universe for each of the time-trails? Or if Earth One and Earth Three both sent rockets to Venus would they meet beoause Venus was common to both time streams? Think of the energy required to separate a complete universe and ask yourself whether you think it possible."
"Energy has little to do with it," replied Virginia. "Who knows the functioning of the thing we call time--possibly for the want of a better word. Who knows why we have trepidation? Certainly the energy required to cause a planet to falter in its orbit is not truly expended but trepidation is
caused by something that seems to require little or no energy."
"We're far from the original premise," said Kingston. "We may never know whether or not the temporal paths are merely local or widespread. It is not a matter of organic versus inorganic matter, for neither is controlled nor directed from any of the other streams of time.
"Were this not so, every time a workman lays a brick on Earth One the same brick would move and be cemented in situ on the other two worlds. And a car on the street might have an accident with a car common to all three worlds but driven only by a driver on Earth One.
"The point is," continued Kingston, "that the time is coming when this triple existence must cease. Again it is the old principle of the survival of the fittest. I am not a firm believer in a god, either benevolent or vicious. Yet there is-or was-some agency that effected this split because it was uncertain as to outcome."
"What hope could there have been for Earth Two?" complained Virginia bitterly.
"Who knows?" replied Kingston. "There might have emerged from her bitter necessity a solution of a lot of ills. Certainly I know that, with the entire world working against that fatal menace, few differences of ideology remain. In earth Two, Virginia, the lion and the lamb have lain together.
"In fact," grinned Kingston, "you might be closer to allegory to state that the eagle and the bear have a lot in comon with lions, dragons and others. It is," he admitted rather unhappily, "a factor that we, here, have not been able to accomplish."
"An ill wind-." said Virginia bitterly.
"True," nodded Kingston. "But the fact
remains that the three time paths diverged because of some uncertainty. These same time paths must ultimately come to one ending. We do not know the future-no one does-but this we do know- That world which has the best factor of survival will emerge as the one and only Earth.
"We," said Kingston proudly, "have the best technical perfection, so in any strife we must win. Therefore we are the ones to survive and we are working toward that end. That is why we grabbed you. Your world is doomed. We must ensure the doom of Earth One so that Earth Three is the only one left."

$\mathbf{k}$INGSTON turned to Maddox. "I think we might be wise to collect Ed Bronson too," he said. "No use letting him run free. Find him and bring him through too."

Maddox nodded and went to work on the controls, setting the dial that determined the depth of penetration to Earth Two. He worked rapidly, sweeping the house that was cojacent with the house on Earth One.
"Heck!" snapped Kingston. "He can't have gone very far. Of course she sent him to her chums. Find them!"

Maddox nodded and located Virginia's laboratory with ease. Moray and Cauldron were there, working on the gear, but obviously getting nowhere. Kingston shrugged. "Cover every place they might conceal Bronson," he directed.
To Virginia, he added, "It is most convenient that Earth Three lies on the other side of Earth One from Earth Two. Were this not so, the fumbling of your friends to penetrate the barrier between the streams of time might cause them to stumble on us."
"Why can't they get through to One?"
[Turn page]

asked the girl.
Kingston smiled. "Within the hour," he said, "four keys will unlock four safety deposit boxes in four different banks in Albuquerque. Each-box contains one suberitical mass of space-resonant elements. My men are finishing the job you started, but this time the key to invasion lies in my hands!" He turned to Maddox, who was fumbling with the controls. "Find him yet?" he demanded.
"No," grumbled Maddox.
Kingston turned to Virginia. "You want to live," he told her in a very matter-of-fact voice, "and therefore it is to your interest to see that we do not permit Bronson to harm our plans. Where is he?"
"I don't know," said the girl. "I merely sent him through."
"You are a brazen little traitor," snapped Kingston. "I believe you! You merely sent him through, you cared not where."

Maddox spoke up. "That equipment she flanged up isn't the most accurate," he said. "But I've covered the entire neighborhood. You know, the closest mass of focal elements lies across the street, in Earth Two, in the laboratory of Virginia Carlson. Therefore, lacking direction and precision, she'd have sent him through to the focal zone of her own gear."

Virginia gasped. Partially blinded as she had been, half-aware of the duplicity of her surroundings, close in the near-paralytic grip of the transmission equipment, Virginia had retained sufficient cognizance to know most definitely that when she looked through the veil, she had been looking into a room that parallelled Bronson's laboratory in shape, size and window-placement.

It was not similar to her own. In her haste she had paid it little attention. Her only thought had been to dispose of the man. Knowing that there were no other critical masses on Earth One, she had felt that anywhere he went was elsewhere.

The implication was clear enough. She had sent Ed Bronson into Earth Three, a simple mistake due to the fact that Two and Three were situated almost equally distant and on opposite sides of Earth One. Obviously, the crude equipment had selected the nearer critical mass-which had been on Earth Three in a cojacent house and not through to Earth Two and across the street to Vir-
ginia's own laboratory.
Bronson, then, was on Earth Three, somewhere.

## CHAPTER X

## Counterfeit

IRONSON found that the streets of the city were teeming with people which was not what he had expected from his brief talk with Miss Carlson of Earth Two. Bronson was absolutely certain that this was not Earth Two at all, for it seemed unlike a world teetering on the brink of death-even ignoring the main clincher of the pillar of atomic fire mentioned by La Carlson, there was that vast and more-than-obvious difference.

Bronson shook his head in wonder. This was not unlike his own world, yet there were subtle differences--subtle differences observable at first glance, but becoming bold and glaring differences as Bronson became more familiar with the street down which he walked.

A bus went past-and did not leave a wake of evil-smelling pale blue exhaust. A store on the corner advertised cigarette lighters which bore the name Irhinium. Bronson knew of most of the cigarette lighter companies by name and none of them bore such a name. He looked more carefully and noted that certain vague references to Irhinium indicated that it was a trade name based upon the motive power of the things.

In this strange world to which he had been hurled, did they-by the Great Harry-use atomic power to light their cigarettes?

Bronson's mind, of course, was overwhelmed by the suddenness of events and its natural inability to accept such a vast conglomeration of new concepts at the same time. It merely watched, saw, cataloged. Anything outrageous would be given the same consideration as something quite normal in Bronson's nervous state of complete wonder. His mental state bordered on shock.

Noiselessly the traffic moved, noiselessly and without odor. Dress and appointment were brilliant-and entirely new. The overhead wires of Ed Bronson's world were gone,
as were the poles that bore them. Nor were there street lights. Streetcars plied their routes with a minimum of thundering racket but there was neither trolley above nor slot in the street below.

Bronson paused before a large toy shop and watched a man manipulating an electric train. The miniature train had all the maneuverability of a real train because of the multiplicity of controls under the fingers of the man in the window. Beside the train was a large box containing cubic bits of metal and non-metal.

The explanation on the box said that the contents would build a miniature fissionreacting pile that worked but which employed Kenium metal instead of uranium since the use of the latter was dangerous, requiring ton upon ton of fissionable material as well as a moderator.

That was the clincher.
Bronson's mind cleared once the facts were driven home. He was not on Earth Two. He was most certainly not on Earth One.
But Ed Bronson's mind leaped to the foregone conclusion with simple reasoning. Earth One, Earth Two-and Earth Three, where the third possibility had taken place at Alamogordo, on July sixteenth, 1945. This was where the bomb had fizzled-and where, because of that, all forms of atomic research went on without regulation.

Not one world, not two worlds, but three!
Well, there was a perfect way to check this. Bronson knew where the library was, had used it often. It might still be there, for the one in Earth One had been erected in-ahhe did not recall the date but it was something like MDCCCLXXXVI.

He turned the corner and walked down the proper street and, after turning the second corner, Bronson saw it-in the same address and in the same building. He wasted no time in finding the newspaper files.

JULY sixteenth, 1945, was uninformative. Bronson wondered what the same paper printed in his own world said on that date but guessed that this paper, a morning daily, might have been composed and on the press at the time of the affair-if it had not been already printed.

Of security angles for the era he studied, Bronson knew only the mention made in history and tales spun by his father and
cronies, who had lived and worked at that time. So Bronson accepted the fact that security might well have suppressed in both worlds-or even all three-any traces of the Alamogordo Experiment for some time to come.

He turned to the following day, July seventeen, 1945, and found nothing. On the eighteenth, Bronson saw nothing truly informative but there was an item printed as recorded from Radio Tokyo in which it was claimed that the United States had asked for representatives of the Japanese Government to come to America under a flag of truce. This was construed to mean that the United States was considering surrender.

Nothing was visible for several issues after that. Then a vast headline-PEACEshouted across the page and on page two of the paper, was a brief explanation that the representatives had returned to Japan. A columnist was demanding an answer to what and why the mystery.

Another account from Radio Tokyo mentioned that, in a spirit of humanity, Japan had surrendered rather than loose upon the entire world a weapon so terrible as the representatives had been shown.

Bronson nodded vaguely. The trail was getting intelligible. He at least knew nothing of this latter fact. He thumbed his way through the paper to the date of the Hiroshima Bomb and found nothing worthy of mention. Nagasaki was not mentioned a week or so later and Bronson, none too clear of his dates, covered days before and after his approximation just to be certain.

He pored through the paper and found many references to the Manhattan Project, including one full newspaper, on the general lines of what he recalled of the Smyth Report.

A month later a Washington columnist printed a scoop. There had been a test of an atom bomb at Alamogordo, he claimed, and the bomb had failed to function.
"Ah," said Bronson aloud.
What came next? How the two worlds had become so socially and technically different was something to be studied at a later date. For the present Bronson felt that it was the time to start thinking about action.

He left the library and walked down the street thoughtfully. Here the bomb had failed, here-and automatically Ed Bronson
cataloged the place as Earth Three-science was unfettered.

So, he reasoned along two lines simultaneously, the transmission of things from one plane to the other required the use of the radioisotopic phosphor-Bronson did not know the conglomeration of transuranic elements comprised an entire rare element group known as the space-resonant series and so called them by the name he had known them-and since this was so, he would be forced to investigate.

Also, since Earth Three had no apparent regulation on scientific research, it would probably be easy to obtain enough to go to work. The unfortunate part of it was that his rather extensive bank account was deposited in the First National Bank. Though it was situated within three blocks of this very spot, its officers would view his very solid checks as so much illegal paper.

He smiled wryly.
So here he was, isolated an an obviously alien world, with the weight of his own earth on his shoulders, quite incapable of more than scratching the surface.

Lost-completely lost-in the troubled thought, Ed Bronson's trained hands, by sheer reflex, dipped into his pocket for a cigarette. The hands, finding none, notified the locomotor areas of his brain, which, operating on sheer habit and reflex, sent a message to the eyes.

The eyes looked around, though what they scanned made no impression on the more conscious sections of Bronson's mind. They caught what was wanted and the automatic process went on-the information went back to the habit-section, directions went to the muscles and Bronson walked towards the drug-store in absolutely the same state of coma as the proverbial absent-minded professor.

Too deeply engrossed in his thoughts to pay attention to the automatic items, Ed Bronson's brain caused his voice to murmur a cigarette-brand name. The cigarette came, and Bronson's right hand dipped into his pocket and dropped a twenty-dollar bill on the counter.

The clerk looked at it and mumbled, "Have to get change, mister."

GAIN unconsciously, Bronson's head nodded.

Had anything evolved that was out of the normal routine, Bronson would have been forced to take notice. But this was like driving an automobile or riding a bicycle. It required no conscious effort so long as nothing demanded decision.

Nothing demanded decision. The decision was made for him. He felt a heavy hand on his shoulder and felt it turn him so that he faced- His mind came back to his surroundings like a snapped rubber band. A policeman!
"What's the idea?" demanded the latter.
"What idea?" asked Bronson.
"Counterfeit money."
"That isn't it-"
The policeman laughed nastily. "Looks perfect," he admitted. "But I might point out that E. Thomas Froman is not the secretary of the United States Treasury."
"Huh?" grunted Bronson.
"A perfect counterfeit excepting that the wrong fellow signed it," snapped the policeman. "What's the idea, fellow? I take it you don't mind counterfeiting but dislike being jailed for forgery?"
"I don't get it."
"You will," smiled the policeman with great self-satisfaction. "Come along. Counterfeit money is a bad thing to have in your possession."

Bronson cursed himself. He had even more.
Anticipating distastefully his second visit to the police station in as many days, Ed Bronson emerged from the squad car behind the policeman. This was one of the basic differences. This was not by far the same place he had been in before and the seriousness of his position made Ed Bronson smile whimsically.

If not the only one ever to do it, he believed himself at least the first man ever to be jailed in two jails on two worlds-or on one world separated by only time. It was "doing time" with a vengeance!

With the policeman following him, Bronson went into the building, upstairs and into a room filled with scientific equipment. His quick mind decided that, on this world, advances had also been made in criminology. But he was forced to wait and see, for none of the equipment made sense to Bronson. What the police did with it, how it separated criminal from citizen, Bronson had no idea.
"-passed a twenty dollar bill signed by
E. Thomas Froman as Secretary of the United States Treasury," said the policeman.
"Clever of you, officer."
"Thank you. The shopkeeper merely assumed it to be counterfeit. I knew better."
"This, officer, is Ed Bronson-of Earth One," said Kingston.

Bronson Jumped visibly. They knew him! Then he realized that they must certainly know him because they had kidnaped him through the barrier in time. This, of course, was erroneous, for it had been Virginia's machinations that had brought him here. On the other hand, the error made little difference so far as its end-result went, for it was true that they knew him and also that they were quite glad to have him under their thumbs.
"So you're the birds who grabbed me?" he said brashly.

KINGSTON grinned wolfishly. He saw little reason for letting Bronson know that another had accomplished what he himself had wanted.
"We're glad to see you," said Kingston.
"No doubt," snapped Bronson. "The pleasure is all yours."
"Don't be petty," laughed Kingston.
Bronson turned around to see what the other man-Maddox, of course-was doing. Maddox had stopped using the space-resonant viewer, but the screen depicted a street on Earth Two, which was obvious since there were twin shadows cast, one by the sun and one by the atomic flame.

Bronson knew it by reputation if in no other way. So he nodded at it and said, scathingly, "Convenient way to spy on your neighbors, isn't it?"

Kingston nodded and smiled. And Bronson knew that the real menace to Earth One was not the fear-filled, already-dying Earth Two with its growing cancer of atomic flame, but this free, lusty Earth Three where science had been unrestricted in scope and field and direction.

Superior in the knowledge that they controlled the entire situation because of their higher degree of varied sciences, men of Earth Three were quite capable of biding their time and aiding in any scheme planned by Earth Two-or perhaps Earth One-that would enhance the future of Earth Three.

Bronson saw them as conquistadores,
watching savages fight over a lush island and waiting for the least difficult moment to release all the terrors of modern civilization to defeat both sides.
"So what happens to me?" he snapped.
"Unwittingly you have served us," said Kingston. "We could not get through to you so long as you possessed no critical mass of the space-resonant elements-"
"What-"
"Among the chemical compounds you were playing with, there are several of the transuranic elements created by the atomic pile," explained Kingston, falling back into his superior attitude. "These form a rareelement group known as the space-resonant series and they respond to one another in many ways.
"Some of them are bizarre compared to the theories held by your so-called modern physics. We use them as matter transmitters and it is a rare home that has none for the delivery of merchandise."
"So?"
"So," laughed Kingston, "when you finally collected your critical mass you enabled us to enter your Earth One, as we call it."
"And?"
"Your engineer's mind can reason out the rest," replied Kingston quietly.
"You mean that sooner or later one of the three must cease?"
"Yes. To prove it, I shall pose a question. Have you ever considered whether the entire universe was following triple time-paths or whether it is only this section of the universe?"
"Not vitally," replied Bronson.
"Then think about it," said Kingston. "You'll have time."
"I—?"
"You'll have time. We have the power and the science and the will and the ability to effect those necessary factors that will cause Earth Three alone to survive."

Bronson was forced to admit that Kingston was quite correct. Though he said nothing nor gave any sign that he agreed, Bronson was forced to agree that Earth Three was deep in its plans while Earth One lay complacently in ignorance of its danger. The only man who had any inkling of their danger was himself-and he had tried to warn them only to be greeted as a lunatic.
He wanted desperately to know about Vir-
ginia but was afraid to ask-or even to show that he had hope. If she were back there and safe-

Kingston smiled tolerantly. "You might as well relax," he said. "There will be no return to Earth One for anybody until we are ready." He explained about the division of the space resonant elements into four subcritical masses. "It even prevents those from the doomed Earth Two from entering."

Bronson remained silent.
"And the stuff in your laboratory is the only critical mass existent on Earth One," added Kingston.

Bronson's heart leaped and it was with all of his effort that he kept that gleam of hope from showing. They did not know nor had they detected the mass used by Virginia in her laboratory-could it be because her setup was inefficient as she admitted? Bronson breathed a prayer that they would never find out.

But it gave him hope-a hope that permitted him to relax for the moment instead of breaking into action, however futile. Bronson's feelings had been one of frustration, an almost overwhelming desire to beat his fists against something even though it was futile-the insane desire to strike a blow, however minute.
"Until later," said Kingston, "you will occupy a room upstairs. Whether or not you survive with us will depend upon how you behave. I assure you that dying for a principle is futility personified and that a live traitor surpasses a dead fanatic."

## CHAPTER XI

## Reunion on Earth Three

IN A SMALL but comfortable room in Maddox's labora tory Bronson found time to object to Kingston's statement that anyone adhering to a principle is automatically a fanatic. A fanatic, according to one of Bronson's rather cynical definitions, was any man who adhered to a set of principles at varlance with your own.

Time went on slowly and it became dark eventually. Bronson could hardly believe that he had been a free and happy scientist but a few days ago, that all that had hap-
pened to him had occurred in so short a time.
He had taken a few hours of sleep not long ago but it was insufficient. Now, with the entire program at a standstill, nervous reaction set in and the enforced inactivity drove Bronson deep into the fatigue he had been ignoring because of nervous energy. He sprawled on the bed and stared at the ceiling for a short time-and then slept.

Bronson awoke much later and saw by his watch that it was about three o'clock in the morning. By then he was slept out and quite ready to test his brain and his body against Kingston and Maddox.

Lying on the bed Bronson tried to plan.
The main problem was to effect an exit and take a look around-cooped up here he could do nothing at all. His mind, having been geared to fast action for days, was now craving more action. It was like a drug. And a portion of his mind told him that if all this could happen in a short time, there was reason to believe that more concentrated action might solve the puzzle.

So Bronson arose and inspected the door. The place had not been designed as a prison. The door was a normal door and the lock was a flimsy affair intended to serve merely as a warning to the uninvited that the room was forbidden. It would give no trouble at all to someone determined to enter-or to get out.

Bronson smiled in the dim moonlight. Undoubtedly, Kingston felt that, with no place to go, Bronson's freedom was unimportant.

He went to the closet and found a couple of wire coat-hangers. One of these he twisted into a small hook to probe the lock. It was a simple single-tumbler bolt lock and Bronson lifted the tumbler easily and slid the bolt back. The door opened on oiled hinges and he was in the clear.

His first move was to the street door. That was heavily locked and barred and, engineer that Ed Bronson was, picking a lock of that calibre was beyond his ability. He checked the windows but every window was equipped with a slender, ornamental grille-work that was as effective a barrier as the plain bars of the average jail.

Bronson shrugged. Whatever the score, whatever the outcome, he had to make some move. Not the kind of idiotic physical strife against Kingston and his minions which would get him only a broken head with noth-

Ing gained, but some move based upon the thing that Bronson knew best. He knew little of the space-resonant communicator but there was a bare chance of his finding out.

Virginia-what had happened to her in the melee? Had she escaped and, if so, could he communicate with her from Kingston's gear upstairs. Or was Virginia also a prisoner in this scientific mausoleum?
Questions all-and no answers. Bronson felt complete futility once more.

He raced upstairs. If the space resonator would cross the temporal rift to Earth One, it would also cross to Earth Two. Perhaps, he reasoned, with greater difficulty because Earth One was the focal point and the more stable. And, if what little he knew about Earth Two were correct, Earth Two might well never learn of Earth Three despite the presence on all hands of the focal elements.

Delving into the lesser facets of a science was not permitted on Earth Two. Some high brass on Earth Two must have viewed the transmission possibilities of the space-resonant elements and decided that they were to be used for transportation and communication and nothing more. Some brass with fear, pardonably ignorant of the fact that just beyond his fingertips in the depths of an unknown science lay hidden the secret that would give them hope.

So much for regulated science!

TTHE equipment was mostly of massmanufa cture. That helped. Nameplates were written in plain enough English and the controls were not difficult to understand. Bronson studied it quite some time before making his first move, then reached forward and snapped on the master switch.

He turned the switch marked "video" and the screen came to life. Maddox had made pencil-marks on the power dial to indicate the depth of penetration necessary to reach both of the other temporal worlds. Bronson tried Earth One gingerly and saw his own home. Maddox had left the controls set when the news of Bronson's capture had come.

Bronson tried the steering controls and sent the plane of view along the silent street of his own world. It went on a skew because the line-up of angles was imperfect and Bronson found that he had to manipulate a side-swing control in conjunction with the line control
to keep the plane of view from angling off into the houses that lined the street.

Then, with the equipment's secrets available for him to study, Bronson abandoned such study in order to think and plan more thoroughly.

The lock upon his door was certainly not the kind that any man in his right sense would use to imprison any but a schoolchild. That did not ring true, even though Kingston and Maddox held him in contempt and knew that Bronson could never return to Earth One.

There was more to it than that. He turned back to the equipment and set the depth-dial to zero-zero. Then, with an amused shock, Bronson was looking at a view of himself who was looking at the viewscreen upon which was the same picture. Lack of definition in the picture elements prevented the scene from being repeated to the infinitely small.

But there was no time for fooling. So Ed Bronson lifted the plane of view and passed the plane entirely through the top floor of the building. He brought it back once it had reached the back and repassed it again, setting it aside by nine-tenths of its span. On the fourth pass Bronson saw something, plucked at the switches and rotated the plane of view.

Here was a small room. Two cots were there with a sleeping man in each. They were in uniform. A third man lounged in an easy chair-asleep.
Bronson breathed more easily. For, on a small portable viewer, was the bedroom that Bronson had recently vacated. Guards, obviously, and one of them luckily eligible for court-martial for sleeping on his watch!

Bronson spun the distance dial wildly, and saw a kaleidoscope of color, land, roc̣k, and stream. He cared not where it was that he came upon the supercritical mass of space resonant elements-all he cared was that it was a goodly distance away.
He did smile when he saw the name of the store on the window-not that he could read it for, to Ed Branson, lettering in Russian might as well be read from either inside or outside or upside-down or backwards-because he had a hunch that uniformed guards trying to explain their undesirable presence in a Russian store would be at a loss to explain how they had got there.

HIS hand found the key marked TRANSMISSION and he saw all three guards land on the hard cold floor, awake, and start to ask themselves what had happened.

He left them to their wonder, though he admitted that at any less strenuous time it would be most interesting to watch their complete discomfort and amazement. He brought back the scene of view, and continued to pass the plane back and forth through the building. On the floor below the guards-in the apartment next to his own place of im-prisonment-the field of view passed over a bed. A tousle of hair and an outstretched arm caused Bronson to blink.
"Virginia!" he breathed.
They had captured her, too. Well. That meant some saving in time. Virginia would help him. Since the mass of crystals in his own lab had been reduced to non-operative masses and well separated, the only other possible mass was that in Virginia's place. What they would do, of course, was to get back on Earth One and subdivide her crystals into ineffectual masses and then instigate a search for the parts of his own. Once he locked the invaders out they could so remain forever.

Bronson nodded happily. He continued to sweep the plane of view through the building until he came upon Maddox and Kingston. With a grin, he delivered both of them to the same store in Siberia and then returned to the contemplation of his problem.

It seemed a shame to abandon all this gear. And if he took Virginia back with him, through this machine, someone would know instantly where they had gone. There was no known way of fouling up the controls after no one was left in the laboratory to do it.

And despite his amusement at the idea of several irate people trying to explain to an irate officialdom why, how and wherefor, Bronson knew very well that Kingston and Maddox would be able to talk their way home in all too short a time.

Certainly far too short a time to transport the equipment he wanted.

Virginia? Bronson shrugged. He kept forgetting that she knew actually less about this sort of thing than he did. She had said that her gear was far less efficient than his.

Bronson sent the plane of view skimming forward across the earth again, and then
thoughtfully set it for Earth Two. Far away from New Mexico, in the lake region of Northern Michigan, Ed Bronson found a small cottage-untenanted but with a supercritical mass of the space-resonant elements available.

Then Bronson expanded the volume of transmission to its utmost, turned up the variac on the line voltage to overload proportions to add to the general increase and then, wondering if he were rushing in where an angel would fear to tread and also remembering that a little knowledge is often a very dangerous thing, Ed Bronson shoved the transmitting switch in with a gesture of finality. . . .

Upstairs, in the room next to Bronson's previous place of imprisonment, Virginia Carlson, formerly of Earth Two, was sleeping easily. Her first big decision had been made -her decision to accept the pleasant aspect of Earth One forever, eschewing her former life. People who insist upon absolute loyalty will scorn her decision. Yet from a pragmatic standpoint, Virginia was correct even though she may have been morally and ethically wrong.

For her own Earth Two had been a sorry place indeed, peopled with neurotics and hopeless mutants, the population more than decimated by the bomb and its radiation effects. Of a minor percentage of the population of Earth Two, Virginia was inclined to view the wholesome and happy population of Earth One as her own kind. Certainly, as a whole and healthy woman in all senses of the word, Virginia did belong.

The decision had not been made without a wrench. It had most definitely been a huge decision. It is never easy to give up an existence completely even though it is less than desirable because of loyalties and friendships made.

Yet the practical aspect was important. Nature-human nature-had created Virginia's decision, not the girl herself. For her life on Earth Two, threatened as it was with extinction within a few short years, violated the very concepts of nature.

First, there is the eon-old instinct for selfpreservation. Few mentalities will accept self-negation for the benefit of other people. No stable mentality will accept self-negation when it means little to anyone.

And why her subconscious mind reasoned,
should she aid in the destruction of a healthy civilization for the benefit of a civilization already doomed?

No more selfish than anyone else, Virginia knew that nothing she could do would render the people of her own world a healthy racenot after radiation and death and the nerveshattering fear had taken its toll for thirty years. So Virginia's initial decision had been made.

Then had come Earth Three. And once the abandonment of the first principle had been done. Virginia no longer had loyalty upon which to fall back. Once the idea of selfpreservation had come to the fore, it was a mere matter of selecting her future from the practical standpoint alone.

EARTH Three certainly had what it took to win. In a culture unhampered by brass-hattism science had made vast strides. From her history she knew that science was a vital factor in any strife and had been for a century or more.

No longer was it possible for a group of farmers to rebel and make it stick. In the American Revolution anv armed man was as good as any armed soldier-better in many cases since the armed farmer was not restrained by certain codes and restrictions.
But for years the armed farmer, though willing and able, was not possessed of the weapons of modern warfare. Tanks are not needed on a farm. Flamethrowers are not a household item. Machine-guns are inefficient against ducks and geese. Pursuit aircraft and bombers do not find much service in a peacetime civilization.

So science had removed the concept of Mr. Colt's Equalizer, for while the Colt made all men equal, its superior developments rendered a trained and equipped army far superior to the most avid of citizen armies.

In a similar vein Earth Three, with its unbounded science was, without a doubt, more capable of survival in this affair.

Especially when their objective, Earth One, was lying silently, enjoying its luxury, and not even suspecting the widespread preparations going on. Earth One would be swarmed under and destroyed before it realized what was going on.
Well, reasoned Virginia, since she had decided to accept a future, eschewing her former life on Earth Two, it remained only
for her to accept whichever future seemed the most secure.

So Virginia Carlson slept easily, feeling that she had, by chance or by luck, been inserted into the one future that promised the most. Her dreams were untroubled.

The building groaned in the cry of tortured metal and stone. It dropped in a plaster-cracking jar a full half yard, then tilted swiftly to one corner and stopped, settling gradually as the slack was taken up. The roaring groan ceased and left only the crackling sound of fissures running through concrete, the flaking of scale from ironwork, and unimportant splintering and cracking of timber.

Virginia awoke with a cry of fear.
She heard footsteps on the stairs and she wondered what had happened. She knew that Maddox and Kingston were experimenting and wondered whether they had touched off something dangerous. Earthquake came to mind and she wondered about it.

Earthquakes were nothing new to Virginia, since the atomic fire that burned deep into the bowels of Earth Two had released surface strain from time to time as it ate its way through compressed rock-strata.

She sat up in bed and reached for her clothing. No matter what it was it was still better to face trouble dressed.

She was slipping into her frock when the door burst open and, there was Ed Bronson -whom she believed that she had sent to Earth Two. Virginia recoiled automatically. "Hi," said Bronson cheerfully.
Virginia blinked-mentally, actually and figuratively. According to her mental record of the proceedings, Bronson had every right to extract any penalty he deemed fit.

Dubiously, she replied, "Hi."
"Cheer up," he told her, not noticing her nervousness. "I've just swiped the entire batch-the whole shooting match. Now we can work this out all by ourselves."

Virginia nodded vaguely.
Bronson noticed her uncertainty. "I've just expanded the field of focus or whatever it's called that used to transmit stuff from one temporal plane to the other-and I've shoved you, me, building, foot, horse and marines into Earth Two to get away from that gang."

Virginia recoiled mentally. After all the mad work, the planning, the acceptance of a plan intended to place her in a more desir-
able future, here she was right back in Earth Two-doomed once more to the creeping atomic flame.

## CHAPTER XII

## Dawn in Flame

IRGINIA followed Bronson down to the laboratory in a daze, and she comprehended only about one half of what he was saying. The one thing that she did not understand was why he knew nothing of Earth Two. She believed she had sent him there and the double transfer should have awakened him.

That should have left him aware of his transfer to Earth Three when Kingston kidnaped him.

Kingston could have told her that the bright sky light she saw in her half-state had been but the temporarily-transferred atomic flame but Kingston was not there. So instead of wanting to kill her summarily for her double-cross, Ed Bronson still believed that she was originally of Earth One, had been kidnaped as he had been.

Virginia did find it a bit amusing-perhaps it was the hysteria that acts as a safety valve when things are so unreasonable that the mind will not accept them without seeking its funny side.

Dawn was breaking as Bronson finished his explanation and, as the light increased, he turned to the equipment and said, "We've got this all to ourselves here. I couldn't find your crystal on Earth One-and besides, if Kingston can flange up some means of detecting the presence of the stuff on Earth One, there'd be but that one to detect.
"And I couldn't set this mausoleum down on Earth One near any city street. No room. I'm assuming that your diggings are in the city?"

He did not wait for Virginia to answer, but turned to the equipment and started to look it over in earnest. "This," he said, "I've got to know more about."

Virginia could have told him but she merely nodded vaguely and said nothing. She thought it over.
"Have you any hope at all of saving your
world?" she asked--and then gasped beoause she had not said "our world."

She might have saved her fear, for he did not notice. "Some," he said, straightening up from the gear and looking at her with a half smile.
"Do I sound disloyal," she said tremulously, "if I suggest that if Earth Three wins we have the means here to join them?" Virginia hoped to gain some idea of his feelings on the subject so that she could calculate his intentions.

Bronson shook his head grimly. "Earth Three," he said, "appears to have all the cards. No one doubts that Earth Two is doomed and is no true menace compared to Three. Earth Three is cognizant of its possible fate and is most certainly working furiously to avoid it. ${ }^{\text {. }}$
"They plot and plan against Earth One while Earth One sleeps in the peace of false security. Lord knows, I've tried to tell them, and they are so incapable of understanding this affair that they tried to slap me in the clink for believing it." He laughed bitterly. "When I was a kid in school they tried to tell me that any man who tells the truth has nothing to fear."
"But if Earth Three wins-as it seems certain to do?" she insisted.
"That would be bad," he said.
"Why?"
"Virginia," he said soberly, "I don't quite know what it is but there's something very wrong with Earth Three. Confound it, it's simple enough, too, but for the life of me I cannot see it."
"What can be wrong with a world where science and knowledge are not suppressed?"
"I don't know," he said irritably. "But there's something wrong with Earth Three." He turned back to the gear again. "The one thing we must be on the watch for is the day when Kingston sends word for his trustees to assemble his space-resonant materials into a supercritical mass.
"Also we must watch to see that he does not use yours. I'm going to duplicate this equipment first and then your job will be to keep an eye on Kingston all the time while I work out this stuff."

Bronson looked around him with a cynical smile. "Books, data, equipment, and supplies," he said. "This is not like finding the science of an ancient culture. This is a man
finding a complete means of study of a science of his own civilization removed but a few years to the future.
"I've often laughed," he went on cheerfully, "at what Volta and Henry might think if they saw a modern circuit. But give them books, equipment and material and they would work it out soon enough.
"Radio, for instance, would have had its inception in the middle of the nineteenth century if twentieth century measuring and testing equipment and books had been handy. So," he strode over to a bookcase and took out a heavy tome, "we work this out."

Virginia shook her head unhappily. "Why, oh why did this thing happen?"

IRONSON smiled tolerantly. "Because of the chances," he said thoughtfully. "I'm mo believer in a great and benevolent god who interferes with his subjects. I'm more inclined to look upon God as an intellect interested in the problems of his subjects and quite willing to let them work out their own destiny-if for no other reason than to discover whether He had built well.
"You cannot know how good your toy is if you insist upon helping it over the difficult places with your hands. It must run of itself to be a good model.
"Now I'm not exactly convinced that Nature or God was baffled by this thing that His toy built and therefore held His benevo-lent-but baffled-hand in the stream of time to see which was the best.
"I'm inclined to think there was a good scientific explanation of why time should have split three ways-why in one case the earth entered fission, why the thing worked properly in another time-stream and why the Alamogordo Bomb fizzled in a third."
"Can you find out why-and what it could have been?" she asked.

He laughed shortly. "It isn't mumbojumbo or magic," he said. "All of the things attributed to mumbo-jumbo are based upon facts not known to those who observe the effects. The very fact that there was some doubt about the outcome of the Alamogordo Bomb proved that the best brains knew their knowledge of nuclear physics was incomplete."

Virginia nodded brightly. "So you think that some unknown factor caused the trouble?"
"Obviously. We know that fissionable materials do operate. The Hiroshima and Nagasaki bombs were of different types of material, giving us at least two different proofs of its operation. We have too little knowledge of Earth Three but I'm reasonably certain that, once the original experiment failed, fissionable reactions took place and are taking place now. We know even less of the affair of Earth Two. We don't know but can assume that later attempts would turn out properly."

Virginia said nothing. She nodded sagely, and her nod was based upon the fact that she knew he was right but could not say so lest she be forced to tell the rest of her story.
"So," he said, "we can assume that something was either generated or present in the mixture at Alamogordo that, in one case, stopped the reaction, in the next case, permitted the thing to work and, in the third case, started the atomic fire in the earth."
"How do you go about finding it?" she asked. Virginia was interested. This theory was new to her, but it sounded reasonably solid.

He grinned unhappily. "The trouble with making experiments in atomic explosions is that it leaves so little stuff to measure afterwards." He lifted a crystal of the space resonant elements and looked at it with wrinkled forehead.
"Something in this crystal holds the answer. I think we should analyze this material right down to the most infinitesimal trace. Then we can find out which of the included elements is responsible for the original problem."
"I can help," said Virginia.
He smiled grimly. "Your job is to keep an eye on Maddox and Kingston. See if you can locate their man on Earth One, also see what you can do toward locating those four subcritical masses. We must keep Kingston and the rest of his gang from entering Earth One." He looked at her thoughtfully. "Also keep an eye on your own collection."

Virginia smiled and nodded. She looked him squarely in the eye and sald, "My collection of those elements is very small."
"Um," he said. "It's more than possible that the various functions of the spaceresonant elements depends upon their mass. For instance, a small quantity might be suitable for mere communication-a larger
quantity may be required for the visual communication, while a still larger mass is needed for a physical transfer.
"How their division comes with respent to the transfer of objects or messages from time plane to time plane is something that might be baffling."
"But what are you going to do right now?" asked Virginia.
"First, I'm going to see what can be done about building a detector for the supercritical masses," he said. "Then we're going to do some micro-analysis on these crystals."

Virginia was silent. She was not entirely convinced that there was something wrong with the culture on Earth Three. Earth Three obviously had all of the scientific cards, what with years of research and no restrictions or regulations.

However, Virginia was content to remain where she was for a short time. There was little point in making an abrupt change just then. Any moment that danger threatened Virginia knew that she could escape to Earth Three and be safe. Her decision to remain was based upon her lifetime of training on Earth Two.
Regardless of any decision to eschew a former life, the training of a lifetime will remain. That Virginia had no intention of remaining on Earth Two did not remove her interest in the main problem of her life. Bronson had some theories that were interesting. Therefore Virginia was content to remain and learn all she could.

Such knowledge might come in handy at a later date.

I.EADER Kingston leaned back against 4 a counter and regarded his cohorts with a cold stare. Maddox growled in his throat and the three guards cowered because theirs had been a crime punishable by death for hundreds of years.
"Well," asked Maddox, "what do we do now?"
"The first thing," said Kingston sharply, "is to locate ourselves."
"That shouldn't be hard," said Maddox, looking around. Kingston nodded, regarding his wrist watch.
"It is near-morning in New Mexico," he said. "Where we are now is midnight."
"It's also cold-and that lettering on the
window is Russian. We are in eastern Siberia."

Kingston made some calculations. "We're lucky at that," he said. "So long as morning comes in Washington before morning comes here we are in no great danger. The fact is," he added, regarding his watch once more, "that the monitors will be taking up their regular duty in a few minutes. Otherwise we might have no end of trouble."

Maddox shrugged. A pajama-clad man has little dignity and very little authority. To be trapped in a foreign country-one whose politics differ from your own-under highly suspicious circumstances might well result in a long period of enforced inactivity. Bronson had been in a hurry when he had performed the shipping operation. Had he taken time to think it over, Bronson would have sent them to some place where their arrival would have brought them instant apprehension.

But Bronson had been in a hurry and his only desire was to ship them to some spot not fitted with instant means of escape. He would have preferred some place where no spaceresonant element existed but that was impossible since the technique demanded a focal mass.
"So," said Kingston, showing Maddox the silvery-metal band on his wrist, "as soon as the monitors take over and locate me, we'll-"

FE disappeared in mid-sentence and Maddox followed a few seconds later. The guards vanished at regular intervals, leaving the Russian store vacant once again.

Minutes later Kingston and Maddox emerged from a standard transmission building not far from the site of the laboratory. Maddox was puzzling openly. "Bronson has probably ripped the tuning circuit from my receiver," he said. "But what would that gain him?"
"Only a few minutes more time," said Kingston. "Instead of our landing back home again, we must use a standard line and walk a few squares. I-look!"
"Heaven!" breathed Maddox.
The laboratory site was, naturally, vacant.
"I didn't think it possible," said Maddox.
"But where did he take it?" wondered Kingston.
"Who knows?" said Maddox, spreading his hands.
"We can find out but it will take time. My guess is Earth Two somewhere. He'd be a fool to stay here where he can be found easily."
"It wouldn't be too easy if Bronson has hashed up the keyed tuning circutt," grunted Maddox angrily. "Confound it, that reduces the problem to one of searching two worlds for the right mass of elements."

Kingston shook his head. "We're about ready," he said. "Give us another week or so and we can eliminate all opposition." His face hardened. "In fact, we can start to spread the atomic fire on Earth Two at any time."

They turned back to the standard transmission building and returned to Washington. There was nothing they could do without the laboratory and there were other, well-equipped laboratories in Washington. Actually, so far as the operations in the space-resonant bands were concerned, location meant very little. It had been merely convenient to locate in Maddox's place.

Once returned to Kingston's official building, the leader set his operatives to checking the supercritical masses in the vain hope of locating one of them that existed in the stolen laboratory.

Bronson's statement that he wanted a detector did not mean none existed. All forms of communication require the two main components-generator and detector. Kingston's men, to track down the stolen laboratory, merely tuned through the spaceresonant bands, stopping every time they hit a response so that they could check the neighborhood visually.

What Bronson wanted was not a mere detector. He wanted some means of knowing definitely when the suberitical masses of his own space-resonant elements were reassembled. This is comparable to a device that will register whenever a radio transmitter is turned on, regardless of frequency or location.

Bronson knew that the tuning qualities of the space-resonant effects depended mostly on the mass of the crystals. He knew the mass of his own stuff but that had been formed to serve as fluorescent material and the amount of the space-resonant elements in that mass was uncertain-especially in view
of the fact that Earth One was still to learn of the space-resonant bands.

So Bronson's knowledge of the mass of his own crystal did not include the proportion of these new elements and therefore he had little knowledge of how the divided masses would resonate.

It was quite a project-but it had to be done.

## CHAPIER XIII

> To Find the Plan

CAUTIOUSLY, Virginia entered the laboratory and peered over Ed Bronson's shoulder. "What are those?" she asked.
"Amplifiers," he explained. "I'm hoping to locàte the subcritical masses."

Virginia looked dubious. "Where did you get them?" she asked.

He grinned boyishly, "Stole 'em. I searched the laboratories of Earth Three and came up with four of their best. Earth Three does have some advantages."
"Most of them, I fear," said Virginia.
"Yeah, but there's something wrong there."
Virginia asked. "What can be wrong with that kind of technical advance?"
"It isn't only their technical perfection that is wrong. That is fine, and something that Earth One will achieve in the due course of time. There's something else-something basic. Maybe," he grinned, "it is feminine intuition, but it has to be there."

Bronson nodded firmly and then turned to his amplifiers. The closer one he turned upside down on the table and looked into for a time. Then, abeently, Bronson reached for a screwdriver and probed into the chassis with the business end.
Virginia gave a cry, "No!"
"No?" he echoed, turning slightly to face her. "It's turned off."

Virginia paused. A moment of walt and her worry about Bronson would have been over. After touching the charged electrode in the way he was about to do, Virginia would have been alone and free to go to Earth Three complete with the laboratory, or to wait and see whether One or Three was successful in the imminent warfare and go to whichever
emerged viotorious.
She knew that Bronson was quite capable of isolating both of them after collecting the only mass of space-resonant elements on Earth One. He would do that as a last resort to save the rest of his world, regardless of whether he received any acclaim or not. And death would be his reward. For once Earth One was safe, Two and Three would perish and both of them with it.

Yet Virginia found admiration in her heart for this man. Bronson, against great odds, had succeeded in coming this far. He may have made an error in his belief that there was something fundamentally wrong with Earth Three but, none the less, he was possessed of a certain drive and purpose that made her admire him.
"All right, Ed," she told him. "I know more about those amplifiers than I could possibly know had I been truly of Earth One."

He turned and faced her slowly.
"I am Virginia-Carlson," she said.
"Carlson?"
"Carlson. I am the woman you contacted with your hybrid space resonator." Then oame the rest of the story from beginning to end. "Curse me if you feel like it, Ed Bronson, but what normal human being would oare to spend the rest of her life on a dying world-or to open the door of a fine world to the hapless, horrible mutants who have no future beyond their own life-endings?"

Bronson nodded. "I am no judge," he said solemnly. "Offhand it seems wrong to abandon one's friends for one's own safety. But if one cannot really save one's friends from their horrible fate it seems foolish to remain and die through mere loyality. It's like that old saw about a live coward being better than a dead hero."
"Then you don't condemn me for seeking safety?"
"Who am I to judge?" he said.
"But supposing Earth Three should be successful?"
"That would prove that Earth Three was best fit to survive. Not for one moment, however, do I beljeve that some higher agency performed this separation-trick to establish the most successful way of running a world.
"Nature-by which I mean natural phenomena-offers survival's choice to many forms of life and living in many ways, and this split in the time stream is but one of
them. I swear that we shall know why it happened some day.
"But, Virginia, I am not to arbitrate your life. I am inclined to think that I might have done the same thing. In fact," he said humorously, "I can find nothing really to be angry about. Even your little job of shipping me to Earth Three resulted in our stealing this laboratory."
"But I sent you to Earth Two."

HE shook his head. "I arrived from my bedroom on Earth Three-the same room but a nursery in Three's time trail."
"I saw the same room from half-transfer," she said, "and there was that pillar of atomic fire in the sky."

Bronson blinked.
"So," he said with an explosive exhale of breath. "So the fission-train in the earth will work on Earth Three as well as Two."
"What do you mean?" asked the girl.
"Kingston undoubtedly intends to transfer bits of the earth-fire from Two to One and thus destroy both of them. That was a test. They brought it, noted its performance on Three and then carefully shipped the thing back again."

Virginia snorted angrily. "I'd like to ship the entire Alamogordo Fire to Earth Three and let Kingston and Maddox roast!"

Bronson nodded. "But the thing that atrikes me the hardest is that only for that very instant of blast was there the chance for timefission. Then all three worlds have the same phenomena and the same effects. One might think that Three would remain a place where no fission-explosion could take place while on Two all atomic releases of power start the ondless flssion in the earth."
"But does that help us any?"
"I don't know yet. But you'll help-now?"
"That I will-and willingly."
"Then tell me," said Bronson amusedly, "Just what was I about to do?"
"You were about to touch a high-energy olectrode that remains hot for hours after the gear is turned off. One of the energizing circuits. It charges itself with space-resonant energy that does not leak off-sort of like a high-capacity condenser of excellent power factor. You can charge it to lethal dose and it may remain so for hours unless it is disoharged."
"Why don't they discharge these, then?"
"It takes too long for them to loed when they fire 'em up," explained Virginia. "Usually they remain at high charge between 'off' periods."

Ed Bronson looked into the amplifier with a wry glance. "A little knowledge is a dangerous thing," he grunted. He squinted at the electrode, lifted an eyebrow and smiled cynically. " Y ' know, there ought to be some easy way of telling when a thing is dangerous.
"Once upon a time that which was dangerous came clearly labeled, like fire, or sabretooth tigers. Later they had to pass laws to get folks to put gasoline in red-coated cans. Nowdays practically anything you open up is dangerous and unless you know what you're doing-"

Virginia sm!led. She knew that he was just talking. rambling as he scanned the circuit, wondering what to do next. Then she touched his arm gently.
"Look. Ed," she said. "Let me take this job over. I know my way around these things, even though they are of Earth Three instead of mine. You've got other things to do, doubtless?"

Bronson looked at Virginia quizzically.
"Trust me?" she asked.
He smiled. "I think so," he said:
"You can," she said.
Bronson's smile faded. "Look, kiddo," he said, "there's one thing about being just a little bit selfish that most of the books never get around to mentioning. I'd prefer to have someone working beside me who is a bit selfish and inclined to think of himself first.
"The guy who has-in capitals-a Mission In Life is all too inclined to toss common sense into the ashcan so that his flanged-up ideals are realized. At least you can predict the future course of any character who is logical enough to think of himself.
"So-you've made your gesture and until someone convinces me that a bit of selfishness is absolutely wrong-g'wan!' He grinned. "Go to work so that I can stop sounding like a philosopher."

Virgina looked at him soberly for some moments.
"You don't question the fact that I will grab for the winner?"
"We all hope to play a winner, gingergirl," he said.
"Yes but-"
"Virginia, you hope to play a winner. Do
you greatly care who really wins so long as all is serene, happy, and peaceful?"
"Only one more requisite," she said wistfully; "I'd like to have it remain that way."

I
RONSON laughed. "It has been adequately pointed out often enough that the gents who formulated the Declaration of Independence guaranteed only the right to 'pursue' happiness. It is a hopeless quest to seek complete peace and quiet."
"Don't talk like that," she said. "I only meant that I'm not too convinced that your idea about Earth Three having something definitely wrong with it-"

Ed Bronson reached forward and put one hand on each of her shoulders. "Look, youngster," he said with a smile, "I'm no hero. I'm not imbued with the spirit of altruism and self-righteous self-sacrifice."

Virginia looked into his eyes solemnly. "You would have little hesitation before you isolated yourself here on Earth One if-"
"Only because I am dead certain that there is something basically wrong with Earth Three."

Virginia smiled. "As a not-too-innocent bystander," she said seriously, "I'm little sold either way. Earth Two is doomed. That I know because I saw Earth One. But having been trained to the idea of scientific research, I'm inclined to think that Earth Three with its freedom is the right answer.
"Who knows," she continued bitterly, "how many times we might have been close to something that might have led the way to life but were stopped because of an arbitrary decision by someone who felt-by some personal logic-that the phase of science held no answer."
"There is one idea," he said half humorously, "that anything taken without a bit of moderation is not too good. Oh, there are exceptions. One can always find something that must not be taken in moderationhonesty or faith, for instance-in order for the best to evolve. But any pendulum swings from extreme to extreme. And you have been living in an order of one extreme. You naturally think the other extreme is better."
"You. wouldn't be generalizing when you claint that Earth Three is wrong somewhere? That you think that Earth Three is too extreme?"
"Extremity, per se, may not be bad," he said. "It is what takes place under extremity that might be dangerous. No, Ginger, I'm baffled right now but you can be certain that, before we get to the end of all this, we'll know the answer.

Virginia smiled. "We seem to have come a long way from the original argument."
"Oh yes." He grinned back at her. "We're both in a mell of a hess right now. It would be a fine thing if we couldn't trust one another. All you seem to want is a secure future and all I want is the same. That we seem to think that this secure future lies in opposite directions is the same factor that makes horse racing interesting. And, like horse racing, we'll find out soon enough who is right."
"I hope it isn't the hard way."
"Virginia, you are willing to take a job on this stuff. You're therefore willing to help the side you think cannot win?"
"If anything is done to aid either side," she said, "and it comes out properly, isn't that a sign that the winning side has every right to succeed?"
"Defining ' $A$ ' in terms of ' $A$ '?"
"No. I'm just willing to help get myself away from the certain doom of Earth One."
"In other words," said Ed Bronson, "you'd work as hard for Leader Kingston as you would for me?"

She looked at him squarely. "Ed," she said, "I wouldn't care to trust Leader Kingsston." Then she turned from him, shrugged her shoulder out from beneath his hands and faced the upturned amplifier.' Beneath the wreath of her hair he noted the blush that tinted the back of her neck.

Bronson took a half step forward. His hands half reached for her shoulders again. Then he paused.
"I'm going to check the mass spectrograph," he said and turned on his heel and left the room.

This, he knew, was no time to question her motives.

As he headed for the laboratory below, this thought crystallized. Questioning her motives would force quick judgment. He knew-and he wondered how he arrived at that sage opinion-that Virginia herself was not aware of the motives that made her keep him from a certain death and now caused her to help him.

## CHAPTER XIV

## Explosive!

NOW it was silent in the computation laboratory, save for the occasional clicking of the super calculator that lined one wall of the room. Pages and pages of equations were piled high in the file box and Bronson sat in the control console of the big machine and worked. Hour after hour he alternated moments of quick activity over the keyboard with periods of quiet contemplation and reasoning as the answers to his mathematical problems came clicking back.

Dimly he heard the door open behind him and he accepted it vaguely-disinterestedly -because the problem at hand was far more important. He felt her presence beside him and she was silent as she read his notes.

He set up another problem on the keyboard and leaned back, looking up at her.
"Found something?" she asked.
"No," he replied. "Except that the spaceresonant elements do not make sense in the mass spectrograph."
"I know," she said. "We've known that for years."

Bronson waved a book. "And I'm a little shocked at the lack of true basic research to be found on Earth Three."
"What?" asked Virginia.
"It seems as though they know a lot," he explained. "But they know no more about this stuff than the nineteen hundreds knew about the electricity they used."
"That's natural," she sald. "People are always willing to use something beneficial though they know little about its basic fundamentals. One out of a thousand automobile drivers really knows anything about the internal combustion engine. The rest are merely drivers, controlling a mammoth they know nothing about."
"Well, perhaps," he said. "Also it is entirely possible that what I'm seeking has no true answer.".
"You hope to learn why the space-resonant elements cannot be separated?"
"Right," said Bronson. He was silent for some time while he digested the answer that had come clicking from the calculator. Then
he sent forth another equation and the machine went to work again. "I'd like to try analysis."
"Won't work. As far as we oan tell there is really only one element."
"By analysis," he nodded. He had been reading what Earth Three knew about it and they, too, said as much. "However, the mass spectrograph separates elements according to their atomic masses and according to their atomic charge.
"Now why do we have a dispersion of atomic mass-making the space-resonant series of elements seem to be merely isotopes of the same element-and at the same time get a dispersion of atomic charge, which would make them seem like isobars of different elements?"
"Heaven knows what we can expect in the transuranic series," observed Virginia.

He grunted. "Run down the physical properties of the stable elements," he said, "and you'll run into about every conceivable idea. Metalsthat melt at room temperature, metals that resist acid and alkali.
"Metals that conduct electricity in proportion to the light falling on them, elemients that combine with almost any other elementand elements so valently self-satisfied that they will not even combine with themselves. Elements as hard as all get-out and others that can be cut into stove lengths with a soft thumbnail.
"But," he continued reflectively, "I'm of the opinion that the answer lies here-that this indivisible property of the space-resonant elements is the answer to a lot of questions.
Then Bronson put his head in his hands. "And I'm supposed to find out all this to save my world-when the best brains of that same world in another time-plane have known about the stuff for thirty years and still can-not-"
"That is not fair," she said. "After all, how many years did Enrico Fermi seek the answer for his experiments with the fission of uranium? They numbered a good many transuranic elements before they discovered that these new elements were actually the fissioned products and were well-known elements halfway down the atomic chart."
"That's true," he nodded. "Also it is against all theory that an element should display more than one atomic identity."
"Right. Unless they are incomplete atoms -a house built of brickbats."

Bronson shrugged. "I'm trying that."
"How?" puzzled Virginia.
"I've got the mass spectrograph running again but each slit is loaded to the scuppers with neutron absorber."
"What do you expect?" asked Virginia.
"I don't really know. I sort of hope it may lead to something. Come on-let's try it."

Taking his last three pages of calculations, Ed Bronson led the way to the analytic laboratory . . . .

LEADER KINGSTON smiled grimly at Maddox and shoved the button home. "That'll fix 'em!" he said savagely.

On Earth Two the pillar of fire flickered a measurable bit-and the downtown district of New York City vomited flame in a thunderous roar. To the stratosphere billowed the ice cap, followed instantly by an up-reaching column of incandescent gas.

Into the vitals of the rock the gnawing atomic flame went and perceptibly-perceptibly to some all-powerful deity that could withstand a holocaust which put the sun to shame-the crater expanded as the substance of Earth Two fed the atomic flame.

Kingston set the steering control once more and shoved the button. The Mall between the Washington Monument and the Capitol erupted in another atomic cancer to feed on Earth Two. The buildings that lined the Mall were blasted to bits-the National Archives, the Smithsonian Institution, all of them gone in one mighty blast.

Then, as the fury of blast subsided, the pillar of fire undulated to the sky. It fed, then, on the inert substance of a dead city for, as in Manhattan, no man remained alive to see.
With cruel disregard for humanity, Leader Kingston set the dials once more and the acres of land enclosed by Chicago's Loop roared skyward. The edges of the crater rimmed Lake Michigan and the waters of the lake began to pour toward the breach. They did not reach the ravening crater for they turned into steam long before they could fall across the lip of the crater.

From Lake Bluff to Gary the lake-front was a scene of molten death.
"That's but the beginning," said Kingston. "Four will become eight and eight will be-
come sixteen. It will not be long before they are reaching one another."
"You'll have a lot of the space-resonant crystals to pass along to Earth One, though," said Maddox.
"We will apply the same principle," said Kingston. "One brings two and each brings two more. My men on Earth One will assemble the four subcritical masses tomorrow for instructions," said Kingston. "This is the one weak link. But once we start, we can move the stuff like fury."
"What do you fear?" asked Maddox.
"Bronson! He has your laboratory. Complete. He is well hidden somewhere and, until we can locate him, we are treading on dangerous ground. For I know that he is keeping an eye on everything we do. And until we locate him we can do nothing."
"Why doesn't he do something, then?"
Kingston laughed bitterly. "Probably because he doesn't quite know what to do."

Maddox grinned. "Also because you've got the key to Earth One. And," he said grimly, "it might be that he has been ignorant until just now when you've shown him how to fight this war."
Kingston whitened in fear. He shook his fist at the flaming horror on the viewer plate and said. "I wish Bronson were in that!"

vIRGINIA CARLSON reeled back from the viewer with a cry. Bronson left his work and came to stand beside her.
"What?" he asked.
Slowly Vrigina shook her head. "Kingston has just transmitted a bit of the atomic flame to New York," she said.
Bronson made the natural error. To him, New York was New York and he considered no other city. What stopped him was the belief that Kingston could not transmit anything across the barrier without the presence of a focal mass.
"How?" he asked Virginia.
"With the space resonator," she said.
"But there is no focal mass."
"In New York?" replied Virginia in surprise. "There must be several thousand."
"But-oh! It was the New York of Earth Two."
"Yes."
Bronson looked out of the window and shook his head. "I find it difficult to believe that this terrain is not my own world," he
said. "And yet it is, in a sense."
Then he turned from the window to face Virginia. "Ginger-girl," he said slowly, "I know what is wrong with Earth Three!"

Virginia swung the steering control swiftly until a distant view of New York was visible. "That is what is wrong with Earth Three," she said bitterly. "Avaricious, hateful and cruel."

Bronson shook his head. "You're not fair," he said. "He's done nothing that you or I would not do to protect our own worlds. And," smiled Bronson, "remember that Earth Two is already doomed."

Virginia whirled on him. "Because a man is slated to die as all men are, is that an excuse to commit murder?"
"No," he sald. "But life is still a matter of the survival of the fittest. I deplore Kingston's act but remember that Kingston knows that it is either kill or be killed."
"Then there is nothing wrong with Earth Three," snapped Virginia with deep bitterness.
"Oh but there is. Virginia, on your world. where every scientific endeavour is directed along the one line of safety in the face of that pillar of fire at Alamogordo, does your government know the location of all equipment?"
"Of course," she said. "Save for a very minute percentage of stuff that has been lost, strayed or stolen."

He turned to the screen. "Did anybody ever think of that?" he asked, pointing to the fire that was consuming Manhattan.
"Yes-but where would we put it?" she asked.
"On the moon," he said simply.
"But there is no focal mass of space resonant elements on the moon," she objected.
"There could have been," he said, "if Earth Two had proceeded to develop the rocket! But no, since no planet is habitable."
"That isn't all," said Virginia. "Earth Three has developed the transmission resonator to the highest degree. We've never been able to speed it up. They can transmit anything *in a matter of microseconds. Ours takes hours sometimes.
"Remember, if we start to shove that pillar of raw energy through a resonator of our type we must build it to withstand raw atomic energy for a long period. But tell me what is wrong with Earth Three."

HE FROW NED. "Remember the day I nearly killed myself because I was poking into an amplifier without knowing all about it?"
"Yes."
"In similar sense, Earth Three is plunging forward into a sea of uncharted danger. Rapid progress in the face of high competition. No control whatsoever. In the oast of Earth Two, progress has been hampered because it has had too much control.
"Had you been free to tinker and investigate the transmission bands you'd have disoovered Earth Three and you might have had the idea of rotating that Alamogordo Flame into Earth Three.
"As of now, Virginia, tell me-could Earth Two reduce all of its space-resonant elements to aubcritical masses in a case of danger?"
"We oould, save for those that were lost, as I've said before."

Bronson smiled cryptioally. "Can Leader Kingston?"

Virginia shook her head. She recalled the myriad uses that Earth Three had developed for the space resonant elements. Each home with many devices, each device containing a supercritical mass.
To eliminate entirely all critical masses of the dangerous elements would be the exact equal to a complete breakdown of all means of transportation and communication. For the space resonator had replaced in nearly all but isolated cases the common automobile, telephone, train, radio and allied arts.

Such a project was impossible to oontemplate, and even less possible to accomplish in any reasonable time. It would require the rebuilding of the former modes of life-almost a return to horse-and-buggy days.
"But every science has its danger," objected Virginia.
Bronson nodded. "But remember that every solence grows like a tree. One does not start on a high technical plane."
"But what has that to do with It?"
"Just this," explained Bronson patiently, "In earlier days no man could develop anything too dangerous to his fellows if it got out of hand. Many embryonic ohemists have left the face of the earth in a gout of smoke and flame but, when they left, they took only a small section of the neighborhood with them.
"Here, then, we have Alamogordo and the Bomb. It took the combined resources of a
nation, its people and years of study and work to develop the atomic bomb. Obviously this is no backyard project like the nitration of glyoerine.
"But here we have Rarth Three," he oontinued, "plunging forward without control-a juggernaut with no one at the helm. In their homes, in their laboratorles, in their very lives, they have supercritioal masses of the space-resonant elements. Leader Kingston has just shown us how he hopes to destroy both Earth One and Two to leave Three supreme."
"In doing that he has given us the answer we seek. For in his attack," said Bronson exultantly, "he has displayed not only his weakness but the fundamental weakness of a culture based upon complete freedom. Not that freedom is wrong. Freedom is an ideal, and complete freedom will be attained only when every man can assume the responsibility of being noble."
"I'm not quite certain," said Virginia.
Bronson laughed. "How long would it be before one of Kingston's men discover the seoret of unlocking the energy of the atom with a gadget the size of your wrist watoh? Hah! Every man his own atom-bomb!" he snorted. "Well, remember this, Virginia, on Earth Three every chunk of space-resonant material is more deadly than the Alamogordo Flame!"

## CHAPTER XV

## Moment of Crisis

RINNING wolfishly, Bronson spoke.
"The next problem," he said, "is the job of getting back to Earth One."
"How can we?"
"Who has the key?" Bronson asked.
"Kingston."
"Then we proceed to grab Leader Kingston and apply bamboo splinters under the fingernails or plaoe a rat on his bare tummy, placing a bowl on top of the rat, and then building a small fire on top of the bowl. In other words, we shall-ah-urge is the wordurge him to reveal his method of getting in touch with his bunch on Earth One."

Virginia shuddered.
Bronson turned to the steering controls and
located Kingston. Then, standing near the focal volume, Bronson motioned for the girl to throw the switch. Kingston appeared instantly and, before the Leader could get his wits together, Ed Bronson swung a heavy fist with all the power of his big body behind it. Kingston went down like a log.

He awakened to the drenching of cold water from a bucket. He strained against adhesive tape and glared.
"Take it easy, Kingston," said Bronson. "I've got the controls set to drop you into the Alamogordo Flame if you get nasty."
Kingston paled.
"What I want from you is the key to Earth One!"
"That you'll never get!"
"Yes I will."
"No you won't."
Bronson snorted. "Want to make a little bet? You can save yourself a lot of grief if you give in right now. Or would you rather be screaming for mercy later?"
"What can you do?" sneered Kingston.
Bronson chuckled. "The Chinese are accused of developing a number of fancy tortures," he said. "I've also known a fiction writer who used an incident to show the strength of his character's will power.
"This fellow, who used to tinker with radio on the side, decided that any man who could grab a couple of hundred volts and not quiver a musole because a sudden motion would be as deadly, would be displaying a nervous control seldom realized. Now I'd guess his idea to have been impossible. But it gives me to think.
"Do you suppose you could stand a mild electrocution? Say a hundred volts at twenty cycles? Not enough to kill, for we'll insert a current-limiting resistance to prevent electrocution, but enough to make life most uncomfortable. The torture of the condemned will have nothing on what you will suffer, Kingston."

Kingston smiled wearily. "It will do you no good," he said. "The thing is set up like the time lock on a safety vault. No one can breach it."
"Big talk." snorted Bronson. He turned from the bound man and rummaged in a bench drawer for wire and parts. A variablevoltage transformer, some alternating current meters and a few lengths of wire were strewn over the table top. Bronson began to connect them into a circuit.
"We'll find out how your resistance is," he told Kingston over his shoulder.

Kingston laughed nastily. Virginia screamed. Bronson whirled-and Kingston was gone!

Bronson leaped to the viewer controls and spun the dial to Kingston's official quarters. The viewer showed a technician just in the act of spinning the steering dials in a random whirl like a man locking a combination safe.

Kingston fell a-sprawl, still bound, against Maddox, who had come with him. Maddox removed the bonds and Kingston fingered the amulet on his wrist with pride. "That was quick," he said.
"Had to be," said Maddox. "I knew that the instant you disappeared from Bronson's laboratory he'd leap to the viewer to see your laboratory. So once you arrived, we both came here and Tony spun the dials so that Bronson can't follow us by reading the callbration."
"That isn't all," chuckled Kingston. "Now we know how to reach Bronson!"

IBRONSON turned from the controls unhappily. "How did he do that?" he asked plaintively.

Virginia shook her head. "Wrong culture or no," she said, "Earth Three seems to take all the tricks."

Bronson nodded wearily. He put head in hands and worried visibly-and was taken out of it when a bell tinkled on the wall. Bronson leaped to his feet with a shout.
"Maybe we're not licked yet," he said. "That was the automatic mass spectroanalyzer."

He left the room and returned quickly with a sheaf of papers.
"They call 'em space-resonant," he said with a wry chuckle, "but I call 'em symbiotic."
"Meaning?"
"Why, it seems as though we have a closed system of radioactivity here," he said.
"But the space-resonant elements are only faintly radioactive," objected Virginia.
"According to outside detectors," he said. "But this is an internally closed system. There are two basic elements and two isotopes of each, all operating in a closed system."
"How?"
He handed her a sheet of paper containing nuclear equations.

(2) $121^{A^{280}}-1^{0} \longrightarrow 122^{B 280}$
(3) $122^{8280}-o^{n^{\prime}} \longrightarrow 122^{\text {B279 }}$

$$
\text { (4) } 122^{B^{2279}}+e^{0} \longrightarrow 1211^{A} 79
$$

"Call 'em ' $A$ ' and ' $B$ ', with respective atomic number of one hundred and twentyone and one hundred and twenty-two and respective atomic weights of two hundred and seventy-nine and two hundred and eighty," he explained. "Then Element $A$ absorbs a neutron, becoming heavy Element A since its atomic weight is increased by one.
"The heavy Element A then emits a negative electron which raises the nuclear charge by one and the element becomes Element B. Element B then emits a neutron which makes it light Element B.
"Light Element B captures an electron lowering the nuclear charge and retransmuting the element back to normal Element A. The neutrons and electrons are passed back and forth within the mass and seldom escape, therefore the space-resonant elements are believed to be only mildly radioactive."
"Yes?"
Miles away and across the barrier in time Kingston and Maddox listened avidly.
"So we can guess what happened at Alamogordo," said Bronson exultantly.
"I don't see it," she said.
"Well, Element A is so avid an absorber of neutrons that a microscopic impurity will destroy the K-factor of a supercritical mass of plutonium or uranium," he said. "That would prevent the Alamogordo Bomb from exploding."
"Element B, on the other hand, emits a torrent of neutrons, enough to raise the Kfactor to a terribly high degree, which caused such violence that the bomb was hot enough to start fission in the earth. A balance of the elements A and B cancels out and therefore we have the normal explosion experienced in Earth One."
"But how did it happen?"
"When the sub-critial masses of uranium came together on Alamogordo Day, the fission started throughout the mass. Also pre-sent-we know now-is the capture of neutrons by unfissioned atoms which raise the
element's mass, and the other fission products hitting this element raise its charge. Spaceresonant elements resulted in those submicroseconds of initial fission.
"So, in one section of the mass, an abundance of Element A was produced, which stopped the explosion. In another section, Element B was produced, which increased its violence. Now the energies produced within the fissioning bomb are high enough to cause a warp in the space-time continuum. This warp permitted one section to die out while the other increased almost without limit."
"I'm beginning to understand," nodded Virginia. "We then had three different levels of energy."
"And three widely-varied levels of entropy," added Bronson. "So widely varied that they could not exist in the same timespace plane. Thus the fission in time that produced the three time-planes. How widespread these areas of separation extend we may never know.
"All I can assume is that space-time is strained and will return as soon as the energy put into the separation is used up. Sort of like an upthrown stone," he mused. "It goes up until the energy put into throwing it is used up against the force of gravity.
"Then it comes down-and the three timeplanes separate until the energy put into the separation was used up and then they begin to fall toward one another."

Kingston turned to Maddox. "That also explains why no one knew of this split for so long. And why it is getting easier and easier to cross the barrier. The three timeplanes are approaching one another."

Maddox nodded. "And that means that we must see the other time-planes destroyed. If they come together and find interference-all will die!"
"Right," said Kingston. His hand fingered the button while his other hand turned the steering oontrol. Maddox looked into the viewer. "Hurry!" he exploded. Kingston looked.

Ed Bronson was walking across the laboratory toward the transmission panel, saying ". . . and that brings one thing to mind, Ginger. If they grabbed Kingston they know where we are!"

He spun the controls quickly and pressed the button. At the same instant Kingston pressed his own button. The viewplate that showed Bronson and Virginia in Maddox's
laboratory erupted in a holocaust of flame that blinded Kingston and Maddox.
"Did we?" asked Kingston, rubbing his eyes.
"We can't know," said Maddox. "But look. If we got them we can find out."
"How?"
"Collect your space-resonant elements on Earth One," said Maddox. "Then send another set across and use one of them to erupt Central City-right where Bronson's home is."
"What good will that do?" asked Kingston.
"We can watch it," explained Maddox.
"And if it is returned to Earth Two, we'll know that Bronson is alive somewhere and watching."
Kingston nodded with a smile of appreciation.

THE laboratory building was askew, its windows shattered and its outer surface scarred. It had been close. Perhaps the only thing that saved them was the fact that they were closer to the focal volume of the transmitter in the laboratory than Kingston was.

At any rate the unbelievably microscopic instant of the beginning of the atomic flame intended to destroy them utterly had been all that building caught. For Bronson had sent it akirling into time-space and it was on the way out as the glimmering of deadly flame started to come in.
But that brief touch of incandescent death had charred the woodwork of the outside of the building. It had cracked the glass and it had jarred its very structure.
The inhabitants-were in bad shape. Bronson was sprawled on the floor. Virginia was crumpled over a desk. Both were unconscious. And, creeping deeper into their skin, was the ruddy color of bad burn.

Hours later they were dark with burn and still unconscious. They knew nothing.
They did not know that Kingston's men on Earth Qne were beginning to assemble the masses in Ed Bronson's collection of radioisotopic phosphor.

Then a bell tinkled gently. Bronson stirred and groaned. The bell tinkled once more. Bronson stirred again-painfully. Another tinkle-

Virginia awakened, opened her eyes vaguely and wondered what had happened.

The bell rang insistently. "Ed-Ed Bronson!" she shouted. "The detector!"

## STORIES

"Detector?" he asked dully.
"They're assembling the space-resonant elements on Earth One!"

The bell broke into an insistent clamoring. Ed picked himself from the floor and looked at the gear. The cascaded amplifiers, incapable of detecting the presence of subcritical masses on Earth One, had sufficient gain to trigger the alarm when Earth One's bits of space resonant elements were collected into critical mass.

Bronson spun the dials of the viewer.
There before him was the familiar laboratory of his own home and four men standing before his bench, upon which stood the crystalline mass.
"Now!" breathed Ed Bronson.

## CHAPTER XVI

## A World at Stake

UNCERTAINLY Virginia paused. "Ed," she said.
"Huh?" he asked, turning.
"You're going to-"
"I must."
She smiled and took a deep breath. Bronson looked at her quizzically. It was obvious that something had happened that had pleased her-or convinced her of something, but what it might be eluded him.
"Look, Ginger, we haven't much time. I've got to get going-and you know what to do."

She nodded, her eyes bright and intent upon him. "Ed," she said in a quiet voice, "I've been both selfish and opportunist, wanting security at any price. But you are willing to trust me with the future of Earth One. That. too, proves the worth of-worth of -of-"
"Forget it," he said softly. "If we win it will prove the right of Earth One to survive."
Then he turned to the machine again. "I've got to go!"
She came up behind him, turned him around and kised him. "Go," she said. "And as you go, Ed, remember that I've made up my mind. I'm going with you-all the way!"
He smiled down at her. "I know," he said cryptically. Then he turned and smapped the button.

He landed in his own laboratory amid the four minions of Kingston. The suddenneag
of his appearance sent them flying in four directions. He whirled and reached for the assembled blocks of the space-resonant elements on the bench, to separate them again.

He was hilt from behind by one of the thugs and staggered against, the bench. Then the other three were upon him.

Only Bronson's sheer size and physical power saved him from instant annihilation. He fought them off, hitting them hard but taking a murderous amount of punishment. He kicked one away, traded blows with the second, turned to drive a hard fist into the face of the third-and nearly fell forward on his face as the blow passed through nothing!
In the big laboratory on Earth Two Virginia coldly and viciously clubbed Kingston's hired hand over the back of the head with a heavy end-wrench as the fellow was atill staggering forward from the effort against Bronson.

Bronson blinked and reoovered from his stagger. He lashed out at the nearest, Just as Virginia grabbed another to give him the same treatment. One of the two remaining jerked a gun from his pocket and fired wildly. Bronson ducked under the gun hand and shouldered the thug cruelly in the pit of the stomach.

The gun dropped to the floor and there was a three-way dive for it. Bronson cracked his head against the nearer man's jaw, drove a fist into the other's face, and grabbed the wrist of the first one again. A gun appeared in the second man's hand.

Bronson jerked the wrist and the man staggered forward in front of Bronson just as the other thug fired. Ed felt the man's body twitch and he coldly lifted a foot, sat it in the small of the stricken man's back and hurled him forward against the gun wielder. Behind him went Bronson but the gun wielder disappeared.

Virginia's quick end-wrench came down hard and then she had three of them lined up on the floor, taped helplessly with adhesive tape.

She scribbled a quick note and sent it through-and an instant later Bronson had the mass of crystals separated into their four parts.

He breathed deeply as he read the note. It did present a problem. He had one corpse on his hands and three other undesirables collected in the laboratory on Earth Two. Also, here he was safe on Earth One again
with the orystals separated. He held the key to security!

But there was Barth Three, still whole and alive. How simple it would have been to ignore Three-Bronson admitted that Virginia might have had to suffer the fortunes of war if the fate of an entire world rested upon the decision.

But Bronson knew that, unless two of the three worlds were exterminated, all would die in a cosmic explosion when they began to reappear on the same time-plane.

F'urthermore, he knew that Kingston was quite prepared to maintain a viewer on each of Ed Bronson's sections of crystal until they were reassembled again. For the very key that opened the portal was as deadly as the Alamogordo Flame. . . .

A hard knock came at the door. Ed turned, puzzled, and went through his house to open it.

Captain Norris of the police strode into the room with a sour expression.
"What are you running here?" he demanded. "Where are the four birds that came in here a few minutes ago. Where have you been?"

Norris strode through the house until he came to the laboratory. He looked down at the body of Kingston's henchman and his eyebrows beetled. "This smacks of murder," he said flatly.
"It-"
"Self-defence," said Norris sourly. "Tell it to the judge." He looked around. "Where are the other three?"
"See here, Norris," snapped Bronson. "When I came to you about the invaders of earth you slapped me in the booby hatch. What would you say if I gave you proof?"
"It will have to be mighty good," snapped Norris.
From separate pockets Ed Bronson took the four bits of crystal. He set them side by side on the bench.
"Virginia," he said, knowing that she was listening. "Now!"

AND his hands scooped the crystals together.
"Who are you-hey!" exploded Norris. They had come across the barrier and were standing in the laboratory building. In the viewer stood Virginia Carlson. She smiled through at them and showed them that she had once more separated the bits of crystal.
"What goes on?" Norris stormed.
"You are now on Earth Two," said Bronson. "And if you want to get back play it smart."
"Don't threaten me-who are these?"
"Three thugs from Earth Three."
"Oh fine," jeered Norris. "This sounds like a real game. Now look-"
"You look," snapped Bronson. He set the controls and snapped the button and the scene outside of the laboratory disappeared. In its place was a tall pillar of flame.
"That," said Bronson, "is the pillar of atomic flame at Alamogordo, caused on Earth Two by the original Manhatten Project experiment in Nineteen forty-five." He spun the dials once more, and the city of Washington was visible at a distance. Its pillar of flame roared high into the sky. "That's Earth Two, Washington," he snapped at Norris.
"But what can you do?" asked Norris, completely/ dumbfounded.
"I can fight back-now," said Bronson harshly. "And you can sit in a corner and figure out a means for a man to come to official quarters to tell of an extra-space invasion without being clapped in the nuthouse!"
He turned from Norris and adjusted the steering controls.
His hand came down on the button.
And Earth Three Washington erupted in a massive incandescent flame.

Kingston shouted in anger as the report came. He twirled his own dials, found a response and pressed the button.

He cried, "Orders! Everyone possessing a Type One transmitter, help spread the atomic fire on Earth Two!"

Out across the face of Earth Three went the orders and the mobilized hundreds of thousands of people started their space resonators.

It was furious work. Bronson whirled the dials until the plane of view looked down upon Earth Two from several thousand miles above. From this point, Bronson knew that Kingston-from whatever hideout he was in-was directing a full-scale attack against Earth Two. The lights twinkled like a field of fireflies.
Bronson knew that his own attempts were pitiful against Kingston's massed attack.

Maybe Virginia was right. Maybe, in the final analysis Earth Three did hold all the tricks and would win. But whether or not
he won or lost Bronson was going to fight to the bitter end. He directed his fire against Earth Three-and saw two disappear as one flared forth.

Bitterly, Bronson nodded. Kingston was well staffed. He could without difficulty set a number of his stations to the job of sending back upon Earth Two the few fires that Bronson could start. He was one man fighting a world well-armed-a gnat batting its head against a wall of polished chromium steel.
Bronson stopped punching the button with a gesture of sheer futility.

And from the vantage point above Earth Two, his viewer showed a spreading holocaust that threatened to cover the entire globe from pole to pole. It would be but a matter of time before a gout of flame and horror erased him and removed all resistance to Kingston's plans. Switching the scene to Earth Three, Bronson saw that the pitifully few dots of flame had been removed.

Which was right? A world .playing with death in myriad or a world so conservative that it had not advanced to the point where it could turn the tables?

Bronson shook his head hopelessly.
The incandescent, flaming curtain almost obscured Earth Two now. The sky was alipht and the rumblings and roarings shook the rocks. Torrents of wind howled back and forth and carried minute bits of the flame with them, feeding on the very air that carried them. They landed and they started their own fires in a million smaller craters.

Bronson shook his head. There was not much point in making even one last gesture. He hit the control panel with his fist and slumped in his chair. He took one last look at Earth Two and felt futility once more at the spreading of the atomic horror.

And then Bronson sat bolt upright. A last gesture! Before he had rushed in where angles fear to tread!

He looked at the equipment and shook his head. But equipment made well can withstand a terrific overload for a brief time. Even the most delicate of component parts require measurable time between application of a tremendous overload and ultimate failure.

His left hand spun the dials and his right hand tuned the transmitter.

He hoped for a break-and he knew also that this was IT in capital letters. If it worked he was the dead winner. If it failed
he was doomed to remain on Earth Two to watch the arrival of atomic death.
But he had no other choice. Facing death either way he'd best go out making a try.

KINGSTON grunted sourly at the visiplate and pointed out a faint arc at one edge. "What's that?" he asked. "Do we need a new tube at this crucial moment?"
"No."
"Then what is it?"
Maddox turned the dials a bit and the arc came out of the frame clearly enough to display a disc. Faint, unreadable, but none the less a definite pattern.

Maddox looked at it carefully and then retreated the plane of view to many thousands of miles into deep space. Right out to the limit of his range he went.

And there were three discs, all of a size. One was, of course, the flaming Earth Two.
"We're approaching!" yelled Kingston. "Those other discs are Earth One and Three."
"But-"
"When their energy levels approach one another it will be unnecessary to employ a depth of penetration correction!" snapped Kingston. "For they'll all be on the same level."
"And when they do-we'll all go skyward."
The communicator clicked and Kingston read the tape. Then with a nasty chuckle, Kingston spun the dials and looked in upon Ed Bronson. "Darn few live pieces of element left on Two," sneered Kingston. "Made picking him out so much easier!"
"Yes." said Maddox dubiously, "but what in the devil is he doing?"
"He's-heavens!" screamed Kingston. His hand stabbed for the button like a striking snake.

And down upon Ed Bronson's stolen laboratory there descended a torrent of raw energy. In through the space resonator it came and it should have boiled out in the terrible holocaust that produced sunlike pillars of roaring atomic destruction.

Instead, the sheer energy came roaring in through the supercritical mass of space-resonant elements in Ed Bronson's stolen laboratory and entered the transmitter circuits, which were wide open to accept-nay, draw -all available energy from whatever source was available.

Into the circuits went the torrent of energy. It drove the focal volume out and out and
out even beyond Ed Bronson's faintest hope. It expanded the volume and then energized the transmission circuits.

And Earth Two-atomic holocaust and all -disappeared from the time-plane it had occupied for so many years. There was a shrinking-but no one was there to record this collapse of the special plane-and at once, a joining, and though it seemed as though Earth One had come into full visibility, this impression was due to the time-fields joining with the original plane.

VIRGINIA CARLSON, alone and wondering on Earth One, alternately watched her wrist watch and smoked furiously.

She watched the second hand creep to its appointed meeting with the top of the dial, and she scooped the space-resonant elements into the palms of her hands. This must be done quickly, so very swiftly lest Kingston manage to get through with more than could be handled safely.

Zero!
Virginia clapped her hands together, creating an instantaneous supercritical mass.

Intolerable heat burned her hands. There was a flash of flame that blinded her and there was the rush and clatter of debris showering the laboratory, shattering windows, and pelting her mercilessly. A heavy something crashed against her skull and drove her to the floor.

Her eyes opened and the space-resonant crystals, crushed by the impact, sifted through her inert fingers and mingled with the powdery untouchably-hot debris that was inch-deep on the floor. . . .

Leader Kingston's hand was stopped in mid-strike. He and his laboratory flamed into instant incandescence as matter was rent to mix with the raving splitting atoms of intolerable explosion.

For close were the temporal paths and the catastrophic energy of Earth Two found its outlet through the myriad of open paths furnished by the millions of commercially-used bits of space-resonant elements. From each of the crystals there poured a torrent of overwhelming flame that of itself formed more of the space-resonant elements.

The excess in entropy of Earth Two forced the transfer regardless of true tuning-as a nearby radio station will blast through to audibility regardless of the position of the
dial-or, perhaps better, the excess in entropy level sought the deficient level of entropy as a north magnetic pole seeks the south magnetic pole. Water-or energy-finds its own stable level.

So from the machines that employed space resonant elements on Earth Three there poured the flaming substance and the excess of energy, to spread in one mighty explosion that rent space itself, but died when there was no more substance left to convert.

And with the release of the temporal strains, there came once more that imperceptible withdrawal of strife in the cosmic planes. Now all was at stable rest and there remained but one time-plane. That plane
contained Earth One and all that belonged to it.
It contained a man hurled back through the space-resonant transmission equipment from Earth Two, from the one place where the atomic destruction had yet to reach, to the one and only place upon Earth One where space-resonant elements existed. And they alone had been tuned to Ed Bronson's stolen equipment, and held in supercritical mass for that bare instant of transfer by a woman's hands.
Burned, bruised and battered, Ed Bronson and Virginia Carlson would soon awaken from their unconsciousness to look into one another's eyes and wonder.

FEATURED NEXT ISSUE

# THE MASK OF CIRCE <br> An Astounding Complete Novel By HENRY KUTTNER PLUS MANY OTHER STORIES 




The third eye opened slowly and looked after the man

# Don't Look Now By HENRY KUTINER 

That man beside you may be a Martian. They own our world, but only a few wise and far-seeing men like Lyman know it!

THE man in the brown suit was looking at himself in the mirror behind the bar. The reflection seemed to interest him even more deeply than the drink between his hands. He was paying only perfunctory attention to Lyman's attempts at conversation. This had been going on for perhaps fifteen minutes before he
finally lifted his glass and took a deep swallow.
"Don't look now," Lyman said.
The brown man slid his eyes sidewise toward Lyman, tilted his glass higher, and took another swig. Ice-cubes slipped down toward his mouth. He put the glass back on the red-brown wood and signaled for a
refill. Finally he took a deep breath and looked at Lyman.
"Don't look at what?" he asked.
"There was one sitting right beside you," Lyman said, blinking rather glazed eyes. "He just went out. You mean you couldn't see him?"

The brown man finished paying for his fresh drink before he answered. "See who?" he asked, with a fine mixture of Boradom, distaste and reluctant interest. "Who went out?"
"What have I been telling you for the last ten minutes? Weren't you listening?"
"Certainly I was listening. That is-certainly. You were talking about-bathtubs. Radios. Orson-"
"Not Orson. H. G. Herbert George. With Orson it was just a gag. H. G. knew-or suspected. I wonder if it was simply intultion with him? He couldn't have had any proof-but he did stop writing science-fiction rather suddenly, didn't he? I'll bet he knew once, though."
"Knew what?"
"About the Martians. All this won't do us a bit of good if you don't listen. It may not anyway. The trick is to jump the gunwith proof. Convincing evidence. Nobody's ever been allowed to produce the evidence before. You are a reporter, aren't you?"

$H$OLDING his glass, the man in the brown suit nodded reluctantly.
"Then you ought to be taking it all down on a plece of folded paper. I want everybody to know. The whole world. It's important. Terribly important. It explains everything. My life won't be safe unless I can pass along the information and make people believe it."
"Why won't your life be safe?"
"Because of the Martians, you fool. They own the world."

The brown man sighed. "Then they own my newspaper, too," he objected, "so I can't print anything they don't like."
"I never thought of that," Lyman said, considering the bottom of his glase, where two ice-cubes had fused into a cold, immutable union. "They're not omnipotent, though. I'm sure they're vulnerable, or why have they always kept under oover? They're afraid of being found out. If the world had convincing evidence-look, people always believe what they read in the newspapers. Couldn't you-"
" Ha ," said the brown man with deef significance.

Lyman drummed sadly on the bar and murmured, "There must be some way. Perhaps if I had another drink. . . ."

The brown suited man tasted his collins, which seemed to stimulate him. "Just what is all this about Martians?" he asked Lyman. "Suppose you start at the beginning and tell me again. Or can't you remernber?"
"Of course I can remember. I've got practically total recall. It's something new. Very new. I never could do it bèfore. I can even remember my last conversation with the Martians." Lyman favored the brown man with a glance of triumph.
"When was that?"
"This morning."
"I can even remember conversations I had last week," the brown man said mildly. "So what?"
"You don't understand. They make us forget, you see. They tell us what to do and we forget about the conversation-it's post-hypnotic suggestion, I expect-but we follow their orders just the same. There's the oompulsion, though we think we're making our own decisions. Oh, they own the world, all right, but nobody knows it except me."
"And how did you find out?"
"Well, I got my brain scrambled, in a way. I've been fooling around with supersonic detergents, trying to work out something marketable, you know. The gadget went wrong-from some standpoints. Highfrequency waves, it was. They went through and through me. Should have been inaudible, but I could hear them, or rather-well, actually I could see them. That's what I mean about my brain being scrambled. And after that, I could see and hear the Martians. They've geared themselves so they work efficiently on ordinary brains, and mine isn't ordinary any more. They can't hypnotize me, either. They can command me, but I needn't obey-now. I hope they don't suspect. Maybe they do. Yes, I guess they do."
"How oan you tell?"
"The way they look at me."
"How do they look at you?" asked the brown man, as he began to reach for a pencil and then changed his mind. He took a drink instead. "Well? What are they likep"
"I'm not sure. I can see them, all right but only when they're dressed up."
"Okay, okay," the brown man sald pe
tiently. "How do they look, dreseed up?"
"Just like anybody, almost. They dress up in-inhuman skins. Oh, not real ones, imitations. Like the Katzenjammer Kids sipped into crocodile suits. UndressedI don't know. I've never seen one. Maybe they're invisible even to me, then, or maybe they're just camouflaged. Ants or owls or rats or bats or-"
"Or anything," the brown man said hastlly.
"Thanks. Or anything, of course. But when they're dressed up like humans-like that one who was sitting next to you awhile ago, when I told you not to look-"
"That one was invisible, I gather?"
"Most of the time they are, to everybody. But once in a while, for some reason, they-"
"Walt," the brown man objected. "Make sense, will you? They dress up in human skins and then sit around invisible?"
"Only now and then. The human skins are perfectly good imitations. Nobody can tell the difference. It's that third eye that gives them away. When they keep it closed, you'd never guess it was there. When they want to open it, they go invisible-like that. Fast. When I see somebody with a third eye, right in the middle of his forehead, I know he's a Martian and invisible, and I pretend not to notice him."
"Uh-huh," the brown man said. "Then for all you know, I'm one of your visible Martians."
"Oh, I hope not!" Lyman regarded him anxiously. "Drunk as I am, I don't think so, I've been trailing you all day, making sure. It's a risk I have to take, of course. They'll go to any length-any length at all-to make a man give himself away. I realize that. I can't really trust anybody. But I had to find someone to talk to, and I-" He paused. There was a brief silence. "I could be wrong," Lyman said presently. "When the third eye's closed, I can't tell if it's there. Would you mind opening your third eye for me?" He fixed a dim gaze on the brown man's forehead.
"Sorry," the reporter said. "Some other time. Besides, I don't know you. So you want me to splash this across the front page, I gather? Why didn't you go to see the managing editor? My stories have to get past the desk and rewrite."
"I want to give my secret to the world," Lyman said stubbornly. "The question is, how far will I get? You'd expect they'd have kdlled me the minute I opened my mouth
to you-except that I didn't say anything while they were here. I don't believe they take us very seriously, you know. This must have been going on since the dawn of history, and by now they've had time to get careless. They let Fort go pretty far before they crecked down on him. But you notice they were careful never to let Fort get hold of genuine proof that would convince people."

The brown man said something under his breath about a human interest story in a box. He asked, "What do the Martians do, besides hang around bars all dressed up?"
"I'm still working on that," Lyman said. "It isn't easy to understand. They run the world, of course, but why?" He wrinkled his brow and stared appealingly at the brown man. "Why?"
"If they do run it, they've got a lot to explain."
"That's what I meen. From our viewpoint, there's no sense to 1 . We do things illogically, but only because they tell us to. Everything we do, almost, is pure illogic. Poe's Imp of the Perverse-you could give it another name beginning with M. Martian, I mean. It's all very well for psychologists to explain why a murderer wants to confess, but it's still an illogical reaction. Unless a Martian commands him to.",
"You can't be hypnotized into doing anything that violates your moral sense," the brown man said triumphantly.

LYMAN frowned. "Not by another human, but you can be a Martian. I expect they got the upper hand when we didn't have more than ape-brains, and they've kept it ever since. They evolved as we did, and kept a step ahead. Like the sparrow on the eagle's back who hitch-hiked till the eagle reached his ceiling, and then took off and broke the altitude record. They conquered the world, but nobody ever knew it. And they've been ruling ever since."
"But-"
"Take houses, for example. Uncomfortable things. Ugly, inconvenient, dirty, everything wrong with them. But when men like Frank Lloyd Wright slip out from under the Martians' thumb long enough to suggest something better, look how the people reaok. They hate the thought. That's their Martians, giving them orders."
"Look. Why should the Martians care what kind of houses we live in? Tell me that."

Lyman frowned. "I don't like the note of skepticism I detect creeping into this conversation," he announced. "They care, all right. No doubt about it. They live in our houses. We don't build for our convenience, we build, under order, for the Martians, the way they want it. They're very much concerned with everything we do. And the more senseless, the more concern.
"Take wars. Wars don't make sense from any human viewpoint. Nobody really wants wars. But we go right on having them. From the Martian viewpoint, they're useful. They give us a spurt in technology, and they reduce the excess population. And there are lots of other results, too. Colonization, for one thing. But mainly technology. In peace time, if a guy invents jet-propulsion, it's too expensive to develop commercially. In war-time, though, it's got to be developed. Then the Martians can use it whenever they want. They use us the way they'd use tools or-or limbs. And nobody ever really wins a war-except the Martians."

The man in the brown suit chuckled. "That makes sense," he said. "It must be nice to be a Martian."
"Why not? Up till now, no race ever successfully conquered and ruled another. The underdog could revolt or absorb. If you know you're being ruled, then the ruler's vulnerable. But if the world doesn't know-and it doesn't-
"Take radios," Lyman continued, going off at a tangent. "There's no earthly reason why a sane human should listen to a radio. But the Martians make us do it. They like it. Take bathtubs. Nobody contends bathtubs are comfortable-for us. But they're fine for Martians. All the impractical things we keep on using, even though we know they're impractical-"
"Typewriter ribbons," the brown man said, struck by the thought. "But not even a Martian could enjoy changing a typewriter ribbon."

Lyman seemed to find that flippant. He said that he knew all about the Martians except for one thing-their psychology.
"I don't know why they act as they do. It looks illogical sometimes, but I feel perfectly sure they've got sound motives for every move they make. Until I get that worked out I'm pretty much at a standstill. Until I get evidence-proof-and help. I've got to stay under cover till then. And I've
been doing that. I do what they tell me, so they won't suspect, and I pretend to forget what they tell me to forget."
"Then you've got nothing much to worry about."

Lyman paid no attention. He was off again on a list of his grievances.
"When I hear the water running in the tub and a Martian splashing around, I pretend I don't hear a thing. My bed's too short and I tried last week to order a special length, but the Martian that sleeps there told me not to. He's a runt, like most of them. That is, I think they're runts. I have to deduce, because you never see them undressed. But it goes on like that constantly. By the way, how's your Martian?"

The man in the brown suit set down his glass rather suddenly.
"My Martian?"
"Now listen. I may be just a little bit drunk, but my logic remains unimpaired. I can still put two and two together. Either you know about the Martians, or you don't. If you do, there's no point in giving me that, 'What, my Martian?' routine. I know you have a Martian. Your Martian knows you have a Martian. My Martian knows. The point is, do you know? Think hard," Lyman urged solicitously.


O, I haven't got a Martian," the reporter said, taking a quick drink. The edge of the glass clicked against his teeth.
"Nervous, I see," Lyman remarked. "Of course you have got a Martian. I suspect you know it."
"What would I be doing with a Martian?" the brown man asked with dogged dogmatism.
"What would you be doing without one? I imagine it's illegal. If they caught you running around without one they'd probably put you in a pound or something until claimed. Oh, you've got one, all right. So have I. So has he, and he, and he-and the bartender." Lyman enumerated the other barflies with a wavering forefinger.
"Of course they have," the brown man said. "But they'll all go back to Mars tomorrow and then you can see a good doctor. You'd better have another dri-"

He was turning toward the bartender when Lyman, apparently by accident, leaned close to him and whispered urgently,
"Don't look now!"

The brown man glanced at Lyman's white face reflected in the mirror before them.
"It's all right," he said. "There aren't any Mar-"

Lyman gave him a fierce, quick kick under the edge of the bar.
"Shut up! One just came in!"
And then he caught the brown man's gaze and with elaborate unconcern said, "-so naturally, there was nothing for me to do but climb out on the roof after it. Took me ten minutes to get it down the ladder, and just as we reached the bottom it gave one bound, climbed up my face, sprang from the top of my head, and there it was again on the roof, screaming for me to get it down."
"What?" the brown man demanded with pardonable curiosity.
"My cat, of course. What did you think? No, never mind, don't answer that." Lyman's face was turned to the brown man's, but from the corners of his eyes he was watching an invisible progress down the length of the bar toward a booth at the very back.
"Now why did he come in?" he murmured. "I don't like this. Is he anyone you know?"
"Is who-?"
"That Martian. Yours, by any chance? No, I suppose not. Yours was probably the one who went out a while ago. I wonder if he went to make a report, and sent this one in? It's possible. It could be. You can talk now, but keep your voice low, and stop squirming. Want him to notice we can see him?"
"I can't see him. Don't drag me into this. You and your Martians can fight it out together. You're making me nervous. I've got to go, anyway." But he didn't move to get off the stool. Across Lyman's shoulder he was stealing glances toward the back of the bar, and now and then he looked at Lyman's face.
"Stop watching me," Lyman said. "Stop watching him. Anybody'd think you were a cat."
"Why a cat? Why should anybody-do I look like a cat?"
"We were talking about cats, weren't we? Cats can see them, quite clearly. Even undressed, I believe. They don't like them."
"Who doesn't like who?"
"Whom. Neither likes the other. Cats can see Martians-sh-h!-but they pretend not to, and that makes the Martians mad. I have a theory that cats ruled the world
before Martians came. Never mind. Forget about cats. This may be more serious than you think. I happen to know my Martian's taking tonight off, and I'm pretty sure that was your Martian who went out some time ago. And have you noticed that nobody else in here has his Martian with him? Do you suppose-" His voice sank. "Do you suppose they could be waiting for us outside?"
"Oh, Lord," the brown man said. "In the alley with the cats, I suppose."
"Why don't you stop this yammer about cats and be serious for a moment?" Lyman demanded, and then paused, paled, and reeled slightly on his stool. He hastily took a drink to cover his confusion.
"What's the matter now?" the brown man asked.
"Nothing." Gulp. "Nothing. It was just that-he looked at me. With-you know."
"Let me get this straight. I take it the Martian is dressed in-is dressed like a human?"
"Naturally."
"But he's invisible to all eyes but yours?"
"Yes. He doesn't want to be visible, just now. Besides-" Lyman paused cunningly. He gave the brown man a furtive glance and then looked quickly down at his drink. "Besides, you know, I rather think you can see him-a little, anyway."

THE brown man was perfectly silent for about thirty seconds. He sat quite motionless, not even the ice in the drink he held clinking. One might have thought he did not even breathe. Certainly he did not blink.
"What makes you think that?" he asked in a normal voice, after the thirty seconds had run out.
"I-did I say anything? I wasn't listening." Lyman put down his drink abruptly. "I think I'll go now."
"No, you won't," the brown man said, closing his fingers around Lyman's wrist. "Not yet you won't. Come back here. Sit down. Now. What was the idea? Where were you going?"
Lyman nodded dumbly toward the back of the bar, indicating either a juke-box or a door marked MEN.
"I don't feel so good. Maybe I've had too much to drink. I guess I'll-"
"You're all right. I don't trust you back there with that-that invisible man of yours. You'll stay right here until he leaves."
"He's going now," Lyman said brightly. His eyes moved with great briskness along the line of an invisible but rapid progress toward the front door. "See, he's gone. Now let me loose, will you?"

The brown man glanced toward the back booth.
"No," he said, "He isn't gone. Sit right where you are."
It was Lyman's turn to remain quite still, in a stricken sort of way, for a perceptible while. The ice in his drink, however, clinked audibly. Presently he spoke. His voice was soft, and rather soberer than before.
"You're right. He's still there. You can see him, can't you?"

The brown man said, "Has he got his back to us?"
"You can see him, then. Better than I. can maybe. Maybe there are more of them here than I thought. They could be anywhere. They could be sitting beside you anywhere you go, and you wouldn't even guess, until-" He shook his head a little. "They'd want to be sure," he said, mostly to himself. "They can give you orders and make you forget, but there must be limits to what they can force you to do. They can't make a man betray himself. They'd have to lead him on-until they were sure."

He lifted his drink and tipped it steeply above his face. The ice ran down the slope and bumped coldly against his lip, but he held it until the last of the pale, bubbling amber had drained into his mouth. He set the glass on the bar and faced the brown man.
"Well?" he said.
The brown man looked up and down the bar.
"It's getting late," he said. "Not many people left. We'll wait."
"Wait for what?"
The brown man looked toward the back booth and looked away again quickly.
"I have something to show you. I don't want anyone else to see."

Lyman surveyed the narrow, smoky room. As he looked the last customer beside themselves at the bar began groping in his pocket, tossed some change on the mahogany, and went out slowly.

They sat in silence. The bartender eyed them with stolid disinterest. Presently a couple in the front booth got up and departed, quarreling in undertones.
"Is there anyone left?" the brown man
asked in a voice that did not carry down the bar to the man in the apron.
"Only-" Lyman did not finish, but he nodded gently toward the back of the room. "He isn't looking. Let's get this over with. What do you want to show me?"

The brown man took off his wrist-watch and pried up the metal case. Two small, glossy photograph prints slid out. The brown man separated them with a finger.
"I just want to make sure of something," he said. "First-why did you pick me out? Quite a while ago, you said you'd been trailing me all day, making sure. I haven't forgotten that. And you knew I was a reporter. Suppose you tell me the truth, now?"

$\Delta^{Q}$QUIRMING on his stool, Lyman scowled. "It was the way you looked at things," he murmured. "On the subway this morn-ing-I'd never seen you before in my life, but I kept noticing the way you looked at things-the wrong things, things that weren't there, the way a cat does-and then you'd always look away-I got the idea you could see the Martians too."
"Go on," the brown man said quietly.
"I followed you. All day. I kept hoping you'd turn out to be-somebody I could talk to. Because if I could know that I wasn't the only one who could see them, then I'd know there was still some hope left. It's been worse than solitary confinement. I've been able to see them for three years now. Three years. And I've managed to keep my power a secret even from them. And, somehow, I've managed to keep from killing myself, too."
"Three years?" the brown man said. He shivered.
"There was always a little hope. I knew nobody would believe-not without proof. And how can you get proof? It was only that I-I kept telling myself that maybe you could see them too, and if you could, maybe there were others-lots of others-enough so we might get together and work out some way of proving to the world-"

The brown man's fingers were moving. In silence he pushed a photograph across the mahogany. Lyman picked it up unsteadily.
"Moonlight?" he asked after a moment. It was a landscape under a deep, dark sky with white clouds in it. Trees stood white and lacy against the darkness. The grass was white as if with moonlight, and the
chadows blurry.
"No, not moonlight," the brown man said. "Infra-red. I'm strictly an amateur, but lately I've been experimenting with infrared film. And I got some very odd results."

Lyman stared at the film.
"You see, I live near-" The brown man's finger tapped a certain quite common object that appeared in the photograph. "-and something funny keeps showing up now and then against it. But only with infra-red film. Now I know chlorophyll reflects so much infra-red light that grass and leaves photograph white. The sky comes out black, like this. There are tricks to using this kind of film. Photograph a tree against a cloud, and you can't tell them apart in the print. But you can photograph through a haze and pick out distant objects the ordinary film wouldn't catch. And sometimes, when you focus on something like this-" He tapped the image of the very common object again. "you get a very odd image on the film. Like that. A man with three eyes."
Lyman held the print up to the light. In silence he took the other one from the bar and studied it. When he laid them down he was smiling.
"You know," Lyman said in a conversational whisper, "a professor of astrophysics at one of the more important universities had a very interesting little item in the Times the other Sunday. Name of Spitzer, I think. He said that if there were life on Mars, and if Martians had ever visited earth, there'd be no way to prove it. Nobody would believe the few men who saw them. Not, he said, unless the Martians happened to be photographed. . . ."

Lyman looked at the brown man thoughtfully.
"Well," he said, "it's happened. You've photographed them."
The brown man nodded. He took up the prints and returned them to his watch-case. "I thought so, too. Only until tonight I couldn't be sure. I'd never seen one-fully -as you have. It isn't so much a matter of what you call getting your brain scrambled with supersonics as it is of just knowing where to look. But I've been seeing part of them all my life, and so has everybody. It's that little suggestion of movement you never catch except just at the edge of your vision, just out of the corner of your eye. Something that's almost there-and when you look fully at it. there's nothing. These
photographs showed me the way. It's not easy to learn, but it can be done. We're conditioned to look directly at a thing-the particular thing we want to see clearly, whatever it is. Perhaps the Martians gave us that conditioning. When we see a movement at the edge of our range of vision, it's almost irresistible not to look directly at it. So it vanishes."
"Then they can be seen-by anybody?"

6 I'VE learned at lot in a few days," the brown man said. "Since I took those photographs. You have to train yourself. It's like seeing a trick picture-one that's really a composite, after you study it. Camouflage. You just have to learn how. Otherwise we can look at them all our lives and never see them."
"The camera does, though."
"Yes, the camera does. I've wondered why nobody ever caught them this way before. Once you see them on film, they're un-mistakable-that third eye."
"Infra-red film's comparatively new, isn't it? And then I'll bet you have to catch them against that one particular background -you know-or they won't show on the film. Like trees against clouds. It's tricky. You must have had just the right lighting that day, and exactly the right focus, and the lens stopped down just right. A kind of minor miracle. It might never happen again exactly that way. But . . . don't look now."
They were silent. Furtively, they watched the mirror. Their eyes slid along toward the open door of the tavern.

And then there was a long, breathless silence.
"He looked back at us," Lyman said very quietly. "He looked at us . . . that third eye!"
The brown man was motionless again. When he moved, it was to swallow the rest of his drink.
"I don't think that they're suspicious yet," he said. "The trick will be to keep under cover until we can blow this thing wide open. There's got to be some way to do itsome way that will convince people."
"There's proof. The photographs. A competent cameraman ought to be able to figure out just how you caught that Martian on film and duplicate the conditions. It's evidence."
"Evidence can cut both ways." the brown
(Concluded on page 139)


I'd never have crawled out into that everlasting

## AND WE <br> SAIIED

A Complete Novelet By

## CHAPTER I

## Graveyard of Old Ships

yOU'VE seen them-the old ships, the battered and ruined ships, the ships that have made one voyage too many, and are so ancient you can't remember their names or the reputations they've earned for themselves in deep space! Sure you've seen them! Black hulls stretching away for miles
into the red sunset-ships that can be bought for a song if you've a song left in you and still want to go adventuring on the rim of the System.

Do you know how it feels not to have a song left in you? Do you know how it feels to be a legend without substance-the lad who broke the bank at Calliato City and walked out two days later without a penny to his name?

night of space for any other woman

## the MIGHTY DARK

## FRANK BELKNAP LONG

Pete knew and he kept harping on it. "If you'd quit that first night, Jim, instead of pushin' it all back across the board!"

There was awe in his eyes when he looked at me, and then he'd look at the ships, and I could guess what he was thinking. Good old Pete! When he shut his eyes I was still wearing a golden halo.

Lucky Jim Sanders, strong as an ox and coming along fine-born lucky and loving
life too much to worry his head about the future. But when life rises up and wallops you and lays you out flat you forget the good times and your own recklessness, and the inner strength and the laughing girls, and you just want to sit down and never get up!

I'd met Pete down in the valley, sitting on a rock. He didn't want to get up either. He wanted to croak.

Steers a Flying Coffin through Outer Space!

A wiry little cuss with blue eyes and a fringe of beard on his chin that had just grown there and stayed. Clothes that made him look like he was trying to spin a cocoon about himself.

You bet he had a story! A hard luck story that would have made Sinbad look like a quiet family man. But when I like someone straight off, his past is just so much water over the dam if he wants it that way.

I never did find out the truth about Pete -right up until we parted. I had a lot of fun kidding him about it. "Rip Van Winkle slept twenty years, but you slept a thousand, Pete! You crawled out of an old ship and went to sleep in the desert.
"Did you get tired, Pete? Of the roar and the dust and the night-the crocus-flower faces of Venusians, the gopher-girls of Mars and the pinwheeling stars-of the night and the dust and the roar? Couldn't you take it in the old days, Pete, when ships kept bursting apart at the seams and there was an ant hill on Callisto called a colony, with twenty living dead men in it?
"The ant hill's a city now, Pete. And you're still Pete, still around, and I'm just cutting my wisdom teeth on my first streak of hard luck! Hard like a biscuit, Petel A dog biscuit flung to a dog!"

IWAS raving even more wlldy as I stared out over that graveyard of old ships, feeling sorry for myself, envying Pete because he didn't seem to care much whether he lived or died.

But I was wrong. Pete did care.
"If we could just get back to Earth, Jim!" he pleaded. "If we could smell the green earth again, after it's been rainin'! If we could just get a whiff $o$ ' the sea!"

I swung on him. "What chance have we? You don't value dough so much when you've got it to toss around. But when you're stony broke you get to feeling like a stone. Weighed down, petrified! You can't do anything without dough!"

Pete made a clucking sound. "All right! You got trimmed, Jim-and bad! But last night you had another streak of luck!"

I stared at him, hard.
He gestured toward the old ships. "There's a yardmaster down there with a list of ships a yard long. If you want to buy a ship you just stand around twiddling your thumbs until he notices you. If he sizes you up right -you get a bargain!"
"You mean if he thinks you've got some dough, but not much?"
"Uh huh!" Pete winked. "But if he thinks you've got a lot of dough you could get a bargain too. Without shelling out a cent!"

It didn't take me long to get what Pete was driving at. I'd taken a beating, and everyone knew it. But everyone knew my face too! I was still Lucky Jim Sanders, wearing a golden halo!

Pete's eyes were shining like Halley's Comet when I got through coaching him. It was his idea, but when I tossed it back at him wrapped up in dialogue the sparkle took his breath away!

We went down into the valley where the ships stood row on row, shouting and reeling as though we'd been celebrating for a week. The yardmaster heard us before he saw us. But he saw us quickly enough.

His lips tightened as he came striding toward us-a bushy-browed, hard-bitten old barnacle with a orusty stare. I could tell the exact instant when he recognized me. His jaw dropped about six inches; then closed with a click.
"Now!" I whispered to Pete.
Pete raised his voice. "You're higher than a kite!" he shouted. "Why buy a flying coffin when you could own the sweetest little job in the System?"
"What I do with my dough is my own business!" I shouted back. "They knew how to build ships in the old days!"
"I tell you-you're crazier than a diving loon!"
"Sure I'm crazy!" I agreed. "Only a baby with curvature of the brain could win back a cool eighty thousand on one spin of the wheel! But I'm sane enough not to want to thin out my take!"
"You'd flip a coin for one o' those flyin' coffins?"
"Why not?" I roared belligerently. "I've got five thousand that says I know what I'm doing! Five thousand against-the right to pick my own ship!"

I tripped myself then, deliberately by accident. I went sprawling over Pete's outthrust right leg. When I picked myself up I must have looked as helpless as a newborn babe, because the yardmaster was gripping my arm and refusing to let go.
"You were saying, mister?"
He was seeing the halo, of course, the rim of gold about my head. I was pretty sure he wouldn't even ask me to cover my bet.

The copper piece on my palm seemed to fascinate him. He couldn't take his eyes from it.
"What will it be?" I asked.
He swallowed hard. "Heads!" he said.
I flipped the coin.
"Tails it is!" I told him.
He stared at my palm suspiciously. I grinned and handed him the copper piece. There was nothing wrong with it.
"I never cheat!" I said.
I walked over to where she stood collecting rust in the red Jupiterlight-the ship I'd picked out. She wasn't so ancient as old ships go. She must have been built around 2097, just a hundred years before I'd won her. We were riding hard on your luck!
"Got a navigator's license?" the yardmaster asked.
"Sure! Want to see it?"

HE SHOOK his head. "Never mind! Take her and get going before I start telling myself Im the System's prize sap!"

The control room was as musty as a tomb, and when I switched on the cold lights our shadows looked like black widow spiders dangling from the overhead.
"She'll never hold together!" Pete groaned.
"Don't be like that!" I chided. "All of these ships have to pass a rigid inspection."

Pete blinked. "You sure of that?"
"Well . . . maybe the inspectors skip a ship here and there," I conceded.

I went over her from stem to stern, to make sure she wouldn't fly about when I gave her the gun. While I inspected the atomotors Pete kept giving me uneasy looks, like he was dying to ask me where I'd picked up my knowledge of ghost ships, but was scared I'd say something to shake his confidence in $m e$.

I wasn't worried. I can be awfully sure of myself when I'm around anything mechanical, from an inch-high rheostat to the guide lines on a sixty-foot control board.
The ship had the right feel about her. I'd have trusted my life to her, but Pete kept sniffing like he could smell the odor of charred flesh. To make him feel better I thumped him on the back and told him not to worry, that he'd appreciate what a fine ship she was when he saw the green Earth filling the viewpane, misty with spring rains. He'd lived alone so long he'd become suspi\&ous of everything.

Eaten up by his own fears, tormented by
shadows, an old man before his time. Some of my confidence seemed to seep into him as I talked. He didn't look so old when he looked up.

He was sitting on a bulkhead chronometer, which meant that time was ticking away right under him. He was a dead ringer for old Father Time himself, but for an instant as he returned my stare there was a strange look in his eyes. As though he'd shrugged off his woes, and was gazing straight back across the years at his lost youth.
"Maybe you're right, Jim," he said. "When do we take off?"
"Before the yardmaster visiphones Callisto City to find out if I really did make a killing last night!" I told him.

I was standing close to the control board, my thumb on the oscillatory circuit. There are two ways of starting an atomotor. You can test out the strength of the circuit by letting the power drum through the board before you give the dial a full turn.
Or you can switch the power on full blast, reaching peak in ten seconds and letting the ship do its own testing. I liked the second way best. A ship that can't absorb the shock of a take-off at sixty gravities will almost certainly fly apart in space.
I switched the power on full strength. From the corner of one eye I had a brief, soul-satisfying glimpse of Pete stiffening in utter consternation. A mean trick to play on a pal? No. I don't think so. I wasn't asking him to take the plunge alone. I was sharing the risks, and I was doing him a favor.

When you're taking a swim you just prolong the agony by sitting around on a diving raft wriggling your toes in the icy water. It's best to jump right in, and get it over with.

We must have been twenty thousand feet up when Pete's startled face slipped out of focus, and I found myself on my hands and knees on a deck that was revolving like a centrifuge. Cathode rays were darting in all directions, and everything int the path of the rays glowed with fluorescent light. I knew that the ship was X-raying itself while fog condensed on the negative ions of its hull and dissolved into sizzling steam.

I didn't try to get up immediately. I waited for the deck to stop gyrating and the strength to return to my wrists. My right arm was numb and tingling. When I raised my hands

I could see the bones in my fingers. All pilots have skeleton hands when they take off. It's a second-order cathode ray effect which vanishes after a minute or two. It doesn't mean a thing. Not if you're sound of mind and limb, and the ship you've picked is spaceworthy.

But Pete seemed to take a different view. He was staring at me in horror. I knew what he was thinking. If I was pinch-hitting for Death-I'd got off to a good start.

He, too, was on his knees on the deck, his shoulders swaying, his face turned toward me in bitter reproach.
Suddenly his eyes blazed with anger. "Son. I ought to get up and bust you one on the jaw! If you'd warned me, I could have braced myself!"

I hadn't thought of that. But before I could tell him how sorry I felt, he was chuckling!
"It's all right, Jim! No bones broken! She sure took it beautifully, eh?"
"She sure did!" I muttered.
I watched him get to his feet and go reeling toward the viewpane. Mr. Chameleon was the name for him! He could change his moods so fast, his mental outlook must have been as dazzling as a display of fireworks.

A guy like that just couldn't hold a grudge. If you poked him in the ribs he'd blacken your eye and give you his last ounce of tobacco. Good old Pete! Insatiably curious he was too, like a little boy at a circus side show.

He just couldn't wait to see how far up we were, had to look out the viewpane before his brain stopped spinning.

I was satisfied just to sit on the deck and watch him.
F'or an instant he stared out, his face pressed to the pane, the pulse in his forehead swelling visibly.

Then, abruptly, he turned and flashed me a startled look. "Jehoshaphat, Jim! Wewe can't be travelin' that fast! Callisto's just a little crawlin' red gnat in the middle o' the sky!"


## CHAPTER II

Planet Shift

ISTARED at him une asily. He was talking like an idiot. I knew that Jupiter itself would have to dwindle to a small disk before Callisto could become a pin point of light. When you take off from a little moor the glare of its primary magnifies its surface features. For about one hour Callisto would look like a black orchid dwindling in a blaze of light. Then it would whip away into emptiness to reappear as a glowing dot.
"Jupiter looks funny too!" Pete muttered. "Mighty funny! Like a big slice o' yellow cheese with golden bands around it, spreadin' out-"

That, did it! I got up and walked to the viewpane, slapping my hands together explosively. I had to let off steam in some way. My steadiness surprised me. My eyelids felt a little heavy, but there was nothing wrong with my space legs.

When I started out I didn't see the red gnat. But I saw something else, something that gave me a tremendous shock. What I saw was a great ringed planet swimming in a golden haze!

When I turned my face must have given Pete a jolt. He gulped so hard I was afraid he'd swallow his Adam's apple and choke on the rind.
"What is it, Jim?" he asked huskily. "You look like you'd seen a ghost!"

I laughed without amusement. "I did! A ghost planet! And we're not moving away from it! It's getting larger!"

Pete stared. "Sure you feel okay, son?"
"Not too good!" I said, looking him straight in the eye. "Take another look!"
I gestured toward the viewpane. "Go on! See for yourself!"
Pete stood for a long time with his face pressed to the pane, his shoulders hunched. I thought he was never going to turn.

A crazy thought flashed through my mind. I'd seen men in a state of collapse on their feet, their faces blanched, unable to move or speak. Had Pete been shocked speechless?

I was sweating as he turned. His face was blanched, all right, but he could speak, and did!
"I've got to sit down, Jim!" he choked out.

He reeled to the bulkhead chronometer, sat down and started tugging at his chin. After a moment he whipped his hand from his face.
"You're an educated man, Jim," he said. "I'm not! If you tell me we're headin' straight for Saturn, I won't call you a liar!"
"You won't?"
"No, Jim. Say a guy brings you a watch. The hands go in the wrong direction, the tickin's so loud it drives you nuts. 'Buddy,' he says, 'if you want to know what time it isn't, this watch will tell you.'
"Well, say you've got to know the time, say your life depends on it. What do you do, Jim? Lift him up by his seat and toss him out the door? Shucks, no! You listen while he talks. You ask him to take the watch apart and show you what makes it tick."
"Fine!" I said. "So I'm the man with the watch! I put Saturn outside the viewpane just to torture you!"
He looked so miserable I felt sorry for him. "I didn't mean it that way, Jim," he apologized. "But I'm plumb scared! Somethin's happenin' to space! Somethin' ghastly awful! You must have some idea what's causin' it!"
"Don't kid yourself!" I todd him. "A wild guess isn't an idea."
"Let me be the judge o' that, son!"
"Well-all right. Maybe we're seeing Saturn as a magnified image-through some kind of magnifying space drift. A big, floating lens in space, made up of refractive particles spread out in a cloud. A lens with more magnifying power than the five-hundred inch! It isn't as haywire as it sounds, if that's any comfort to you!"
"But no pilot's ever seen anything like that, Jim!" Pete protested, with unanswerable logic.
He tapped his brow. "It could be in here, Jim! That's what I'm afraid of! A sickness of the mind-"
"Don't start that!" I warned, striking my knee with my fist. "Don't even think it!"

My voice was getting out of control. I was yelling at him, and there was no reason for it.

He had every right to his opinion.
"What are we goin' to do, Jim?"
"Check up first!" I snapped. "If I have to use every instrument on the ship-"

TSTOPPED. The door into the pilot room had opened and closed, and a clumping figure was coming toward us across the deck.

I heard Pete suck in his breath. I couldn't seem to draw a deep breath. There was a physical quality of eeriness in the sight which took me by the throat.

The figure was wearing a light spacesuit, vacuum-sealed at the neck. A transparent headpiece bulged out above the flexible garment, a great glistening globe encasing the head of the most beautiful woman I'd ever seen.

Her hair was piled in a tumbled mass of gold on her head and there was a delicate flush on her skin, visible through the glowing sphere. She was staring at me without seeming to see me, her cheeks shadowed by long, convex lashes.

Some women mature into loveliness; others have it thrust upon them. I didn't tell myself that straight off. I was too stunned to make up pretty speeches. But later I realized that her hair, eyes, and complexion were as near perfect as they could be without looking artificial.

Her suit was cumbersome, and it weighed her down. But there was something weird, spine-chilling about the way she moved. She walked with a smooth flow of motion, almost as if she were skating across the deck.

I was a little afraid of what Pete might do. He was shaking with excitement, and I could see that he was keyed up to a dangerous pitch. Doubting his own sanity and mine to boot!

But I wasn't going to be stampeded into fear! I'd been under a tremendous strain, sure. But I knew a flesh-and-blood woman when I saw one! The girl was real! The pulse beating in her forehead was real and so were her eyes and hair! We hadn't made even a cursory search of the ship. There were plenty of dark little corners where she could have concealed herself.

Suddenly I saw that she'd glided past Pete and was facing away from us, her hands extended toward the control board. A little to the left of the board there was a dull flickering on the bulkhead.

For an instant I mistook the weird glimmer for a shadow cast by her swaying shoulders. I thought she was just reaching for the board to steady herself.

Then I saw her hands moving on the board and knew that a gravity panel was swinging open on the void! I leapt toward her
with a warning cry.
If she heard me she gave no sign. You can hear a shout through a thin helmet, but she didn't even turn. She just darted sideways and then forward-straight through the panel into the utter black emptiness of space! A flash of light-and she was gone!

The panel closed so soundlessly you could have heard a pin drop.

I had trouble with my breath again. For an instant my throat had an iron brace around it. Then I remembered that she hadn't gone out unprotected into the void. Her suit would keep the cold out, and the magnetic suction disks on her wrists and knees would enable her to cling to the hull, to crawl along it. But if she'd gone out to do a repair job on the hull, she had the kind of courage you read about in the Admiralty Reports.

If I had it, it was glazed over with a thick coating of ice. I stood braced against the bulkhead, the old Adam in me chanting a hymn to life, a hymn to the Sun, and feeling glad I wasn't in her shoes.

What a way for a guy to feel!
Then something happened to me. I saw her face again, deep in my mind, and it seemed to be pleading with me. It wasn't just a pleading. There was music and wonder in it !

I could hear the pound of surf on a golden beach, and the sun was warming the sea and the air, and she was in my arms and I was kissing her.

Then it was night and the palms were bending lower over us, and the moonlight was so bright I could hardly see the web of radiance around her head. But I could hear the rise and fall of paddles, and someone singing far off over the water. We were running down the beach toward the pounding surf. Water was glistening on her tanned arms and I could hear her laughter.

Pete had leapt to his feet. He was staring at me, sweat standing out on his forehead in great, shining beads.
"What did I tell you, son?" he groaned. "A sickness of the mind-"
His voice thickened, broke.
The terror in his stare made me realize how close to the brink I was. His refusal to believe the evidence of his eyes was an attempt at rationalization, but it wasn't a good attémpt.

He was assuming the worst, taking his own madness for granted.

GRABBED him by both shoulders.
"You're as sane as I am!" I yelled, shaking him. "That girl was here when we took over! A stowaway! What's so crazy about that?"

Pete's throat moved as he swallowed. "Let go of me, Jim! Believe what you want! I'm going crazy-and tryin' to explain it won't stop it!"
"Common sense will stop it! Did you notice that vacuum suit she was wearing? It's as ancient as the ship! It must have come out of the ship's locker!"

Pete stared at me until I lost my head. "She's out on the hull alone! You hear? Alone, in a suit that won't give her much. protection! If her irons slip she'll be done for! She's either stark staring mad or-"

My thoughts came so fast I had to stop. But my mind raced on. Was she actually mad? Or had she crawled out of hiding to find herself in a ship that was fast becoming a droning death trap?

A woman hiding in the dark, with her senses abnormally alert, would be quick to get the awful feel of a ship about to fly asunder. She wouldn't have to guess. She'd know!

A girl pilot? Well, why not? There were plenty of girl pilots working their fingers to the bone to earn passage money in Callisto City. Stowing away would be a short cut to freedom and the green hills of Earth. You couldn't blame a girl for hating the dust and roar of an atomic power plant, or the drudgery of a mining job.

I could picture her succumbing to blind panic, ripping a suit down from the locker, and crawling out into the void to tighten the gravity bolts on the naked hull with a magneto-wrench.
"Jeebies always try to kill themselves!" Pete croaked. "You get to pitying them! Your head swells and you get all choked up with pity! And that's when you know you've blown your top!"

I answered that with a voice that rang hard. "All right, have it your own way! She's a jeebie! But I'm not going to stand here pitying her! "'m going to help her!"

I never quite knew how I reached the locker, with imaginary eyes glittering at me from every corner of the ship. Pete's wild talk hadn't really shaken me. All loose talk about the mind is dangerous, of course. But I wasn't scared of anything I couldn't see.

The idea of a haunted ship seemed silly to
me. Almost laughable. But I had to admit the ship had the feel of occupancy about it. I half expected that a second helmeted figure would pop out of the shadows before I could go to the aid of the first.

My palms were sweating as I struggled into a spacesuit that hadn't been occupied for at least a century. There were five suits hanging in the locker, and I picked the biggest one. It was a little too small for me, but I couldn't complain much on that score. It kinked a little, then drew tight over the shoulders, but nothing ripped when I moved.

IMUST have looked grotesque in that old, stiff, freakish garment, all bulges and creases. A big flaring dome over my head, feet like metal pancakes clattering on the deck.
But I wasn't concerned with my appearance, just my oxygen intake.
Back by the gravity panel, Pete tried desperately to stop me. His bony hands went out, plucked at my wrists. I couldn't hear him babbling outside the helmet. But I could see his shining eyes and moving lips. His eyes were tortured, pleading.

He might as well have been pleading with a man a hundred miles away-or a century dead!
I was deaf to reason. I was feeling merely a blind instinct to help a woman who had taken on a man's job.

Pete's eyes followed me as I went clumping toward the control board, and I felt a sudden tug of pity for him. If I never came back, he'd miss me a lot. Good old Pete! To make him feel better I flashed him a smile and waved him back.
"Sit down and relax, old-timer!" I said. "I'm just going out for a little breath of fresh air!"

It was just as well he couldn't hear me. He was real touchy about space. You had to treat it with respect. The lads who sailed the seas of Terra before Pete started reaching for the stars with his little pink hands had what it takes, and their lingo is the spaceman's lingo still. But to Pete spacemen were a notch higher in every respect. Nothing riled him more than loose talk about reading the weather by the glass or taking a squint at the North Star. Or going out for a breather on deck!

I thought of all that as I went out. Oh, Pete was a special character if ever there was one.

## CHAPTER III

The Mirage Pup

ICRAWLED out into the void on my hands and knees, dinging to the rough hull, digging with my magnetic irons into the thick coating of meteoric dust and grit and rubble the ship had picked up in deep space.

Brother, it's all yours if you want it! A wind that isn't a wind tearing at you; the stars blazing in a black pit, and a million light years staring you in the face, doing your thinking for you, warning you that forever is too long a time to go somersaulting through space shrouded in a blanket of ice.

You feel your grip slipping, know it can't slip, and dig, dig with your knees. You look up and there's the flame of a rocket jet missing you by inches. You look down and there's nothing to maim or sear you-just utter blackness. Believe me, that's worse!

I stared straight across the hull through a spiraling splotch of blue flame toward the stern rocket jets. The flame whorl came from diffuse matter friction. Tiny particles hit the ship, bounced off and set up an electrical discharge in the ether.

It's cool and it doesn't burn. If you keep your head you can crawl right through it.

I started crawling the instant I saw her. She was clinging to the hull between two flaring rocket jets, her magneto-wrench rising and falling in the unearthly glare.

A swaying figure wrapped in blue light, her face looking pinched and white and faraway through the globe on her shoulders. The helmet itself looked small against the vast backdrop of space. But as I crawled toward her it kept getting larger-like an expanding soap bubble. I had the crazy feeling that there was a big crowd down below, waiting to jeer or cheer!
I threw the illusion off and let my irons carry me back and forth in a crazy kind of jig. The magnetics had to be guided by my muscles and my will. It was twist and turn, go limp and brace hard, relax and edge forward.

Suddenly the ship lurched, giving off a blinding flare. I knew it was just a stress we'd hit-one of those little pockets in space where the diffuse matter of the void is sucked
dry by energies that don't show up on the instruments.

Ships pass through stresses fast. But when the flare vanished I was dangling heed downwards from the hull, my right knee attached to solid metal, the rest of me hugging empty space.
Furiously I slammed my left knee upward, twisted my body forward, and got a firm grip on the hull again with my wrist irons. It was a contortionist feat which brought the blood rushing to my ears. When my head stopped spinning I was staring into the face of the girl I'd risked my neck to save in an inferno of ice and flame.

We were so close our helmets almost touched. But she wasn't looking at me. Six feet from my swaying knees she was making frantic gestures with her magnetowrench, her face a twisting mask of horror. Her body was twisting too and she seemed to be fighting off something I oouldn't see!
Frantic with alarm, I strained forward and threw my right arm about her.

At least, I thought I did! But my ironweighted wrist seemed to pass right through her! It whipped through emptiness to strike the hull with an impact that sent a stab of pain darting up my arm to my shoulder. The pain was agonizing for an instant; then it fell away.
At the same instant I saw the light. It was faint at first, a pale spectral glow that haloed her helmet and lapped in concentric waves about her knees. It wasn't a flame whorl. It gave off iridescent glints and grew swiftly brighter, turning from pale blue to dazzling azure. Then it became a weaving funnel of light that spurted from the hull with a low humming sound.

The humming was unearthly. It penetrated my helmet and became a shrill inward keening with a quality hard to define. Imagine a butterfly of sound struggling fieroely to escape from a sonic chrysalis. It was a little like that, a kind of shrill fluttering on the tonal plane.

THE light did not remain attached to the hull. It shot up into the void and became a vertical shaft of downsweeping radiance. From its summit pulsing ripples ascended, giving it the aspect of a waterfall. Then it became a prism, flashing with all the colors of the spectrum.
A man may awaken from a nightmare, stare for an instant into the darkness and
try to rationalize his fears. But this was no nightmare! As I stared up the iridescence was replaced by a leaf-screen effect shot through with crimson flaments. Shadows appeared amidst the ripples, straight and Jagged lines of some tenuous substance that seemed to mold itself into a pattern.
It may have been imagination. But for the barest instant as I stared at the incredible shape of radiance a face seemed to look out at me. A fat face, bloated, toadlike, supported by a shadowy neck that swelled out beneath it like the hood of a rearing cobra!

Suddenly my scalp crawled and my helmet seemed to oontract, pressing against my skull with a deadly firmness. An electrolube!
I knew instinctively that the flame shape was an electrolube-a devouring entity of the void which snaked through deep space close to Saturn's orbit, a whiplash shape of pure force with a hellish affinity for life, its negative charge seeking a positive charge with which to unite!

It was itself alive, the ultimate life form, sentient and polarized, an energy eater that sucked nourishment from electrical impulses.

And there was just enough positive electricity in the human body to give the horror the power to destroy by slashing down in swift, flesh-destroying stabs that could cut through a spacesult like a knife through jelly!

Flesh and blood had no chance against it.
For one awful instant I looked straight into the eyes of a girl I couldn't save, an instant as long as a lifetime to the poor fool who loved her! No, I'm not raving! Do you think I'd have crawled out into the everlasting night of space if I hadn't known there could be no other woman for me?

She didn't walt for the horror to slice down. She jerked her knees, tore her wrists free and shut her eyes. Then she was gone. She didn't even move her lips to say goodby. Space was her bridegroom. It took her and she was gone.
I looked away. Not caring how soon death came, knowing I'd be with her if I just stayed with the ship.
I waited for the anguish to hit me. I waited for a full minute. Two. I shut my eyes as she had done.

When I opened them the electrolube had vanished. And when I looked down, the void had grown brighter. Gone was the great ringed disk of Saturn.
Just little frosty stars glittered far-off,
mocking. And another planet that was mottled pink and yellow. A ringless planet, swimming in a murky haze, with eleven little moons spinning around it-eight on one side, three on the other. One of the moons was red.

Jupiter is bigger than Saturn, bigger than a thousand Earths. And I was moving away from it on a droning ship's hull, a tiny fleck of matter of no importance in that awful sweep of space. But when I dragged myself back through the gravity panel into the ship my brain was bursting with a despair so vast it seemed to dwarf the vastness of space.

Pete was standing fust inside the panel, holding something furry and black in his arms that squirmed in the cold light. When he saw me he uttered a smothered oath.

I tugged at my helmet, got it off.
"Jim, lad, I was afraid you was a goner!" Pete choked. "You went chasing mirages on the hull. Mirages, Jim!"
My jaw dropped. I stood stock still, staring at him, unable to believe my eyes.
"It's all my fault!" Pete groaned. "Me and my rantings! Jeebies my foot! Soon as you went out I got to thinkin'. There's a beastie could do it, a little black, furry beastie called a mirage pup!
"Sired on Pluto, breedin' on Pluto in the dark an' the cold! Squattin' on its haunches, projectin' thoughts! Makin' 'em look solid and real! Sounds too, though you don't hear the sounds with your ears!
"His memories, Jim! Things he's seen himself, long. long ago! We been makin' pets of 'em so long we take 'em for granted. All the old skippers had 'em on their ships."
"Oh, Eternity!" I choked.
"They can make thoughts look as solid as a cake of ice, Jim! Three-dimensional, like! I figured it this way. There was a girl about a hundred years ago, took a ship-this ship -out to Saturn! And somethin' happened to the ship. So she went out to fix what was wrong and maybe never came back. Her gravity irons could have slipped-"
"No," I said quickly. "She let go deliberately because-it was better that way!"

IWAS staring at the little beast. Take a rabbit, puff it out, palnt it black, and give it two huge, spectral, tarsierlike eyes! Give it a purple snout, devilishly long claws. Breed it with a full-blooded Scotch Terrier and you'll get-a Plutonian mirage pup!

The little beast whined, then yapped and
wagged its tail at me. Its ear stood straight up. It nuzzled Pete's palm.

Mirage pups could coat everything over with evanescent images that looked real. They could change the outside as well as the inside of a ship. They could put Saturn beyond the viewpane, instead of Jupiter. Put a girl in the ship who lived once, engrave an image of that girl on your heart so that getting it off would mean a tearing anguish.

Yes, a mirage pup could do that because it would have a long memory. Mirage pups lived to a ripe old age. Slowed metabolism. The cold and dark of Pluto. Long periods of hibernation on that frigid planet while they dreamed the long, long dreams of their youth. And projected those dreams on awakening. Dreams, memories, buried loyalties.
If a master had been kind they'd never forgot! If a mistress had been kind-

The wetness at the corners of my eyes was making me blink.

So the mirage pup had followed her out on the hull, long ago. Crouched down perhaps, shivering, its paws covering its face. And the electrolube hadn't touched it! A small body, a small positive charge! No nourishment for an electrolube in a mirage pup!

Then it had crawled back, whining and hopeless and lost, back into the ship. Hibernation in a dark corner! For one hundred years!
"I found him in the tube room!" Pete grunted. "He was hidin' behind one o' the atomotors, coiled up like a porcupine. But I knew he was just playin' possum! I could see his eyes-blazin' out at me in the dark!"
"Yeah," I said, gruffly.
"You want to hold him, Jim?"
Pete extended the little beast toward me, but I shied away. I couldn't bear to touch anything that she had touched! Later, maybe, when I got over the shock.
"Guess we'll never know how the ship found its way to the graveyard!" Pete said. "Say, do you suppose if we're patient he'll project a picture of what happened? Maybe he'll start fillin' the tub with mirages again!"
"They only do it when they're scared!" I told him. "And lonely and miserable! He's not scared now! He likes us, worse luck!"
"He was homesick, eh?"
"That's right! For his past, for his mistress." I looked at Pete. "As for the ship, I can make a pretty good guess. Ship went
into an orbit of its own, close to Saturn. It drifted around for about a century. Then a salvage crew found it and towed it- to Callisto City to be sold as junk. It has happened before, plenty of times!"
"Never with a mirage pup inside, I bet?"
"Maybe not!"
I turned away, feeling all hollow inside, like one of those caterpillars that pupae wasps sting to death and feast on until they're nothing but husks. Grave bait, lying in a tunnel deep in the earth.

I knew the only chance I had of crawling out of the tunnel into the sunlight again was to give the little beast a kick. If he got lonely and frightened, he'd see her again! He'd start dreaming about her, and she'd come to life again, as a memory in the brain of a mirage pup!

But I never could be that cruel.
"What's the matter, Jim?" Pete asked, concerned. "You look sick!"

I wheeled on him. "I didn't tell you what happened outside. If you open your trap again-I will!"

Pete avoided my eyes. "I didn't ask you, Jim!"

IKNEW then that the pup had projected two sets of images, one in the control room for Pete's benefit and one outside for me to live through. A mirage pup could generate images like an electronic circuit, duplicate them in all directions, pile them up in layers. Automatically without thinking, to ease its own wretchedness.

Pete had been able to follow me as I crawled along the hull. He knew what I was going through.

I moved away from him, sat down on the chronometer and cradled my head in my arms.

Dusk.
Dawn.
Dusk.
Dawn.
You don't see the sun rise and set inside a spaceship, but that's how the days seem to pass. Your mind grows a little darker when It's time for the sun to set on Earth. Lightens when it rises.

Dusk. Dawn. Dusk. Dawn. Three days. Four. But for me it was just dusk. My mind didn't lighten at all.

How does it feel to love a woman a century dead? If you'd asked me, I couldn't have told you. Because she wasn't dead to
me. I kept seeing her pale, beautiful face and everywhere I turned time seemed to stretch away into endless vistas. If Id been on Earth, in New York or Chicago, I could have gone out and lost myself in the crowds and the glitter. But it wouldn't have helped.

I turned and looked at the sleeping mirage pup. He lay on my bunk with his legs coiled up under him, his moist nose resting on his folded forelimbs. He looked like a prize puppy at a pet show, but what a puppy!

In his unfathomable animal mind was that strange capacity for projecting illusions, of making them seem three-dimensional and real. He could blur the viewpane, fill it with unreal star fields, draw shapes of energy from the void.

But he couldn't change his memories by sicklying them over with the pale cast of thought! At bottom he was just a dumb beast. He had the mind of a puppy, a mind that chased fantasms while asleep through a labyrinth of dark alleyways. He twitched and shook while asleep, just like an excitable mutt.

Little agitated noises came from him. His nostrils quivered, his tail vibrated and he rolled over in his sleep and started scratching himself. Thump. Thump. Thump.

What was he thinking about? A girl in a garden with the moonlight in her hair? Stooping to pat him or feeding him yummies? He'd rolled over and was lying with his forelimbs stretched straight out, as though he were reaching for the moon.

But I knew he wasn't seeing the moon. He was reaching for something I couldn't see or hear or touch, something older than the human race maybe.

I was hating him furiously when Pete came into the compartment. He grabbed my arm and started shaking me.
"Jim! Jim, lad! Get a grip on yourself! We'll be hittin' the Heaviside in a minute!"
"What do I care?" I lashed out. "Go away, can't you? Blow!"'
"Now, now, son!" he pleaded. "That's no way to act! You can't bring her back! And if you keep eatin' your heart out-"
"Get out!" I shouted, heaving myself from the bunk. "Get out-get out?"
"Don't be a fool, Jim! You've got to get rid of that grievin' look! The skyport Johnnies are funny that way! You walk out of this ship with your eyes burnin' holes in your face, and they'll think you got somethin' to hide!
"Look at yourself in a mirror! Whiskers sproutin' out of your chin, face sooty as a tube fittin' and no fight left in you! You got to get back the look of a fightin' fury, son! A lad who can stand up to a port clearance inspector and say 'Me an' my buddy, here, we're headin' for that gate, and if you want to stay healthy-"
"What?"
"Jehoshaphat!" Pete groaned. "He don't even hear me!"

I stood up. "Okay, Pete!" I told him. "I heard you! Most of it, anyway. And I'll get myself spruced up. How close are we to the Heaviside?"

He heaved a high sigh of relief. "We'll hit it in half an hour, Jim!"
He grinned. "He's got to have a harness, Jim. I'll rig up a harness for him!"

## CHAPTER IV

New York Kid

wE MADE as good a landing as could be expected, considering the way my hands shook when I brought her down.
Right smack in the middle of La Guardia field! It's the biggest skyport in the System, and you can't miss it if you're a New York kid, with the lay of the land and the navigation lights burned into your brain from boyhood.

One of my own ancestors had brought a primitive skyplane down on that field during the Second World War, when the First Atomic Age was just starting.

They'd built the field up quite a bit in the intervening years-built it in revolving stations toward the Heaviside. You could make contact with the atomic clearance floats at sixty-five miles, and pick up a guiding beam from a rocket glider twenty miles above the grounded runways.

But you can't build the past out of existence. There were ghosts all over that field, grease monkeys in khaki jeans, and taking care of jet planes that had passed into limbo before the first space crate took off for Mars. At least, that's the way Pete seemed to feel, and I could sympathize with his screwball occultism.

I had a feeling that my own ancestor was down there, shading his eyes, watching me
make a perfect twenty-point landing. His eyes shining with pride because I made such a good job of bringing her in. What he didn't know wouldn't hurt him.

I thought we'd have trouble with the clearance officials, but when I came striding out of the gravity port with the mirage pup clinging to my right shoulder I was greeted with nothing but merriment. Tickle a man's sense of humor if you want him to do you a favor!

Just seeing that crazy little beast put everyone in the best of humor. A tall, youngold lad with puckered brows and graying hair, his skin bleached by irradiation particles, took one swift look at my pilot's license, ignored Pete's jittery stare, and gave the mirage pup a pat that set his tail wagging.
"What's his name?" somebody asked.
I thought fast. "Flipover!" I said.
"Boy, he's quite a pup! Cute! Don't see many of them since the new quarantine regulations-went into effect. They have to be defleed too often."
"All the little critters jumped off him in deep space!" I said.

The officer chuckled. "Okay, my friend! You can pass through. The first gate on your right!"

We were through the gate and ascending a ramp toward a skyline that brought a lump to my throat in less time than you could say, "Flip Flipover!"

Little old New York hadn't changed much in ten years. The white terrific flare that spiraled up from its heart was as bright as the day I'd first seen it. Broadway-and a New York kid is hooked for life. He'll always come back to it.

But now I didn't want to head for the bright lights. I wanted to find a lodging close to the harbor lights, where I could look out over the bay at night and-remember things. Her face just before she let go, not really seeing me. Her eyes-

Pete was shaking his arm. "Set him down, Jim! Put him into that harness I rigged up. Give him a chance to stretch his legs!"
"Sure, why not?" I grunted.
I set Flipover down on the ramp, fitted Pete's makeshift harness to his shoulders, and wrapped the leash-end around my wrist.

The little beast started tugging right off.
"Looks like he knows his way around!" Pete chuckled. "Maybe New York was his home town!"

That didn't sound funny to me. But a few minutes later I was taking it seriously. The crazy pup had led us deep into the labyrinth of dark streets which bordered the skyport, and there was no stopping him. I had all I could do to keep up with him.

Pete's eyes were shining with excitement. "Give him his head!" he urged.
"What do you think I'm doing?" I yelled.
From the houses lights streamed out. Cornerset windows flamed in the dusk and people moved across shadowed panes. Music came from beyond the windows, loud, tumultuous. Someone was playing Milhaud's Bal Martiniquais on an old-fashioned percussion instrument with shallow keys.

I liked it. Give me color in music, polychromes. Give me oolor in life. The flare of rocket jets, the blackness of space, a spinning wheel in a big crystal casino-

I'd stay one week on Earth! Then I'd be off again and never come back. I'd bury myself in the farthest-
"Give him his head!" Pete yelled.

FLIPOVER had swerved and was heading for a narrow walk leading to a fairly large circular house surrounded by a garden plot bright with yellow flowers. There was a fountain in the middle of the garden and it was sending up jets of spray which drenched Flipover as he tore down the path.

I almost let go of the leash as I played it out. The house had the look of age about it but not of neglect. We were within thirty feet of it when the front door banged open and a big, angry-faced man came striding out.

Down the path he came, straight toward me. A sunbronzed giant of a lad built like a cargo wrestler, but with keen, probing eyes behind glasses that had slipped far down on his nose.

When he saw me he stopped dead. Then he adjusted his glasses and peered at me wordlessly, his hands knotting into fists.
Flipover was straining furiously, but I drew him in quickly and returned the big lug's stare.
"So you're the guy!" he roared.
It happened so quickly I was taken by surprise. His fist lashed out, caught me on the jaw.

I felt Flipover tear loose as I went crashing backwards, my head filled with forked lightning.

He jumped me the instant I hit the ground.

About three tons of flailing weight crashed down on my shoulders, pinning me to the walk.

As deliberately as I could, I raised my right knee, whammed it into his stomach and threw one arm about his neck in a strangle lock he couldn't break.
"That's showin' him, son!" I heard Pete yell.

I tried not to break his glasses. But I had to be a little rough because he wanted to play rough.

About one minute later he was standing in the fountain, eying me angrily from behind a rising curtain of spray. The water came to his knees.

Suddenly his lips split in a grin. He threw back his head and roared with laughter. "By George, you sure know how to cool off a hot-head!"
"Well-thanks!" I said, modestly.
He stepped out of the fountain, walked up to me and thrust out his hand. "Phillip Goddard's the name?" he said. "She just gave me my ring back! When she said she couldn't marry a certified public accountant I knew there was someone else. You're the kind of lad her great-grandmother went for -and she's just like that famous ancestor of hers!"
"Ancestor?" I gulped.
He nodded. "Just like her! Pluckiest girl in the System! Back in the First Atomic Age it was. First girl pilot to make a solo hop to Saturn-"

His face darkened. "Something happened to her! She never came back. But she's come alive again in her granddaughter! No indoor cookie for Anne Haven's granddaughter! I'm not exactly a lightweight, but I make my living adding up long rows of figures. If she married me what would be the result?"

The grin returned to his face. "She'd pine away from boredom. I like it. I enjoy it! But the girl for me will have to be a redheaded adding machine."

He stepped back. "When I saw you coming up the walk I lost my head! Sour grapes, fella! If I couldn't have her-I didn't intend to step aside for a rival without putting up a fight! Little boy stuff! I had no call to take a sock at you! You're all right, fella!"

He gave me a resounding thump on the back. "So the best man gets her! Okay, I can be a good loser! I don't know how long you've known her, but I bet if you pop the
question tonight, when she has that faraway look in her eyes again-"
"He never bets!" Pete cut in.

IDIDN'T wait to thank him. I was running up the walk toward the house before he could let out a startled grunt. But I heard the grunt-far off in the darkness.

Then a door slanmed and I was standing in a brightly lighted living room staring at her. A log fire was crackling in the grate and there was a big, framed painting in oils hanging on the wall, facing the entrance hall.

She was standing directly before the painting, staring down at Flipover. Flipover was wagging his tail and pawing at her knees, and she was stooping and patting him on the head. Only-she wasn't calling him by the name I had given him. She was calling him, "Tow Tow."
"Oh, I can't believe it! I can't, I can't. Granny's pup! You've come home, Tow Tow -and you are Tow Tow! I'd know you anywhere! You precious darling."

Then I saw the girl in the painting. She was wearing a space suit a hundred years out of date, and her hand was on the head of a mirage pup too. Only it was a mirage pup in oils! Life-sized, lifelike and unmistakably Tow Tow! The pup in the painting had the same dumb-bright unweaned look about him! Any child brought up with that painting before her would know the real Tow Tow when he came bounding home! He was like no other pup!
The girl who was patting the real Tow Tow raised her head suddenly, and looked at me!
For a full minute we just stood there, staring at each other. I don't know how she felt, but I knew how I felt! A family resemblance can be a remarkable thing! The contours of a face, the way the eyes look at you, and the trembling of lips shaped in a certain way can-make the universe reel!

Especially when there's no difference at all between the face of a girl a century dead and a living face you'd never thought to see again!
"Who are you?" she whispered.
I told her.
Her eyes were shining when I stopped telling her about myself. She swayed a lit-
tle, and I think we both knew then how it was going to be.

She was in my arms before I realized that I didn't even know her name.
"It's Barbara!" she whispered, when I got around to asking her. That was quite a few minutes after I'd met her. You can't kiss a girl and ask her name in the same breath. And there was just a chance she'd be offended and refuse to tell me.

But Barbara was a darned good sport about it!
"I've never been kissed by a total stranger before!" she said. "Jim, it was wonderful!"
It sure was. We went back to it again.
It's been a long time, now. Seven years. And if I haven't proved you can fall in love with the same woman twice I've been living a lie. But I know that it isn't so. If I was living a lie, Tow Tow would be unhappy, and he'd be filling the house with mirages. But my five-year-old son, Bobby, isn't a mirage, and neither is the girl I married.

Sometimes, when I see the lights of the skyport through a cornerset window, and winds howl in from the bay, I get to wondering about Pete.

You see, he never came in that night, never joined us! He may have looked in through a window, and realized I'd reached my last "port o' call," a quiet harbor in a storm that had died away forever. He may have turned and gone stumbling off into the night!

I'll never know, of course. Good old Pete! Sometimes I get to thinking. A mirage pup can coil up in an old ship and hibernate for a century. Could a human being do that?

There are strange influences in deep space. Are there discharges in the electromagnetic field that could slow up the metabolism of a tired little character like Pete?

That's nonsense, of course.
I'll have to go now. Bobby's calling me. He's standing at the head of the stairs, in his pajamas, and he's waiting for me to tell him a bedtime story about what it's like out in the mighty dark.
"Pop, you promised! Aw, come on, Pop-"
I'll have to keep it simple, of course. But maybe tonight I'll tell him about Pete.

Maybe when he grows up he'll meet Pete.
Who knows?

# MISTAKE INSIDE 

## By JAMES BLISH

Hugh Tracy suddenly finds himself inside Outside-and learns that it's like a trip through Inferno to reverse the processl


THIS was England, two hundred years before bomb craters had become a fixed feature of the English landscape, and while the coffee house still had precedence over the pub. The fire roared, and the smoke from long clay churchwarden pipes made a blue haze through which cheerful conversation struggled.
The door swung back, and the host stood in the opening, fat hands on hips, surveying the scene contentedly. Someone, invisible in the fog, drank a slurred uproarious toast, and a glass slammed into the fireplace, where the brandy-coated fragments made a myriad of small blue flames.
"Split me if that goes not in the reckoning!" the innkeeper bellowed. A ragged chorus of derision answered him. The inn cat shot down the stairs behind him, and its shadow glided briefly over the room as it passed the fire. It was an impossibly large, dark shadow, and for a moment it blacked out several of the booths in the rear of the chamber; the close, motionless air seemed to take on a chill. Then it was gone, and the cat, apparently annoyed by the noise, vanished into the depths of a heavy chair.
The host forgot about it. He was accustomed to its sedentary tastes. It often got sat on in the after-theater hilarity. He rolled good-naturedly across the room as someone pounded on a table for him.
But the cat, this time, had not merely burrowed into the cushions. It was gone. In the chair, in a curiously tranparent condition which made him nearly invisible in the uncertain light, sat a dazed, tired figure in a Twentieth-Century Tux. . . .
The radio was playing a melancholy opus
called "Is You Is or Is You Ain't, My Baby" as the cab turned the corner. "Here you are, sir," croaked the driver in his three A.M. voice.
The sleepy-eyed passenger's own voice was a little unreliable. "How much?"
The fare was paid and the cabby wearily watched his erstwhile customer go up the snow-covered walk between the hedges. He put the car in gear. Then he gaped and let the clutch up. The engine died with a reproachful gasp.
The late rider had staggered suddenly sidewise toward the bushes-had he been that drunk? Of course, he had only tripped and fallen out of sight; the cabby's fleeting notion that he had melted into the air was an illusion, brought on by the unchristian lateness of the hour. Nevertheless the tracks in the snow did stop rather unaccountably. The cabby swore, started his engine, and drove away, as cautiously as he had ever driven in his life.

Behind him, from the high tree in the yard, a cat released a lonely ululation on the cold, still night.
The stage was set. . . .
There is order in all confusions; but Dr. Hugh Tracy, astronomer, knew nothing of the two events recorded above when his adventure began, so he could make no attempt at integrating them. Indeed, he was in confusion enough without dragging in any stray cats. One minute he had been charging at the door of Jeremy Wright's apartment, an automatic in his hand and blind rage in his heart. As his shoulder had splintered the panel, the world had revolved once around him, like a scene-changing stunt in the movies.

THE scene had changed, all right. He was not standing in Jeremy Wright's apartment at all, but in a low-roofed, dirt-floored room built of crudely shaped logs, furnished


The unreal spaces were black with blurred faces rushing down upon him
only with two antique chairs and a rickety table from which two startled men were arising. The two were dressed in leathern jerkins of a type fashionable in the early 1700's.
"I-I beg your pardon," he volunteered lamely. "I must have mixed the apartments up." He did not turn to go immediately, however, for as he thought disgustedly concerning the lengths to which some people will go to secure atmosphere, he noticed the dirty mullioned window across the room. The sight gave him a fresh turn. He might just possibly have mistaken the number of Jeremy Wright's apartment, but certainly he hadn't imagined running up several flights of stairs! Yet beyond the window he could see plainly a cheerful sunlit street.

Sunlit. The small fact that it had been 3.00 A.M. just a minute before did not help his state of mind.
"Might I ask what you're doing breaking out of my room in this fashion?" one of the queerly-costumed men demanded, glaring at Hugh. The other, a younger man, waved his hand indulgently at his friend and sat down again. "Relax, Jonathan," he said. "Can't you see he's a transportee?"

The older man stared more closely at the befuddled Dr. Tracy. "So he is," he said. "I swear, since Yero came to power again this country has been the dumping ground of half the universe. Wherever do they get such queer clothes, do you suppose?"
"Come on in," invited the other. "Tell us your story." He winked knowingly at Jonathan, and Hugh decided he did not like him.
"First," he said, "Would you mind telling me something about that window?"
The two turned to follow his pointed finger. "Why, it's just an ordinary window, in that it shows what's beyond it," said the young man. "Why?"
"I wish I knew," Hugh groaned, closing his eyes and trying to remember a few childhood prayers. The only one that came to mind was something about fourteen angels which hardly fitted the situation. After a moment he looked again, this time behind him. As he had suspected, the broken door did not lead back into the hallway of the apartment building, but into a small bedchamber of decidedly pre-Restoration cast.
"Take it easy," advised Jonathan. "It's hard to get used to at first. And put that thing away-it's a weapon of some kind, I
suppose. The last transportee had one that spouted a streamer of purple gas. He was a very unpleasant customer. What do you shoot?"
"Metal slugs," said Hugh, feeling faintly hysterical. "Where am I, anyhow?"
"Outside."
"Outside what?"
"That's the name of the country," the man explained patiently. "My name, by the way, is Jonathan Bell, and this gentleman is Oliver Martin."
"Hugh Tracy. Ph.D., F.R.A.S.," he added automatically. "So now I'm inside Outside, eh? How far am I from New York? I'm all mixed up."
"New York!" exclaimed Martin. "That's a new one. The last one said he was from Tir-nam-beo. At least I'd heard of that before. How did you get here, Tracy?"
"Suddenly," Tracy said succinctly. "One minute I was bashing at the door of Jeremy Wright's apartment, all set to shoot him and get my wife out of there; and then, blooey!"
"Know this Wright fellow very well, or anything about him?"
"No. I've seen him once or twice, that's all. But I know Evelyn's been going to his place quite regularly while I was at the observatory."

Bell pulled a folded and badly soiled bit of paper from his breast pocket, smoothed it out on the splintery table top, and passed it to Hugh. "Look anything like this?" he asked.
"That's him! How'd you get this? Is he here somewhere?"
Bell and Martin both smiled. "It never fails," the younger man commented. "That's Yero, the ruler of this country during fall seasons. He just assumed power again three months ago. That picture comes off the town bulletin board, from a poster announcing his approaching marriage."
"Look," Hugh said desperately. "It isn't as if I didn't like your country, but I'd like to get back to my own. Isn't there some way I can manage it?"
"Sorry," Martin said. "We can't help you there. I suppose the best thing for you to do is to consult some licensed astrologer or thaumaturgist; he can tell you what to do. There are quite a few good magicians in this town-they all wind up here eventuallyand one of them ought to be able to shoot you back where you belong.
"I don't put any stock in that humbug.

I'm an astronomer.
"Not responsible for your superstitions. You asked my advice, and I gave it."
"Astrologers!" Hugh groaned. "Oh, my lord!"
"However," Martin continued, "you can stay here with us for the time being. If you're an enemy of Yero's, you're a friend of ours."

Hugh scratched his head. The mental picture of himself asking an astrologer for guidance did not please him.
"I suppose I'll have to make the best of this," he said finally. "Nothing like this ever happened to me before, or to anybody I've ever heard of, so I guess I'm more or less sane. Thanks for the lodging offer. Right now I'd like to go hunt up-ulp-a magician."
Bell smiled. "All right," he said, "if you get lost in the city, Just ask around. They're friendly folk, and more of 'em than you think have been in your spot. Most of the shopkeepers know Bell's place. After you've wandered about a bit you'll get the layout better. Then we can discuss further plans."
Hugh wondered what kind of plans they were supposed to discuss, but he was too anxious to discover the nature of the place into which he had fallen to discuss the question further. Bell led him down a rather smelly hallway to another door, and in a moment he found himself surveying the street.

IT was all incredibly confusing. The language the two had spoken was certainly modern English, yet the busy, narrow thoroughfare was just as certainly Elizabethan in design. The houses all had overhanging second stories. Through the very center of the cobbled street ran a shallow gutter in which a thin stream of swill-like liquid trickled. The bright light flooding the scene left no doubt as to its reality, and yet there was still the faint aura of question about it. The feeling was intensified when he discovered that there was no sun; the whole dome of sky was an even dazzle. It was all like a movie set, and it was a surprise to find that the houses had backs to them.

Across the street, perched comfortably in the cool shadows of a doorway, an old man slept, a tasselled nightcap hanging down over his forehead. Over his head a sign swayed: coppersmith. Not ten feet away from him a sallow young man was leaning
against the wall absorbed in the contents of a very modern-looking newspaper, which bore the headlines: dowser confesses fairy gold plant. Lower down on the page Hugh could make, out a boxed item headed: stiletto killer feigns insanity. In a moment, he was sure, he wouldn't have to feign it. The paper was as jarring an anachronism in the Shakespearean street scene as a sixcylinder coupe would have been.

At least he was spared having to account for any cars, though. The conventional mode of transportation was horses, it seemed. Every so often one would canter past recklessly. Their riders paid little regard to the people under their horses' hoofs and the people in their turn scattered with goodnatured oaths, like any group of twentieth century pedestrians before a taxi.

As Hugh stepped off the low stone lintel he heard a breathy whistle, and turning, beheld a small red-headed urchin coming jerkily toward him. The boy was alternately whistling and calling "Here, Fleet, Fleet, Fleet! Nice doggy! Here, Fleet!" His mode of locomotion was very peculiar; he lunged mechanically from side to side or forward as if he were a machine partly out of control.

As he came closer Hugh saw that he was holding a forked stick in his hands, the foot of the Y pointing straight ahead, preceding the lad no matter where he went. On the boy's head was a conical blue cap lettered with astrologioal and alchemical symbols, which had sagged so as to completely cover one eye, but he seemed loathe to let go of the stick to adjust it.

In a moment the boy had staggered to a stop directly before Hugh, while the rigid and quivering end of the stick went down to Hugh's shoes and began slowly to ascend. He was conscious of a regular sniffing sound.
"Better tend to that cold, son," he suggested.
"That isn't me, it's the rod," the boy said desperately. "Please, sir, have you seen a brown puppy-" At this point the stick finished its olfactory inspection of Hugh and jerked sidewise, yanking the boy after it. As the urchin disappeared, still calling "Here, Fleet! ${ }^{\text {N }}$ Hugh felt a faint shiver. Here was the first evidence of a working magic before his eyes, and his sober astronomer's soul recoiled from it.

A window squealed open over his head, and he jumped just in time to avoid a gush of garbage which was flung casually down
toward the gutter. Thereafter he clung as close to the wall as he could, and kept beneath the overhanging second stories. Walking thus, with his eyes on the sole-punishing cobbles, deep in puzzlement, his progress was presently arrested by collision with a mountain.

When his eyes finally reached the top of it, it turned out to be a man, a great muscular thug clad in expensive blue velvet smallclothes and a soarlet cape like an eighteenth century exquisite. Was there no stopping this kaleidoscope of anachronism?
"Weah's ya mannas?" the apparition roared. "Move out!"
"What for?" Hugh replied in his most austere classroom tone. "I don't care to be used as a sewage pail any more than you do."
"Ah," said the giant. "Wise guy, eh? Dunno ya bettas, eh?" There was a whistling sound as he drew a thin sword which might have served to dispatch whales. Hugh's Royal Soclety reserve evaporated and he clawed frantically for his automatic, but before the double murder was committed the giant lowered his weapon and bent to stare more closely at the diminutive doctor.
"Ah," he repeated. "Ya a transportee, eh?"
"I guess so," Tracy said, remembering that Martin had used the word.
"Weah ya from?"
"Brooklyn," Hugh said hopefully.
The giant shook his head. "Weah you guys think up these here names is a wonda. Well, ya dunno the customs, that's easy $t$ ' see."

He stepped aside to let Hugh pass.
"Thank you," said Hugh with a relieved sigh. "Can you tell me where I can find an astrologer?" He still could not pronounce the word without choking.
"Ummmm-most of 'em are around the squaah. Ony, juss between you an' me, buddy, I'd keep away from there till the p'rade's ova. Yero's got an orda out fa arrestin' transportees." The giant nodded pleasantly. "Watch ya step." He stalked on down the street.

Looking after him, Hugh was startled to catch a brief glimpse of a man dressed in complete dinner clothes, including top hat, crossing the street and rounding a corner. Hoping that this vision from his own age might know something significant about this screwy world, he ran after him, but lost him in the traffic. He found nothing but a non-
descript and unhappy alley-cat which ran at his approach.

IISCOURAGED, Hugh went back the way he had come and set out in search of the public square and an astrologer. As he walked, he gradually became conscious of a growing current of people moving in the same direction, a current which was swelled by additions from every street and byway they passed. There was a predominance of holiday finery, and he remembered the giant's words about a parade. Well, he'd just follow the crowd; it would make finding the square that much easier.

Curlous snatches of conversation reached his ears as he plodded along. ". . . Aye, in the square, sir; one may hope that it bodes us some change . . ." ". . . Of Yero ake, that of a younge wyfe he gat his youthe agoon, and withal . . ." ". . . An' pritnear every time dis guy toins up, yiz kin count on gittin' it in the neck . .." ". . . Oft Scyld Yero sceathena threatum, hu tha aethlingas ellen fremedon . . ."

Most of the fragments were in English, but English entirely and indiscriminantly mixed as to century. Hugh wondered if the few that sounded foreign were actually so, or whether they were some Saxon or Jutish ancestor of English-or, perhaps, English as it might sound in some remote future century. If that latter were so, then there might be other cities in Outside where only old, modern and future French was spoken, or Russian, or-

The concept was too complex to entertain. He remembered the giant's warning, and shook his head. This world, despite the obvious sweating reality of the crowd around him and the lumpy pavement beneath his feet, was still too crazy to be anything but a phantom. He was curious to see this Yero, who looked so inexplicably like Jeremy Wright, but he could not take any warning of Outside very seriously. His principle concern was to get back inside again.

As the part of the crowd which bore him along debouched from the narrow street into a vast open space, he heard in the distance the sound of trumpets, blowing a complicated fanfare. A great shouting went up, but somehow it seemed not the usual cheering of expectant parade-goers. There was a strange undertone-perhaps of animosity? Hugh' could not tell.

In the press he found that he could move
neither forward nor back. He would have to stand where he was until the event was over and the mob dispersed.

By craning his neck over the shoulders of those in front of him-a procedure which, because of his small stature, involved some rather precarious teetering on tip-toe-he could see across the square. It was surrounded on all four sides by houses and shops, but the street which opened upon it directly opposite him was a wide one. Through it he saw a feature of the city which the close-grouped overhanging houses had hidden before-a feature which put the finishing touch upon the sense of unreality and brought back once more the suggestion of a vast set for a Merrie-England movie by a bad director.

It was a castle. Furthermore it was twice as big as any real castle ever was, and its architecture was totally out of the period of the town below it. It was out of any period. It was a modernist's dream, a Walter Gropius design come alive. The rectangular façade and flanking square pylons were vaguely reminiscent of an Egyptian temple of Amenhotep IV's time, but the whole was of bluely gleaming metal, shimmering smoothly in the even glare of the sky.

From the flat summits floated scarlet banners bearing an unreadable device. A clustered group of these pennons before the castle seemed to be moving, and by stretching his neck almost to the snapping point Hugh could see that they were being carried by horsemen who were coming slowly down the road. Ahead of them came the trumpeters, who were now entering the square, sounding their atonal tocsin.
Now the trumpeters passed abreast of him, and the crowd made a lane to let them through. Next came the bearers of the standards, two by two, holding their horses' heads high. A group of richly dressed but ruffianly retainers followed them. The whole affair reminded Hugh of a racketeer's funeral in Chicago's prohibition days. Finally came the sedan chair which bore the royal coupleand Dr. Hugh Tracy at last lost hold of his sanity. For beside the aloof, hated YeroJeremy in the palanquin was Evelyn Tracy.

When Hugh came back to his senses he was shouting unintelligible epithets, and several husky townsmen were holding his arms. "Easy, Bud," one of them hissed into his ear. "Haven't you ever seen him before?"
Hugh forced himself back to a semblance
of calmness, and had sense enough to say nothing of Evelyn. "Who-what is he?" he gasped. The other looked at him tensely for a moment, then, reassured, let go of him.
"That's Yero. He's called many names, but the most common is The Enemy. Better get used to seeing him. You can't help hating him, but it'll do you no good to fly off the handle like that."
"You mean everybody hates him?"
The townsman frowned. "Why, certainly. He's The Enemy."
"Then why don't you throw him out?" "Well-"
The other burgher, who had said nothing thus far, broke in: "Presenuk prajolik solda, soldama mera per ladsua hrutkai; per stanisch felemetskje droschnovar."
"Exactly," said the other man. "You okay now, Bud?"
"Ulp," Hugh said. "Yes, I'm all right."

THE crowd, still roaring its ambiguous cheer, was following the procession out the other end of the square, and shortly Hugh found himself standing almost alone. A sign over a nearby shop caught his eye: Dr. ffoni, Licensed Magician. Here was what he had been looking for. As he ran quickly across the square toward the rickety building, he thought he caught a glimpse out of the tail of his eyes of a top hat moving along in the departing crowd; but he dismissed it. That could wait.

The shop was dark inside, and at first he thought it empty. But in answer to repeated shouts a scrambling began in the back room, and a nondescript little man entered, struggling into a long dark gown several sizes too large for him.
"Sorry," he puffed, trying to regain his right hand, which he had lost down the wrong sleeve, "out watching the parade. May I serve you, young sir?"
"Yes. I'm a transportee, and I'd like to get back where I belong."
"So would we all, so would we all, indeed," said the magician, nodding vigorously. "Junior!"
"Yes, paw." A gawky adolescent peered out of the back room.
"Customer."
"Ah, paw, I don wanna go in $t$ ' any trance. I'm dragging a rag-bag to a rat-race t'night an' I wanna be groovy. You know prognostics allus knock me flatter'n a mashedpotato san'witch."
"You'll do as you're told, or I'll not allow you to use the broomstick. You see, young sir," the magician addressed Hugh, "familiar spirits are at somewhat of a premium around here, there being so many in this town in my profession; but since my wife was a Sybil, my son serves me adequately in commissions of this nature."

He turned back to the boy, who was now sitting on a stool behind the counter, and produced a pink lollipop from the folds of his robe. The boy allowed it to be placed in his mouth docilely enough, and closed his eyes. Hugh watched, not knowing whether to laugh or to swear. If this idiotic procedure produced results, he was sure he'd never be able to contemplate Planck's Constant seriously again.
"Now then, while we're waiting," the sorcerer continued, "you should understand the situation. All living has two sides, the IN-side and the OUT-side. The OUT-side is where the roots of significant mistakes are embedded; the IN-side where they flower. Since most men have their backs turned to the OUT-side all their lives, few mistakes can be rectified. But if a man be turned, as if on a pivot, so that he face the other way, he may see and be on the OUT-side, and have the opportunity to uproot his error if he can find the means. Such a fortunate man is a transportee."
"So, in effect, existence has just been given a half-turn around me, to put me facing outside instead of inside where I belong?"
"A somewhat egotistical way of putting it, but that is the general idea. The magicians of many ages have used this method of disposing of their enemies; for unless the transportee can find his Atavars-the symbols, as it were, of his error-and return them to their proper places, he must remain Outside forever. This last many have done by choice, since none ever dies Outside."
"I'd just as soon not," Hugh said with a groan. "What are my Atavars?"
"To turn a c̣apstan there must be a lever; and to pivot a man Outside means that two other living beings must act as the ends of this lever, and exchange places in time. Your Atavars changed places in time, while you stood still in time and space, but were pivoted to face Outside."

At this point he reached over to the boy and gave an experimental tug on the protruding stick of the lollipop. It slipped out easily; all the pink candy had dissolved.
"Ah," he said. "We are about ready." He made a few passes with his hands and began to sing:

"Jet propulsion, Dirac hole,<br>Trochilminthes, Musterole, Plenum, bolide, Ding an sich,<br>Shoot the savvy to me, Great White Which!"

The tune was one more commonly associated with Pepsi-Cola. After a moment the boy's mouth opened, and, licking the remains of the lollipop from its corners, he said clearly, "Two hundred. Night prowlers."
"Is that all?" Hugh said, not much surprised.
"That's quite enough. Well, maybe not quite enough, but it's about all I ever get."
"But what does it mean?"
"Why, simply this: that your Atavars are two hundred years apart from each other; and that they are night-prowlers."
"Two hundred years! And I have to find them?"
"They are represented by simulacra in Outside. You must identify these simulacra and touch each one; this done, they will exchange again, and you will be rotated Inside. Have you seen any here?"

A light burst in Hugh's brain. "I saw a man from my own age who looked like a bona-fide night prowler, all right."
"You see?" The magician spread his hands expressively. "Half the work is over. Simply search for another night-prowler whose costume is two hundred years older-or, of course, younger-than the first. It's very simple. Now, young sir-" The hands began to wash each other suggestively.

HUGH produced a handful of coins. "That's no good," said the little man with a sniff. 'I can make that myself. It's the city's principle industry. I don ${ }^{-1} t$ suppose you have any sugar on you? Or rubber bands? No? Hmm. How about that?"

He prodded Hugh's vest. "That" was Hugh's Sigma Chi key, dangling from his watch chain. He had been elected to the honorary society by virtue of a closely reasoned paper on the deficiencies of current stellar evolution hypotheses. With a grin he passed it across the counter. "Thanks," the thaumaturgist said, "I collect fetishes. Totem fixation, I guess."

Feeling rather humble, Hugh left the shop
and started back toward Bell's house by the most direct route his memory could provide. Now that he had begun to get his bearings, his stomach was reminding him that he had gone the whole day without food. On the way he saw the known Atavar half-way down a dark alley, contemplating a low doorway sorrowfully; but when he arrived, the top-hatted figure was gone. By the time he entered the house where he had his first glimpse of Outside, he was decidedly discouraged, but the pleasant smell of food revived him somewhat.
"Good evening," Bell greeted him, though the ambiguous daylight was as unvaryingly bright as ever. "Find your astrologer?"
"Yes. Now I have to find a night-prowler. You wouldn't be one, by any chance?"

The man laughed softly. "In a sense, yes, but I'm too old to be the one you want. You're Atavar-hunting, I take it?"
"That's it."
"Well, I'm not a simulacrum. I'm a native here, one of the original settlers. Come on and eat, anyhow." He led the way into the room which Hugh had first seen, and waved him to the table. On it was a platter bearing a complete roast hog's head with an apple in its mouth and three strips of bacon between its ears, a pudding, a meat pie, a spitted duckling, three wooden trenchers-boards used as plates-and three razor-sharp knives. Obviously forks were not in style Outside.
"Has Yero's administration caused a potato shortage?" Hugh asked curiously.
"Potato? No. You transportees have odd ideas; you mean potatoes to eat? Don't you know they're a relative of the deadly nightshade?"

Hugh shrugged and fell to. There was bread, anyhow. During the course of the meal the two pumped him about his experiences during the day, and he answered with increasing caution. They seemed to be up to something. He especially disliked young Martin, whose knowing smile when Hugh described his belief that Yero's queen was in actuality his own wife irritated him. As the dinner ended Bell came to the point.
"You've heard Yero spoken of as The Enemy? Well, his rule here is intermittent. He just pops up every fall season and takes the place of the Old One, who is the only rightful king, and a good one. It's during Yero's ascendancy that all the transportees show up-all the people who make mistakes during that period, if the mistakes are of a
certain kind, get pivoted around here to correct them. It gets pretty nuisancy.
"You can see what I mean. Here you come busting in on us and split our good pine door and eat one third of our food. Not that we begrudge you the food; you're welcome to it; but it is a bother to have all these strangers around. In addition it decreases the future population in a way I haven't time to describe now. Everybody hates Yero, even the transportees. It's our idea to assassinate him before he gets to come back another time; then the Old One can really do us some good and the town can come back to normal. Sounds reasonable, doesn't it?"
"I thought no one ever died here."
"Nobody ever does, naturally, but accidents or violence can distribute an individual to the point of helplessness. Since you seem to hate Yero like the rest of us, we thought you might like to throw in with us."

The hospitality of the two did not permit him to refuse immediately, but more and more he was sure he did not want to be involved in any project of theirs. Bell's picture of what the Outside's substitute for death was like revolted him; and in addition, the thought occurred to him that it would be dangerous to take any positive steps while he was still ignorant of the error that had brought him here.
"I'd like to sleep on that," he said cautiously. "Do you mind if I defer judgment for the night? I haven't had any sleep for thirtysix hours, and I'll just pass out, if I don't get some."
"All right," Bell said. "You think it over With The Enemy out of the way it might be easier to find your Atavars, too, you know. Nothing ever works right while he's in power."

wHEN Hugh awoke his brain did not function properly for quite a few seconds. The bed had had fleas in it, and the changeless brilliancy of the "daylight" had kept him awake a long time despite his exhaustion. The sight of the black-clad figure seated on the nearby stool did not register at first.
"Good mornin'," he said muzzily. Then, "Youl"
"Me," the man in the top hat replied ungrammatically. "I had to wait for the two Princes to get out of the house before I could see you. I've been looking for you."
"You've been looking for me," Hugh res
peated angrily, sitting up in bed. He noticed with only faint surprise that the wall of the room was plainly visible through the visitant's stiff shirt bosom. "Well, you'll have to solidify a minute if you're going to do me any good. I'm supposed to touch you."
"Not yet. When you do, this image will vanish, and I've got a few things to talk to you aboutbefore that happens. I got bounced back two hundred years in time just on account of a fool mistake you made, and I'm as anxious to see you straightened out as you are myself." He hiccuped convulsively. "Luckily I'm a book collector with a special bent towards Cruikshank. I had sense enough to consult Dr. Dee while I was behind the times, and found out where you were. Do you know?"
"Where I am? Why, I'm Outside."
"Use your noggin. How much does 'Outside' mean to you, anyhow?"
"Very little," Hugh agreed. "Well, the only other place I know where people go that make mistakes is-awk! Now, wait a minute! Don't tell me-"

The figure nodded solemnly. "Now you've got it. You should have guessed that when the Princes told you their boss was called the Old One. You've already had clue after clue that they're forbidden to conceal from you; that no one dies here; that all the world's magicians come here eventually; that making money-remember the saying about the root of all evil?-is the town's principle industry; and so on."
"Well, well." Hugh scratched his head. "Hugh Tracy, Ph.D., F.R.A.S., spending a season in Hell just like Rimbaud or some other crazy poet. The fall season at that. How Evelyn would love this. But it's not quite as I would have pictured it."
"Why should it have been?"
Hugh could think of no answer. "Who's Yero, then? He's called The Enemy."
"He's their enemy, sure enough. I don't know exactly who he is, but he's someone in authority, and his job is to see that the Purgatory candidates get a chance to straighten things out for themselves. Naturally the Fallen buck him as much as possible; and part of the trick is to disguise the place somewhat, to keep its nature hidden from the transportees-the potential damned-and lure them into doing something that will keep them here for good. That bed you're in, for instance, is probably a pool of flaming brimstone or something of the-sort."

Hugh bounded out hastily.
"Yero establishes himself in the fortress of Dis, which is what that pile of chromium junk is, up on the hill, after you get behind the disguise. Each time he comes, he makes a tour through the town, showing himself to each newcomer in a form which will mean the most to that person. The important thing is that few people take kindly to being corrected in the fundamental kinds of mistakes that bring them here, so that nine times out of ten Yero's appearance to you makes you hate him."
"Hmm," Hugh said. "I begin to catch on, around the edges, as it were. To me he looked like a man I'd started out to murder a few days ago."
"You're on the track. Examine your motives, use your head, son, and don't let the Princes trick you into anything." The pellucid shape steadied and grew real and solid by degrees; the man in the top hat rose and walked toward the bed. "Above all-don't hate Yero."

His outstretched hand touched Hugh's sleeve, and he vanished on the instant with a sharp hiccup.

There was no one in the house, and nothing to eat but a half-consumed and repellentlooking pudding left over from the "night" before, which he finished for lack of anything else rather than out of any attraction the suety object had as a breakfast dish. Then he left the house in search of the other Atavar.

The light was bright and cheerful as always, but he felt chilly all the same. Discovering where he was had destroyed all of his amusement in the town's crazy construction, and taken the warmth out of his bones. He eyed the passers-by uneasily, wondering as each one approached him whether he was seeing a prisoner like himself, a soul in eternal torment, or an emissary of the Fallen whose real form was ambiguous.

FOR the rest of the morning he roamed the streets in search of a likely-looking figure, but finally he had to admit that his wanderings were fruitless. He sat down on a doorstep to think it out.

His Atavars were the "symbols of his error"; they were night-prowlers, obviously, because he had been one himself, gun in hand. The error itself was something to do with.. Jeremy Wright and Evelyn-not the impending murder, because it had not been committed, but some other error. The man in
the top hat had been chosen, perhaps, because he had conceived of Wright as a cavalier, a suave homebreaker, or something of the sort; dinner clothes made a pointed symbol of such a notion. Of what else, specifically, had he suspected Jeremy? Tom-catting!

He groaned and dropped his head in his hands, remembering the cat he had seen in conjunction with his first sight of the man in dinner clothes. How was he to find one ragged alley-cat in a town where there were doubtless hundreds? Cats did not wear period costumes. He couldn't go around touching cats until something happened!

He heard a sniffing sound and a thin mournful whine at his side. He looked down.
"Go 'way," he said. "I want a cat, not a mongrel pooch."

The puppy, recoiling at the unfriendly tone, dropped its tail and began to sidle away from him, and gloomily he watched it go. Brown dog?-Brown cat?-Brown dog! An inspiration!
"Here, Fleet," he essayed. The puppy burst into a frenzy of tail-wagging and came back, with that peculiar angled trot only dogs out of all the four-footed beasts seem to affect. Hugh patted its head, and it whined and licked his hand.
"There, there," he said. "You're lost, I know. So am I. If your name is Fleet, we'll both be home shortly. It darn well better be Fleet."

Hugh considered the animal speculatively. It certainly seemed to respond to the name; but then, it was only a puppy, and might just as easily respond to any friendly noise. Grimly he sat and waited. In about an hour the dog began to get restless, and Hugh carted it across the street to a shop and bought it some meat, leaving in payment a letter from a colleague which the shopkeeper seemed to think was full of cantrips, charms of some kind. Then he resumed his vigil.
It was approximately four o'clock by his personal time-keeping system when he finally heard the sound he had been listening for, but not daring to expect-the voice of the redheaded urchin, calling his dog's name in incredibly weary tones. In a moment the boy appeared, his face tear-streaked, his feet stumbling, his eyes heavy from lack of sleep. The stick was still pulling him, and the conical cap, by a miracle, still rested askew on his head. The rod lunged forward eagerly as soon as it pointed toward Hugh, and the boy stopped by the doorstep, the divining rod
pointing in quivering triumph squarely at the puppy. The boy sat down in the street and began to bawl.
"Now, now," said Hugh. "You've found your dog. Don't cry. What's the matter?"
"I haven't had any sleep or any food," the boy snuffled. "I couldn't let go, and the dog could move faster than I could, so I've been pulled all over the city, and I'll bet it's all the Old One's fault, too-" His voice rose rapidly and Hugh tried to calm him down, a little abstractedly, for in the reference to the Old One Hugh had recognized the boy's real nature, and knew him for an ally. Wait till I tell Evelyn, he told himself, that I've seen an Archangel and one of the Cherubim face to face, and hatched plots with the Fallen!
"I saw your dog, and figured probably you'd be along."
"Oh, thank you, sir. I guess I'd have spent the rest of eternity chasing him if you hadn't held him until I could catch up with him." He looked angrily at the forked stick, which now lay inert and innocuous on the cobbled pavement. "I used the wrong spell, and it had to smell people. No wonder we could never get close enough to Fleet for him to hear me!"
"Do you think you could make the rod work again?"
"Oh, yes, sir. Only I never would."
"I want to use it. Do you mind?"
"I don't mind. It's my uncle's, but I can always cut another one. Only it won't work without the hat, and I took that from my uncle too. He's an Authority," the urchin added proudly. Hugh thought of Goethe's Sorcerer's Apprentice and grinned.
"How come you didn't shake your head and knock it off when you got tired?"
"Oh, the hat only starts it. After that it goes by itself. I just didn't want to lose my uncle's hat, that's all."•
"Good for you. Then suppose I borrow the hat for just a minute, and you grab it when the stick starts. I want to find a cat."

The boy shook his head doubtfully. "I wouldn't want to do it myself, but it's your business. What kind of cat? I have to make up a spell."

Hugh anticipated some difficulty in explaining what it was he wanted, but to his relief the boy had already recognized him as a transportee and understood at once.
"All right. Put the hat on. Pick up the stick like I had it. That's it, one fork in each hand. Now then:

Seeker of souls, lost boys and girls, Of objects and of wells,
Find his gate between the worlds Before the curfew knells;
Find the cat who should reside In the mortal world Inside."

THE divining rod started forward with a terrific jerk, and Hugh plunged after it. The boy ran alongside him and snatched off the magician's cap. "Thanks," Hugh shouted. "You're welcome," the boy called after him. "Good luck, sir, and thank you for holding my dog." Then the stick hauled Hugh around a corner, and the dog-owner was gone; but in Hugh's mind there remained a splitsecond glimpse of a strange smile, mischlevous, kindly, and agelessly wise.

The cherub had not specified in his incantation which senses the rod was to use, and so it had chosen the quickest one-intuition, or supersensory-perception, or sixth-senseHugh had heard it called many things, but until he held the ends of the fork he never quite comprehended what it was.

The stick drew him faster. His toes seemed barely to touch the hard cobbles. Almost it seemed as if he were about to fly. Yet, somehow, there was no wind in his face, nor any real sensation of speed. All about him was a breathless quiet, an intent hush of light through which he soared. The houses and shops of the town sped by him, blurred and sadly unreal. The outlines danced waveringly in a haze of heat.

The town was changing.
Fear lodged a prickly lump in his larynx. The façades were going down as he came closer to his own world. He knew that before long the conventional disguises of the town would be melted, and Hell would begin to show through. Startled faces turned to watch him as he passed, and their features were not as they should be. Once he was sure he had confronted Bell and Martin for an instant.

A cry, distant and wild, went up behind him. It had been Bell-or was it-Belial? Other feet were running beside his own; shortly there were other cries, and then a gathering roar and tumult of voices; the street began to throb dully with the stampeding feet of a great mob. The rod yanked him down an alleyway. The thunder followed.

In the unreal spaces of the public square the other entrances were already black with blurred figures howling down upon him. The stick did not falter, but rushed headlong
toward the castle. His hands sweated profusely on the fork, and his feet skimmed the earth in great impossible bounds. The gates of the fortress swept toward him. There were shadowy guards there, but they were looking through him at the mob behind; the next instant he was passing them.

The mists of unreality became thick, translucent. Everything around him was a vague reddish opalescence through which the sounds of the herd rioted, seemingly from every direction. Suddenly he was sure he was surrounded; but the rod arrowed forward regardless, and he had to follow.

At last the light began to coalesce, and in a moment he saw floating before him a shining crystal globe, over which floated the illuminated faces of his wife-and-Yero, The Enemy. This was the crucial instant, and he remembered the simulacrum's advice: "Don't hate Yero."

Indeed, he could not. He had nearly forgotten whom it was that Yero resembled, so great was his desire for escape, and his fear of the tumult behind him.

The light grew, and by it, the table upon which the crystal rested, and the bodies belonging to the two illuminated heads, became slowly visible. There was a cat there, too; he saw the outline become sharp as he catapulted on through the dimness. He tried to slow down as he approached the table. The rod, this time, did not resist. The two heads regarded him with slow surprise. The cat began to rise and bristle.

The shouting died.

*     *         *             * 

"Hugh!"
He was in Jeremy Wright's apartment, a splintered door behind him, his heels digging into the carpet to halt his headlong charge. In his outstretched hand was, not a warped divining rod, but a gun.
"Hugh!" his wife cried again. "You found out! But-"

The table was still there, and the crystal. The cat and the castle were gone. But Jeremy Wright was still dressed in the robes of an astrologer. He was an astrologer.
"I'm sorry, darling, honestly-I knew you hated it, but-after all, breaking in this way! And-a gun! After all, even if you do think it's humbug-"

Hugh looked at the serene face of Jeremy Wright, and silently pocketed the automatic. There was nothing, after all, that he could have said to either of them.


There was another plane above the clouds over Burden Bay

# Clímate-Dísordered 

## By CARTER SPRAGUE

## A hot publicity man gets a $\$ 25,000$ chill

THE President of the Chamber of Commerce of Wheedonville by the Sea was stately and rather terrifying in his measured wrath. Nor was his peroration against the dapper young-old man who sat at the foot of the long mahogany conference table lessened by the knowledge that he had the full support of the rest of that august body.

But Wiley Cordes, on whom all this anger was focussed, appeared singularly uncowed by the disfavor in which he basked. As a seasoned resort promotion expert he was not unacquainted with municipal ire. So many unforeseen factors could send resort trade swarming to the wrong resort-as had hap-
pened in this case.
Having talked himself into the fat job of putting Wheedonville on the map as the seaside town where vacationers would have the amusement world at their feet, he had been forced to sit by and watch the bulk of the available tourist vacation trade pass to Burden Bay, sixty miles to the south. It was too bad, of course, but a fellow could only do so much.
". . . and despite your definite assurance -in fact your promise-that retail trade in Wheedonville by the Sea would pick up a minimum of twenty-five per cent, in the year you entered the employment of this Chamber it has decreased by more than thirty per
cent. In this same period the retail trade in Burden Bay has risen by almost forty per cent. I and the Chamber whose spokesman I am would appreciate an explanation."

Gathering the skirts of his morning coat carefully to avoid unslightly wrinkles, the President sat down. The silence which followed his sonorous harangue could have been scooped up with a spatula. Eight pairs of eyes remained fixed with suspicion upon the object of his address.
With a sigh, Wiley Cordes got to his feet. Hands in pockets he leaned against the table, jingling the change and keys his fingers found. He was going to have to make this good or be out of a very soft, high paying job Fortunately, he had an idea.
"When I undertook to lift your resort trade here in Wheedonville by the Sea above that of Burden Bay," he began with an air of good humor that drew no response from the grave men listening to him, "I could not, of course, foresee that Mrs. Quinlan in our rival metropolis was going to give birth to quintuplets."

He paused, let it sink in. "Nor could I look into a crystal ball and learn that Wheedonville by the Sea was going to be cursed with five straight weeks of fog and rain at the height of the season. And it is hardly my fault that the Burden Coastal Oil Refineries should bring in five gushers."
"Granted, Cordes," said the President, speaking without arising. "But we cannot continue indefinitely against such buffets of fortune-not and pay twenty-five thousand dollars a year for protection against ill luck -without receiving an iota of protection."
"Your sentiments touch me deeply," said Cordes. "And I should not have been worthy of your more than generous salary if I had not studied the problem thoroughly and come to this meeting with a plan which should speedily put an end to the difficulties under which all of us have been laboring."

Cordes paused to let this sink in. He knew, as do all talented pitch men, when he had his audience hooked. The expression in the eight pairs of eyes upon him was still uni-form-but it flashed a uniformity of hope.
"Gentlemen," he went on, "the summer season draws rapidly to its close. It has not been successful. But Wheedonville by the Sea and Burden Bay have both built their reputations as resort cities, much like that of Atlantic City. upon the warmth of climate and water in fall and spring. I propose to
make Wheedonville by the Sea the only mild-weather resort in this entire section of coastline."
"And just how do you propose to do this?" asked one of the members, his interest aroused above his incredulity. In simple words Wiley Cordes told them. At first there were a few protests upon humanitarian grounds. But they were not enduring. After all the Chamber of Commerce was a collection of hard-headed businessmen. Furthermore they were hard-pressed businessmen. Their ultimate approval was unanimous, as was their vow to mutual secrecy. There was little else they could do.

COLD weather was a factor in Cordes' scheme. But cold weather descends in occasional unseasonable snaps upon the balmiest of resort climate. Even in Florida and Texas there has been snow during recent years. For once the luck ran for Cordes and his quasi-desperate employers.

Early upon a morning in late September, less than a week after the showdown meeting, a plane took off, not from the Wheedonville Municipal Airport but from a private field that lurked less prosperously and publicly in the resort city's villa-studded suburbs.

The plane, a converted Mitchell B-25 AAF bomber, was piloted by Wiley Cordes himself -aviation was among his numerous personal accomplishments. There were bombs in the bomb bay-but bombs of a type not yet seen in war. Millions of pellets of dry ice were so stowed away that they could be sowed high in the atmosphere by continued pressure upon a release trigger in the cockpit.

The cloud formations were just rightwith heavy layers above the target area and little wind. The temperature, in the high thirties at ground level, was below zero two miles up. After getting a sight through the cloud strata, Wiley Cordes began to sow his snow.

Back and forth he flew for the better part of an hour, bombarding the clouds with ice pellets to make snow. He had timed his flight with care so that no other plane would be aloft when he reached the sky above the rival Burden Bay resort-no others took off once the snow storm began. Incoming planes were routed to Wheedonville by the Sea.

Wiley Cordes listened to the reports on his radio as he flew back to the secluded airport outside of Wheedonville. From the tenor of
the announcers it was clearly evident that no one suspected the snowstorm had been deliberately induced by the hand of man. After taxiing his ex-bomber into the hangar, he got out of flying togs and drove to the Wheedonville City Club, where the members of the Chamber of Commerce were waiting.
If the mood of their previous meeting had been glum, today joy was unconfined. Old whiskey was brought out, and a special banquet served by close-mouthed club attendants. The radio was left on, and each report of the inexplicable snowstorm which had brought a halt to the Burden Bay autumn season was the occasion for a toast.
"The man who really deserves our thanks," said the President, lifting his glass to Wiley Cordes. A chorus of "Hear, hear" greeted his salute. Wiley, entering into the spirit of the occasion, waxed enthusiastic when he was given the floor after cigars were passed.
"It is my belief," he went on, "that by repeatedly inducing snow to fall over our neighbor city I can ultimately reduce its mean temperature by the very emanation of cold from the snow covered ground to a point where it will remain colder than normal throughout the fall, winter and spring.
"Furthermore," he added, his well-preserved face alight with optimism, "I see no reason why we should limit ourselves to snowstorms. The same dry ice treatment, given to the right cloud formation above Burden Bay when opportunity offers, should produce a certain percentage of rainy weekends and holidays. I can truthfully say that our worries are over."
"Keep it up, and you'll find a welcome surprise in your pay envelope, Wiley," said the President, beaming. The arrival of the afternoon papers from Burden Bay was the aignal to cease all speech making for a good gloat.

The journalists of Wheedonville by the Sea's ancient rival, beneath a commendable effort to gloss over the disaster, were really crying catastrophe. Coming without warning, the baby blizzard-for it had amounted almost to that-had literally caught them with their plants down.

Damage, it was hinted in stories hastily killed for later editions, would almost certainly run high into millions. Hotel reservations for the usually equable autumn months were already being canceled. As if to prove it never snowed but it poured, the Oil $\mathrm{Re}-$ finery chose that day to announce the failure
of a sixth gusher and resultant passing of a dividend.

Three days later, when clouds again moved in on the coastline, Wiley Cordes took to the air with another load of dry ice pellets. And once again he did his dirty work undetected and with disastrous results for Burden Bay.

On his third trip, because of a low current of warm air of whose existence he was not informed, Wiley came in with a rain storm that washed away most of the snow. But his fourth, fifth and sixth one-plane raids more than made up for this lapse.

wILEY CORDES and Wheedonville by the Sea were riding high. Hotels were packed and concessions were booming. The public relations expert found his salary raised an added hundred dollars a week. There was laughter at a Chamber meeting over a Burden Bay picture release showing a couple of pretty girls in ski clothes backed by a slide made of the defunct oil gushers.
"I'll get the chorus of Mike Todd's new musical down here next week end and put them on water skis in bathing suits," promised the laughing. Wiley Cordes. Of course he knew it could not last forever. But he saw no reason for the run of good fortune to come to an early end. He had planned and executed his scheme too well.
So he was not pleased to discover another plane above the clouds on his next trip over Burden Bay. Still, it was something that had to happen. He merely cruised on innocently and was relieved when the other ship-a big four-motored flying boxcar-disappeared through the clouds. Then he swung back and did his stuff.
He saw the plane on three more occasions as he placed snowstorms accurately over hapless Burden Bay and its presence began to worry him. But the pilot gave no indication that he knew what Wiley was up to and the discrest young public relations counsellor decided not to mention it to the men who were backing his scheme.
As a result of this step and of his own preoccupation with promoting the balmy atmosphere of Wheedonville by the Sea, he was really caught off-guard when disaster finally struck. As fall merged into winter the reservations totals for Wheedonville hotels fell off far more sharply than it should have-especially with Burden Bay out of the picture.
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# The Denultinmate Trump 

By R. C. W. ETTINGER

When millionaire H. D. Haworth awoke after three hundred and twenty-two years of living death he thought that the world was his oyster, but there had been some changes made!


HARLEY D. HAWORTH had been a doughty warrior in the American manner. Many a powerful Wall Street foe had bowed to his strength and thousands of innocent victims had cursed his name. But that was many a misty year ago.
Now even his son was an aged philanthropist and H. D. himself was relegated almost to legend. But at ninety-two the old battler was locked in his most desperate struggle, vainly trying with his failing strength to beat off the grimmest, most relentless of all antagonists.

If the man in the street ever heeded or mentioned this struggle, it was to disinter a corny, dog-in-the-manger joke.
"Old Harley D. Haworth," he would say patronizingly, "Is such a guy-if he can't take it with him, he just don't go."

But he was going all right, battle by battle, losing his war. Not that his forces were small-two billion greenbacked stalwarts comprised his army. The resources of the planet were his. Only his generals, the world's fanciest physicians, were incompetent to maneuver these forces to advantage.

They gave him gland extracts, they gave him vitamins, they gave him blood transfusions. They gave him false teeth, eyeglasses, arch-supports. They cut out his varicose veins, his appendix, one of his kidneys. And in the end the learned doctors held a conference and this was the sum of their wisdom-eat crackers and milk.

At this juncture there was a shake-up in the high command. The new Chief of Staff was not a physician but an engineer named Jones.
"What man can imagine, man can do." So
runs the optimistic saw. The boy, Garibaldi Jones, had had firm faith in said saw, and imagined himself a great lawyer and famous statesman. With the passage of time, however, there gradually came to Garibaldi, as to many another before and since, the suspicion whoever said that was kidding.

Now Baldy Jones had long since conceded that his imagination, at least, far outran his capabilities. He had settled down, when he realized he lacked the persuasive gift, to being a reasonably competent mechanical engineer.
An ordinary slip-stick jockey, that was the work-a-day Jones. But sometimes, on a Sunday, Jones the general-statesman-sci-entist-prophet-and - all - around - wiseacre would hold forth from his armchair on life, love, art, literature, science, religion, politics and various other manifestations of nature that are dignified by names.

On a certain portentous Sunday in the summer of 1947, about the time the doctors were prescribing crackers-and-milk as a specific for senile debility, Garry had found a particularly depressing article in his Supplement. Goodwife Nancy was relaxed with the Women's Section.

Garry wiped the perspiration from his gleaming head of skin and proceeded to her instruction.
"Listen, dear, it says here some scientist thinks the human race is going to be wiped out. It's too dumb to survive, or too smart. I think that's crazy but he's got a lot. of points. Listen, he says-
"'To date there has been no indication whatever of any barrier to the indefinite extension of the frontiers of science. It is breath-taking to think what this means. It means that so far as we know the scientific method is capable of carrying humanity to any conceivable heights and beyond'."
"Garry, stop talking so loud and let me


The thirty feet of gold and crystal grace the garage held was a thing of beauty
read this, 'Fun With Fish-Hints for the Hurried Housewife.' You're always saying, 'Give me something different.' Science. What do I know about science?"
"You should know something beyond the kitchen. Listen-'But reflection turns hope to alarm, with this thought-In the vast and ancient universe surely some races must have had time already to attain godlike power and yet they have not manifested themselves. Many answers are offered to this riddle, but none very satisfactory.'"
"Garry, will you be quiet?"

NANCY'S question was sharp. "I will not," said Garry. "One answer is that our civilization is very young, and the hypothetical super-civilization somewhere just hasn't found us yet. But that is a contradiction in terms, because it takes most of the "super" out of the super-civilization, considering that a technological culture advances on an exponential curve.'"
"Garry, are you going to let me read in peace?"
"I am not," said Garry. " 'Another is that a super-civilization would have advanced beyond any concern about us or our petty problems. This is an uneasy possibility, but rather thin for this reason-
"'From all indications our mastery of the physical world is proceeding much faster than our mental evolution, and while this condition may change I am inclined to think we would be flitting about the galaxy before we would have lost our humanity.'"
"Garibaldi Jones, if you don't stop with that crazy stuff I'll go out of my mind!"
"You will not," said Garry remorselessly. "'We are thus led to the proposition that there is no aper-civilization and to the corollary that intelligence, at least technological intelligence, has no survival value. This is a sobering thought, and we ask-
"'Why? Aside from metaphysical hypotheses vain to pursue, there is one outstanding answer. Someone, someday, will find a chain reaction for one of the light elements like oxygen and silicon, or perhaps some other even deadlier agent will be loosed upon the world-for as science progresses more and more power is more and more often concentrated in fewer and fewer hands.'"
"Garry, do you intend to ever stop talking?"
"I do not," said Garry. " There is, sadly,
no indication of an abatement of the spirit of irresponsibility that has kept the world, especially in recent years, in turmoil, at war or in fear of war.
" "The only real remedy, perhaps, is fear of God, but the materialist knows that when he dies his rotting carcass is beyond punishment, beyond hope, beyond recall. Thus the only restraint on beastliness is the ineffectual one of conscience, and in consequence-" "
"Why beyond recall?" interrupted Nancy, surprisingly.
"What?"
"Well, if science can do anything, like he says, why can't they bring the dead people back some day? Now you just read that tripe to yourself, if that 'scientist' knew anything he wouldn't have to write for trashy Sunday Supplements, and let me read in peace, do you hear me?"
"How can I help it?" muttered Garry, who had already conceived the germ of a notion.

The notion grew into an idea, and the idea hardened into a resolve. And in the natural course of events he went to H. D. Haworth with his proposition and there was a meeting of minds.

But a third talent was needed for their project, and the logical candidate was Ellsworth Stevens, M.D.. Ph.D.

The seduction of Ellsworth Stevens made a temporary stir in certain lofty circles, shocking all but the most cynical.

A brilliant bio-chemist, a few months previously Stevens had reported some attempts at suspending animation in mammals by a method involving preliminary partial dehydration of the living tissue through starvation, followed by freezing.

The technique exploited the newly-discovered tendency of very minute quantities of radioactive phosphorus in certain phospholipids to counteract the degenerative anti-gelation effect of low temperatures on the colloidal phases of protoplasm.

He had not succeeded in reviving any of the animals, since none of the nerve tissue had lived through the freezing, but results had been nonetheless promising. Now Stevens was employed by the Cancer Institute, consecrated to this most important work.

Until one evening a Tempter called at his modest home. His name, of course, was Jones.
"Dr. Stevens," said Garry, "I want you to quit your job and go back to work on suspended animation."

Stevens blinked rapidly behind his bifocals and smiled deprecatingly.
"Well, Mr. Jones, I could hardly do that. You see, I've been doing some work with radioactive tracers and I'm beginning to get significant results. Can't very well quit now, can I? That other matter isn't very impor-tant-I hardly think it could be done, anyway."
"Dr. Stevens," said Garry, "the Cancer Institute doesn't pay you very much. You have a daughter who is getting to the age where she would like to be dressed up. I will give you a ten year contract at ten thousand dollars a years."
"Mr. Jones, do you realize that cancer is responsible for more deaths than any other ailment except heart disease? Maybe I sound sentimental but I actually think of myself as taking an important part in the world's greatest crusade."
"Dr. Stevens, I will give you a ten year contract at one hundred thousand dollars a year."

Blankness in the shy, blinking eyes, then mounting anger. "Look, you, who the heck d'you think you're kidding? If you-"
"Dr. Stevens," Garry said hastily-an enraged sheep is an appalling spectacle-"I have a power of attorney from Harley D. Haworth." Ellsworth Stevens gaped like a fish, and was pure no more.

THE Pacific lay stagnant, having decided it was too hot a day to do anything except evaporate. But there was the suggestion of a breeze in the garden and ample shade for three men. The dried-up little old man was speaking, and the big bald man and the lean bespectacled man listened with respectful attention.
"I'm a hard-headed business man, and I'm not easy to fool, as many a smart-aleck's learned, hrumph! It would surprise you the number of quacks that try to sell me miracle water and yoga systems and such-like. Blasted parasites!
"But I know a good investment when I see one," the thin, complaining voice went on, "and you gentlemen have a sound idea." He paused benevolently to let them look gratified.
This is ridiculous, thought Gary, the old boy's a caricature.
"A sound idea-don't depend on these pillrolling fools that call themselves doctors nowadays to keep you hanging around a year
or two more, but just go to sleep in a nice refrigerator until people really know something about the body." He shook a bony forefinger.
"And they'll do it, too. I don't believe in much, but I believe in science. It will take a lot of money, but that's what I've got. And you can have all you need, Mr. Jones, all you need, as I've told you before. Blank check. You came to the right man when you came to H. D. Haworth." He sank back into his nylon deck chair, exhausted by the long speech.

Garry seized the opportunity to air some of his ideas. He was all enthusiasm.
"We'll put the vault in Michigan, Mr. Haworth, not here in California-too many earthquakes. Might be a long time before they know enough about bio-chemistry to revive a dead man and restore his youth. Not that you'll be dead," he amended hastily, "just in a state of suspended animation. I'm sure Dr. Stevens can work that out.
"Anyway, we'd better put the vault in Michigan-very safe country, geologically. We'll make the vault and the coolers of the very best, of course, granite and stainless steel and quartz that will never wear out. And then," he added, coyly, "I have a little idea for a power plant that will be really dependable, if I am the one that says it."
"It better be!" snapped H. D., suddenly ferocious.
"Yes-of course. There's the problem of keeping everything secret but I'm sure we can manage it. The workers won't know what they're doing, Dr. Stevens, and I can do all the really technical work. And there'll be only one trustee each generation to keep his eye on things, starting with me."

Stevens was leaning forward, wearing a somewhat bewildered expression.
"But I thought-but surely after we demonstrate that suspended animation is feasible and we've verified our results, we'll publish?" Seeing the odd-faces the other two were pulling, he repeated plaintively, "I always publish."
H. D. Haworth pronounced a certain fourletter word. Garibaldi Jones cast his eyes to the heavens and tore his hair, coming away empty-handed, of course.
"Well, what's wrong with that?" Stevens snapped, a little color in his face. "Don't the people have a right to know?"
"Young man," quavered H. D., tottering to his feet and shaking the bony forefinger,
"what you know about people I could stick in my-"
"Wait a minute, Mr. Haworth," Garry soothed. "Let me explain to Dr. Stevens how it is. Please don't excite yourself. Remember," he coaxed, "we don't want a heart attack now, do we?" The old man collapsed into his chair with a feeble curse.
"Look, Ellsworth, old man," Garry said kindly. "The last thing in the world we want to do is keep anything from humanity, You know Mr. Haworth is the biggest philanthropist in the world. But in this casewell, it's dangerous.
"What do you think would happen if people found out a few rich men were sleeping in quartz coolers while they had nothing but mouldy graves to look forward to? Why, man, they'd tear our vault down with their bare hands!"
H. D. was nodding, muttering something about blasted' riff-raff, but Garry saw Stevens' look of contempt.
"But that's not the main thing," he said hastily. "It wouldn't be good for the country -in fact the world couldn't stand it. Once people were convinced, everybody would demand a frigidaire instead of a coffin. Not many could be made and people would plot and steal and kill to get theirs and religious people would fight against it.
"There'd be fakers and stock promotions all over. The nation's economy would be wrecked. People would take their money with them or leave it as savings at compound interest while they slept for a few centuries. Think of the harm it would do, man-think of the people who are happy now, whose lives would be embittered with vain hopes!"

HAWORTH'S head was bobbing on his scrawny neck. 'That's right, young fellow, and that ain't the half of it!" He cackled. "Almost like to get a finger in that pie myself.
"The insurance companies would be the ones for it, of course. Twenty-year endowment and, instead of paying you, they pickle you. But it's too risky, too risky-you see that, don't you, my boy?"

Stevens sighed unhappily. "I suppose so," he said, defeated.
"Good, good!" Garry boomed, rubbing his hands briskly. "I knew Dr. Stevens would see the point. He has a head on his shoulders.
"Now, as I was saying, Mr. Haworth, we'll have space in the vault for a hundred or so.

That should be enough, I think, but we'll rush yours through first, of course, and have it ready in jig time, just in case . . . And after that "
And so their plans were laid and something new was born under that sun which shone with such ridiculous indiscrimination on H. D. Haworth and on the common people.

According to the outline sketched that afternoon, the vault was to be safeguarded and the sleepers' interests looked after by the establishment of a Haworth Trust, with Garibaldi Jones the first Administrater. Ónly one person in each generation, the Administrator, would know all about the vault.

Of each generation the Administration and one or two of his closest relatives would join the ranks of the sleepers. The Administrator's responsibilities and discretion would include all measures necessary for the safety of the sleepers and the trust funds would be ample, to allow for unforeseen future contingencies.
A number of experimental animals closely duplicating H. D.'s condition would be included for the future biologists first to try their skill on-because if Stevens should not perfect a practicable method of suspending animation in time, and H. D. should actually die, his resuscitation would be a ticklish matter.
H. D. did not want to wake up blind, for instance, or with an altered personalityalthough Stevens, for one, thought any change in the old pirate's personality would be a step in the right direction. The blasted Washington administration wouldn't let a citizen buy radioactives without a lot of busybody questions, but Garry had an idea for a reliable source of power for the coolers.
An improvement on the new "heat pumps," his design dispensed entirely with moving parts, providing a large safety factor. Successfully reversing the refrigeration cycle, the device utilized the heat potential between sub-frost level ground and surface to produce power, using buried coils of a common refrigerant gas.
Caches of treasure were to be tucked away in unlikely places, the key to their location securely hidden in H. D.'s mind. No Tut-ankh-amen he, to invite grave-robbers by foolish ostentation.

And so it came to pass, and H. D.'s last months, despite the physical pain his increasing debilitation caused him, were lighthearted ones.

He was sustained by the bubbling knowledge that he tottered down life's highway toward-not that great, silent abyss that the common folk's imagination called Heaven or Hell and peopled with childish gods and demons anxiously waiting to take him to task for his many "sins"-but merely a bend in the road beyond which lay unkhown, but surely friendly, lands.

In course of time Harley D. Haworth was carefully laid away in his ice-cold "coffin," and those who read the obituaries did not suspect that he was the first of men to die a qualified death.

HE LAY on his back, staring at the white ceiling-it had not occurred to him yet to move. His uncoördinated muscles left his face blank but he was frowning mentally. There was something he wanted to remember, something. . . .

He struggled laboriously to pin down those elusive shapes, but the words wouldn't come. It's hard to think when the words won't come. His eyes sharpened their focus a little and he perceived that he was in bed. Hospital, he thought clearly, I'm in a hospital, of course.

He felt more and more secure now and, after a moment's relaxation, tried again to remember.

A man's voice said clearly, "What am I?"
A feminine voice said pleasantly, "You're a man, and your name is Haworth. Feeling all right?"

Thousands of little relays clicked in H. D.'s brain and he sat up quickly. This room was white and windowless, but it was not the vault in Michigan-and that tall, clear-eyed brownette with the grave eyes and tender lips was certainly not Dr. Stevens.

The man's voice said, "I guess so," and this time H. D. realized that he had spoken. The blood rushed to his head and pounded in his ears, for it had been a strong, young voice.

He ripped away the sheet that covered him, careless of his nakedness, and it was true.

These limbs were firmly rounded, the smooth skin pink with the warm blood coursing beneath. His wildest hopes were realized. He snatched the mirror smilingly proffered him and there it was, that face of youth once lost to faded photographs! Then
a great wave swept in with a rush, a roar, a dazzling sparkle of spray.

He emerged from his faint to find the head of his bed elevated, the woman in white holding his wrist to count his pulse. Well, this is it, H. D. thought jubilantly, it actually panned out. I did it, I did it!

Now to plunge into the great adventuremillions of questions to ask, millions of things to do-a new world to conquer. H. D. rubbed his hands briskly together in his habitual getting-down-to-business gesture.

Loosing his hand, the brownette looked up from her watch. Her eyes were dark blue, and

Bells rang in the back of H. D.'s head, his skin tingled and he forgot what he wanted to say. Her faint, sweet perfume was in his nostrils; a long-forgotten stimulus performed its ancient function. Being a direct man by nature and training, H. D. decided that the shortest distance between two points was to seize this delicious creature. Without more ado he lunged.

But she had stepped back, shaking her head and smiling reprovingly, and H. D. almost fell out of bed. He recovered and collected himself, and laughed to show that he was a good sport.
"Oh, well, more important things to think of now, anyway-or are there more important things? Well, get me some clothes and call the head man around here, and I'll look you up later, Miss
"Lorraine, Dr. Lorraine, I'll get you some pajamas-here they are-and you won't see the Supervisor unless you show some pretty unusual symptoms. He's a busy man and I'm a married woman."

## H. D. sputtered.

"Now really, Mr. Haworth, I'm not just being mean. You have to stay here under observation for three days as a final check before you're sent to-well, and the supervisor doesn't speak English anyway. I'm the only one here at the hospital that does, which is why I'm here. Now there'll be some nice lunch for you in a few minutes, so relax like a good boy and-"
H. D. exploded. "Young woman," he shouted, "Doctor young woman, as you value your job, I demand to see the person in charge!" He practically foamed. "Boy indeed! I am Harley D. Haworth and I am ninety-four years old-and then some," he added thoughtfully.
"Three hundred and twenty years in the
vault and two years we've been working on you," Dr. Lorraine said helpfully.
"Eh? Yes. Well, get me-"
"No," she said very firmly. "You've had enough excitement for the first time in so long. When you've had a nice lunch and a nice nap I'll talk to you again, although you won't really find out very much until you go to-"

A door had opened and shut, and a huge male orderly came in pushing a metal cabinet. The orderly and Dr. Lorraine exchanged a few words that H. D. could identify with no language, although the sounds were easy and musical-a little like Hawaiian, perhaps.
"What's that?" H. D. asked suspiciously. "Where are we?"
"Why, we're in Chicago. Oh, the language -Hominine, we call it. It was adopted only about fifty years after you died, at the time of the Union, when the U. S. sort of took over the world and a universal language became necessary." The orderly had gone out, and she set a dish before H. D. on a sliding bed-tray. "Here, eat your lunch while it's hot."
H. D. let out a yelp. "Lunch! A plate of soup! Woman, I'm hungry! Haven't had a bite for three hundred twenty-two years!"
"That's just why you must go easy for a bit. Here's your spoon. Now, doesn't it smell good?"

It did, and H. D. grumblingly took some. It tasted good, too-beefy-and he went at it. Between slurps he tried to get a little more information. "You say the U. S. conquered the world fifty years after I died?"
"Oh, no! Just absorbed it, you might say. You had something to do with that in a way."
"Eh? How's that?"
"Well, your idea of putting yourself on ice to wait for better times gradually got around and, after awhile, it got pretty common in the States. The insurance companies did most of it. But they couldn't do it in Europe, being, you know, bureaucratic and half decayed and all, and so poor from all the wars. Couldn't afford it. Guess I'm not much of a historian."

Snort from H. D.
"Oh, eat your soup! Well, it got hard for the European leaders to keep their people satisfied with their poverty but there were still plenty of ugly things here they could point to. Then Farbenstein came along with his Probe, and the Constitution was amended
to adopt the Ascension Code-and a lot of things changed."

BY THIS time H. D. had finished his so up, and Dr. Lorraine took his plate a way and flipped the switch above him that lowered the head of his bed. H. D. objected testily.
"I don't want to lie down! Quit that, will you. What about this confounded Code?"

The doctor shook her head. "Sorry, it's time for your nap now."
"Nap! Are you out of your mind? Millions of questions! I'm not the least bit sleepy!" This was a lie. There must have been something in the soup, because his eyelids were becoming very, very heavy.
"Well, you can't argue with a woman," he complained peevishly. "Who ever heard of a woman doctor-a pretty woman doctor . . . ?"

Dr. Lorraine did something to a lever, and the room darkened.
H. D. awoke refreshed and full of vigor, the conversation with Dr. Lorraine fresh and clear in his mind. He jumped out of bed, and stumbled, cursing, around in the dark until he finally figured out where the light would be.

He pushed a lever above the head of his bed, the first of several in a panel, and light filled the room, varying in strength with the position of the lever. He did not see the source.

The room was unremarkable in appearance, although he could not identify the smooth, creamy, soft material of the walls. Of two doors the outer, to his cursing disgust, was locked. The other opened into a Rube Goldberg bathroom. After admiring the array of buttons, switches, cranes and slings, after a little cautious experimentation, H. D. saw that the design was intended to permit cripples the luxury of a real bath and toilet.

Wandering back into the bedroom, he idly fiddled with the other levers in the wall panel with no perceptible results until the last. Then the entire end wall vanished and he was looking at Chicago.

At where Chicago should have been, at any rate-he could hardly have said what he expected but what he saw was merely a jungle. From what seemed a considerable height he could make out little detail in the mass of growing things.

He could see no other tall buildings, but he was looking toward the lake and his view was limited. As he strained his eyes ,he could see a little of bright winding paths,
and graceful little houses buried in greenery and blossom. No movement caught his eye.

These people must conduct their business elsewhere, he thought-underground, perhaps, leaving the surface for leisure and reoreation. Garden City indeed! Life must be pleasant here-and it would soon be his! He fairly itched to make his mark on this Brave New World.

He turned from his contemplation when he heard the door open. There was that woman, smiling and inquiring how he'd slept. He'd soon straighten her out.
"Dr. Lorraine," he said grimly, "why was I locked in?"

The smile faded just a little. "Three days observation, remember?"
H. D. was patient. "Look," he said carefully, "I don't think you quite understand. I'm H. D. Haworth. From the little you've said I gather there's been no Bolshevik revolution, common sense be praised, so the Haworth Trust must be worth hundreds of millions. You still use money, don't you?"

She nodded slowly.
"And I have millions hidden away where no one can ever find them but myself-don't think I came an empty-handed beggar, even if something happened to the Trust funds. Millions, I tell you-gold and jewels, rare old books and art, everything of value.
"And besides that I'm the oldest sleeperwhat's the matter with you people?" he demanded fretfully: "Don't you know what news is? Why am I met by one insignificant woman doctor?"

Dr. Lorraine did not seem put out by the upbraiding and this in itself was subtly exasperating. It was her attitude, her air, in which he sensed-sympathy, yes, and a sort of embarrassment. He did not understand it but it was absolutely offensive!
"Well," H. D. snarled, beside himself, "confound it, woman, say something!"
"Three days observation," said Dr. Lorraine, almost stupidly. Then she visbily readjusted the mantle of her professional cheerfulness and spoke briskly.
"It won't be so bad. I'll be making tests every day and that will pass the time and you can play the 'visor." She went over to his bedside table and pulled out the drawer holding the instrument.
"I hate radios," H. D. said sullenly. "I'd like to jam every one down Marconi's throat, first breaking the tubes. Confounded trashy programs, changing every five minutes!"
"Is that how they were? How awful for you! See, you just dial, like this, and one station has nothing but dance music, another nothing but Jimmurian dissonances. See? Anything you like.
"And if you first dial "O" you can then dial for any number or any entire program that's ever been recorded. Here's the index. Too bad we don't have one in English."
H. D. yielded a snicker. "Where's the screen?" he asked, slightly mollified.
"Oh. I did say 'visor,' didn't I Well, you see, this is a modifled visor. No visual, no talking programs, just music. It's too bad, in a way, but we had to have you here for some of the tests. This is a neuro-psychiatric ward, you see. Yes, soft walls and all. It can be stripped down for violents."
H. D. showed signs of becoming that way himself and the doctor smilingly stepped to the door and opened it.
"See you tomorrow."
"Wait!" H. D. roared. "What happens then? What-"
"Three days observation." She nodded, and the door was closing. He reached it in a bound but the lock clicked first.

LATE in the afternoon of the third of those maddening days that loathsome woman-the part of her that wasn't phonograph must have been clam-brought him some clothes. And the word that she spoke as she quietly left was music-Goodby.
He vaguely remarked the clothes as he pulled them on-socks, thin-soled shoes, a loosely draped one-piece garment of a closely woven sky-blue material resembling silk but duller-a light cape of darker blue. Just as he was appraising the quite satisfactory effect in the wall mirror a sound turned him toward the door.
They stood a little awkwardly in the doorway, pulling rather solemn faces. The blackhaired man, who would have been big by ordinary standards, was mopping his red face in a nervous gesture and the seven-foot giant who dwarfed him was stroking his platinum-blond beard.
H. D. stared at the giant gape-mouthed. He looks exactly like God, if God were in the shape of a man, he thought.

Teeth flashed in a smile through the silvery brush and God said, haltingly, "Hello, Grampaw."
H. D. started violently. The black-haired man came forward with a jovial, if forced,
laugh and a deprecating wave of the hand.
"You are his grandfather, you know, Mr. Haworth. Fourteen times removed, that is. He's the Administrator now. Don't you know me? Guess the bird looks different with all this plumage, eh?"

There was, at that, something familiar about this coarse, good-natured fellow, something
"Jones!" It was the delighted cry of a homesick sailor sighting the old church steeple.
"Garibaldi Jones! It's good to see you, man! When did they dig you up?"
"About twenty years ago." Garry grinned.
For a moment H. D. thought he discerned in his grin a trace of that expression he had so come to hate in the last three days, that tinge of something like embarrassment. Nonsense!

He rushed on, "Now I'll find out about this new-fangled world and pretty soon we'll set 'er by the ears. Once I get my . . ."
The giant said something to Jones, who nodded uncomfortably. H. D. frowned.
"What's that? Why don't you speak English, Mr.-uh-Mr. Haworth? I guess you're a Haworth?" The giant smiled politely.
"He don't know any English. Mr. Haworth, except those words I taught him. Guess you might as well call him Junior-same name as yours. He says we better get going. Have to be in Washington by six. Your flyer's waiting."

Your flyer! This was more like it. Well, after all, he was H. D. Haworth, and they named demigods after him! In the exuberance of the thought he forgot to ask why they had to go to Washington. He swirled his cape about him and strode out. The demigod stepped aside for him.

The corridor was a surprise. It was not merely long-it was shockingly long. It must have been miles long. And it was broad. A truck could have easily passed and it was lined with doors and little signs in a wavy lettering. No one seemed to be about.

They hurried along, H. D. gawking to all sides, almost trotting as Junior set the pace. At the great double door of an elevator shaft Junior touched the signal button.

Big-everything around here was big! The elevator could have accommodated several pianos and the pretty red-head operating the lift had to look down at' H. D. She winked and made a laughing remark.
"She says you're cute."
H. D. did not know whether to be pleased or offended and before he could decide the acceleration took his breath away. They went up, up, a ridiculous distance, and at last he stepped out into another corridor.

Corridor! The floor must have been forty yards across and most of it was moving, a series of horizontal escalators with three speeds in each direction, adjacent strips moving at different speeds.

WHILE H. D. stared, Junior and Garry Jones had stepped aboard the nearest strip and were moving away. Now Jones came trotting back, making little headway against the conveyor's motion. He had to chuckle.

In my country, said the queen, you have to run like the devil to stay in the same place.
"Come on, Mr. Haworth," Garry called. H. D. waited for the next opening in the rail to oppose him, took hold and stepped on. When he had come up, Garry explained, "This is Chicago-this building-this is the whole city, the business part, that is. This is one of the transport levels."
"Hmm." The place didn't look right-too bare, too empty. "Where are the stores? Where are the signs? Where are the people?"
"Stores? Oh, this is juist a garage. Working day's over. Just about everybody's gone home."
"Garage?"
"Sure, for flyers-remember? Here we are."

The door Junior unlocked let them into a space sufficiently garage-like in its bareness, but the thirty feet of gold-and-crystal grace it sheltered was a thing of beauty, enough to warm the cockles of any limousine-lover's heart. As H. D. gave himself up to the upholstery's caress he felt his old confidence return.

The wall rolled away as Junior made some unperceived signal. With the slightest of vibration the flyer wafted out into the shadowed evening. As the wingless craft emerged into space H. D.'s hands instinctively tightened their grip on the arms of his chair. Then he relaxed with a smile. He looked around with appreciation, ready to accept each new thrill with easy complacency.

When the mounting flyer finally cleared the shadow of that Everest of a building they must have been six thousand feet up. In the western distance the dipping sun shed its
fire on a doll's garden of patched green, with here and there a spot of cheerful early autumn color. Charming, he thought patronizingly, charming!
"Let's go down closer and have a good look at those suburbs," he exclaimed on sudden impulse.
Garry shook his head. "Too late. We'd never make it to Washington by six." The flyer was gaining speed and altitude.
"What's all this about Washington? What happens there?"

Garry hesitated. "You have to take a trip, Mr. Haworth."
H. D. leaned forward, unable to hear the last words. With their mounting speed the whine of violated air was becoming a soream. Garry reached back over Junior's shoulder and hit a toggle at the right end of the instrument board. It was like shutting off a radio.

He repeated, "You have to take a trip, Mr. Haworth."
"Trip. By heaven, you're as mysterious as that woman. Why don't you speak up? Well, never mind that." His eyes narrowed. "To whom does this airship belong?"

Garry sighed. "To you, Mr. Haworth."
"Tell that oaf to turn around and go back."

Garry sighed again and shook his head. "He won't, Mr. Haworth." The flyer was arching through a dark swirling cumulus layer, still gaining speed.
H. D.'s jaw set hard. He gritted his words.
"I don't know just what this is," he said slowly, "but I know this. You won't get away with it. Nobody fools with me. I'll break you and that great goon of a great-great-grandson. Money still counts herethat woman said so."
"Yes."
"Yes. I suppose you know to whom the Haworth Trust reverts now?"
"To you, Mr. Haworth."
"Yes. And that means I'm one of the richest men in the world again."
"No, sir."
H. D.'s cold tone deepened. "What do you mean, no?"
"Well, sir, times have changed, you might say."
"Inflation!" H.D. exploded.
"No, sir, none to speak of. You can still get a loaf of bread for a quarter. It's just that the growth curve is pretty steep, and it gets steeper all the time. Atomic energy,
you know, and no wars for a long time, and now no natural death.
"You can get twelve percent on your money in a savings bank. It's really an expanding economy. Why, Chicago alone is worth more in dollars and cents than all the nations of earth in our time."
H. D. reflected this. "Well, how much is the Trust worth?"

GARRY exchanged a few words with Junior. "About thirty million, he says." "What!"
"Well," Garry hastened, "I know it isn't much for twenty million to grow to after all this time, but there have been expenses! What we had to spend for protection in the old days, when the mobs wanted to dynamite the vault!
"The sums that were spent on research to revive youl And then the Administrator, Junior here, has to live up to the Haworth name and that's expensive. He draws over a million a year."
"Why, that thieving, white-whiskered pipsqueak, I'll sue him within an inch of his life! ' 'll-"
"Now, now, Mr. Haworth, you're still a wealthy man."
H. D. glared. "Wealthy. Yes. And famous. The oldest Sleeper. Can't understand why the newsmen haven't been after me. In my time-"
"You're not news, sir. Look, Mr. Haworth, I have some rather unpleasant things to tell you. I've been shirking it but I might as well tell you now."
H.D. shrugged off a faint twinge of apprehension and leaned back in his seat. He looked out. The flyer was rocketing through clear air, high above a sea of crimson cotton, no longer accelerating.
He relaxed and permitted himself a smile. He had life, health, and millions. The billions would come easily enough. Pah, what "unpleasant things" could mar this paradise?
"You did have some news value as the oldest and one of the deadest Sleepers-but you've been thoroughly Probed out this last year."
H.D. frowned impatiently. "What's this 'Probe' business? That woman mentioned it, and some 'Code'."
"The Farbenstein Probe," Garry said, looking thoughtfully out at the darkling horizon, "is, in simple terms, a hypno-bio-
physical technique for reaching and interpreting buried memories. Your thoughts and experiences are on file and the newsworthy ones have been published."
H.D.'s mind refused to accept this horrible thought. He stared stupidly.
"No! It can't be!" he gasped. "It's-it isn't possible! It isn't decent!"
"Oh, not all your thoughts," he explained quickly. "Just-well, I'd better just tell you as well as I can about the Code." A very uneasy feeling mounted in H.D.'s breast as Garry continued.
"The Ascension Code made some basic changes in the conditions of life. What it really did was take most of the irresponsibility out of people's behavior. Because the freezatoria gave people hope that had no faith in Heaven-so the Code gave them fear, that didn't fear God. The Code put justice on a remorseless eye-for-an-eye basis."
H.D.'s blood ran slowly cold. He repressed the thought, denied it, rejected it, but in his heart he knew. His intuition had made the connection. Garry noted his heavy breathing, and felt a stir of pity. He continued, gazing out.
"It's simple enough, in practise. Every fifty years each person must submit to a Survey-and all Sleepers when they're revived. By association techniques they're made, under the Probe, to admit everything they've done that was wrong, either by their own conscience or by the written law.
"Then-well, you see-one outgrowth of the Probe is that suffering has been classified, qualitatively and quantitatively. Oh, it's arbitrary on the edges, but not very, and where there's doubt there's charizy, of course.
"After the Survey, if he's passed a certain allowable maximum in wrongdoing, a person must go to-the penal colony and experience himself all the suffering he has caused, qualitatively and quantitatively as closely as possible."

The question was only a whisper. "How long will I have to spend at this-this placewhere did you say?"
"The penal colony? It's on the fourth planet. I guess we used to call it Mars." He hesitated. "In your case, I'm afraid-well, they say you hurt a lot of people."
"It's ridiculous!" H.D. cried desperately. "It's barbaric! My word, even in our time reasonable people knew that revenge isn't
civilized, even against criminals. Can't they rehabilitate people?"

Garry grimaced, and spoke flatly, slowly.
"'There is no known deterrent from harmfully selfish action except fear of punishment. Nor can there be a healthy mind as long as there exists a debt to conscience.' That's a translation from a schoolbook."
H.D. sprawled in his chair like a poled ox. He recognized that he was beaten. His eyes stared vacantly, he mumbled over and over, "They can't, they can't." He did not notice the flyer's swooping deceleration.

S
OMETHING was shining with a white light. They were hovering. H.D. looked up absently, little interest in his eyes. A great long cave-mouth yawned in the mountain that was Washington, bright in the gathering dusk.
"There's our signal." A green eye was blinking rapidly. Junior settled the flyer in a curbed rectangle and H.D. had a moment to note the rows of craft, the conveyors, the rows of brightly lettered doors in the background. Then the door of the flyer opened and a gray-uniformed man almost as big as Junior clambered in, carrying a little leather bag.
H.D. watched in silence as the Administrator and the stranger exchanged a few words and some sheaves of paper, to which each affixed a signature. Then the man in gray opened his bag and, with the tools he took out, began to do something to the flyer's instrument panel. He whistled as he worked, a jazzy dance tune, and the sound grotesquely accentuated the silence of the watching three.

Jones stirred. "Well, here's where we get off, I guess." He stepped down out of the flyer, Junior after him, but when H.D. mechanically followed, the Administrator's bulk blocked the door. He was smiling with polite embarrassment.
"Move, you oaf!" H.D. snapped.
"Sorry, Mr. Haworth," Garry said. "You're going on to . . . the penal colony."

Red rage gripped H.D.; they were treating him like an animal, sending him off like a bull to the packing house. He gripped the door-frame with his hands, and in a quick motion set his foot against Junior's chest. The giant sprawled backwards, and there was a satisfying thump as his head struck the pavement.

An iron hand gripped H.D.'s shoulder. The
uniformed man's face was completely indifferent, almost bored. He merely held H.D. until he relaxed and sank shaking into a seat. Junior was on his feet, rubbing his head, the oafish smile a little rueful now.

The man in gray resumed his work and his whistling. It was intolerable. Those two with their sympathetic silence, and this fellow with his cheerful, loathsome whistling. He had to say something.
"How's a little can like this able to get to another planet?"
"Oh, we're pretty good engineers these days," Garry said eagerly. "Tell you about it sometime. Well, the J-man's fixing your pilot signal now. It'll fly on automatic. It ought to be pretty interesting, really, your first space trip and all."
H.D. scarcely heard him. The "J-man" had put his tools back in their bag and was descending to the pavement. The door closed with a ringing sound and the J -man was doing something to it from the outside. Despairing, frustrated tears welled in H.D.'s eyes. His knuckles whitened.

A faint vibration stirred in the flyer and H.D. looked around in panic. Going already? He felt horribly afraid. He had an impulse to claw the walls. Garry caught his wild look and returned a glance of sympathy. His lips moved, but no sound came.
H.D. stared. Garry's lips moved again, and he gestured. H.D. remembered then and hit the toggle.
". . . easy, Mr. Haworth." Garry's voice was as clear now as though he spoke beside him.

The flyer lifted gently and eased around in a 180-degree turn. The last tints of evening glowed in the western sky, the earth was lost in darkness and the first insolent stars were mocking him.

Garry, on the other side now, called again.
"Take it as it comes, Mr. Haworth. It won't last forever, even if it seems like it. Son of a gun-said the wrong thing again, didn't I!"
H.D. screamed, "Appeal! Appeal the case!"

Garry sadly shook his head. "'There is no known deterrent from harmfully selfish action except fear of punishment. Nor can there be a healthy mind as long as there exists a debt to conscience.'"

The flyer was easing out into the night, toward that red star of evil.
"You say Mars isn't called Mars any more?" he called hoarsely, pressing desperately against the hard crystal.
"No," Garry called softly and the quiet words were still very clear. "Now they call it Hell."

Because he is branded a misfit, Deker volunteers for Nirvana-which brings him surcease for aeons-but at each awakening he is again tormented by evil reality in THE SLEEPER IS A REBEL, an amazing novel of the future by Bryce Walton featured in the February issue of our companion magazine THRILLING WONDER STORIESnow on sale at all newsstands!

# Backache,Leg PainsMayBe DangerSign Of Tired Kidneys 


#### Abstract

If backache and leg pains are making you miserable, don't just complain and do nothing about them. Nature may be warning you that your kidneys need attention.

The kidneys are Nature's chief way of taking excess acids and poisonous waste out of the blood. They help most people pass about 3 pints a day.

If the 15 miles of kidney tubes and filters don't work well, poisonous waste matter stays in the blood. These poisons may start nagging backaches, rheumatic pains, leg pains, loss of


pep and energy, getting up nights, swelling, puffiness under the eyes, headaches and dizziness. Frequent or scanty passages with smarting and burning sometimes shows there is something wrong with your kidneys or bladder.

Don't wait! Ask your druggist for Doan's Pills, a stimulant diuretic, used successfully by millions for over 50 years. Doan's give happy relief and will help the 15 miles of kidney tubes flush out poisonous waste from the blood. Get Doan's Pills,

# The Brink of Infímity <br> By STANIEY G. WEINBANM 

Professor Abner Aarons, mathematician, is forced to probe the supreme problem-with his life the price of failure!



©NE would hardly choose the life of an assistant professor of mathematics at an Eastern University as an adventurous one. Professors in general are reputed to drone out a quiet, scholarly existence, and an instructor of mathematics might seem the driest and least lively of men, since his subject is perhaps the most desiccated. And yet even the lifelessscience of figures has had its dreamers-Clerk-Maxwell, Lobachewski, Einstein and the rest. The latter, the great Albert Einstein himself who is forging the only chain that ever tied a philosopher's dream to experimental science, is pounding his links of tenuous mathematical symbols, shadowy as thought, but unbreakable.

And don't forget that "Alice in Wonderland" was written by a mathematician. Not that I class myself with them. I'm practical enough to leave fantasies alone. Teaching is my business.

At least, teaching is my main business. I do a little statistical work for industrial corporations when the occasion presents itselfin fact, you'll find my name in the classified section: Abner Aarons, Statistician and Consulting Mathematician. I eke out my professional salary, and I do at times strike something interesting. Of course, in the main such work consists of graphing trends of consumption for manufacturers, or population increases for public utilities.

And occasionally some up-and-coming advertising agency will consult me on how many sardine cans would be needed to fill the Panama Canal, or some such material to use as catch advertising copy. Not exactly exciting work, but it helps financially.

TNHUS I was not particularly surprised that July morning to receive a call. The
university had been closed for some weeks. The summer session was about to open, without however, the benefit of my presence. I was taking a vacation, leaving in two or three days for a Vermont village I know, where the brook trout cared not a bit whether a prize-fighter, president, or professor was on the hither end of the line. And I was going alone; three-quarters of the year before a classroom full of the tadpoles called college students had thoroughly wearied me of any further desire for human companionship. My social instincts were temporarily in abeyance.

Nevertheless, I'm not unthrifty enough to disregard an opportunity to turn an honest penny, and the call was far from unwelcome. Even the modest holiday I planned can bite deeply enough into the financial foundation of an assistant professor's pittance. And the work sounded like one of these fairly lucrative and rather simple propositions.
"This is Court Strawn," the telephone announced. "I'm an experimental chemist, and I've completed a rather long series of experiments. I want them tabulated and the results


SOME stories are forgotten almost as soon as they are printed. Others stand the test of time.

Because "The Brink of Infinity," by Stanley C. Weinbaum, has stood this test, it has been nominated for SCIENTIFICTION'S
HALL OF FAME and is reprinted here.
In each issue we will honor one of the most outstanding fantasy classics of all time as selected by our readers.

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Nominate your own favorites! Send a letter or posteard to The Editor, STARTLING STORIES, 10 East 40 th St., New York 16, N. Y. All suggestions are more than welcome!


I was falling through a nightmarish sea of mathematical monsters
analyzed. Do you do that sort of work?"
I did, and acknowledged as much.
"It will be necessary for you to call here for your data," the voice continued. Strangely unctuous, that voice. "It is impossible for me to leave." There followed an address on West Seventieth Street.
Well, I'd called for data before. Generally the stuff was delivered or mailed to me, but his request wasn't extraordinary. I agreed, and added that I'd be over shortly. No use
delaying my vacation if I could help it.
I took the subway. Taxis are a needless luxury to a professor, and a car of my own was an unrealized ambition. It wasn't long before I entered one of the nondescript brown houses that still survive west of the avenue. Strawn let me in, and I perceived the reason for his request. The man was horribly crippled; his whole left side was warped like a gnarled oak, and he was hard put to hobble about the house. For the rest-stringy dark
hair, and little tense eyes.
He greeted me pleasantly enough, and I entered a small library, while my host hobbled over to a littered desk, seating himself facing me. The deep-set eyes looked me over, and he chuckled.
"Are you a good mathematician, Doctor Aarons?" he asked. There was more than a hint of a sneer in his voice.
"My work has been satisfactory," I answered, somewhat nettled. "I've been doing statistical work for several years."

He waved a shriveled left hand.
"Of course-of course! I don't doubt your practical ability. Are you, however, well versed in the more abstract branches-the theory of numbers, for instance, or the hyperspatial mathematics?"
I was feeling rather irritated. There was something about the man-
"I don't see that any of this is necessary in statistical analysis of experimental results," I said. "If you'll give me your data, I'll be going."

He chuckled again, seeming hugely amused.
"As a matter of fact, Doctor Aarons," he said smirking. "the experiment isn't completed yet. Indeed, to tell the truth, it is just beginning."
"What!" I was really angry. "If this is your idea of a joke-" I started to rise, thoroughly aroused.
"Just a moment," said Strawn coolly. He leveled a very effective looking blue-barreled automatic at me. I sat down again openmouthed. I confess to a feeling of panic at the sight of the cripple's beady little eyes peering along the ugly weapon.
"Common politeness dictates that you at least hear me out, Doctor Aarons." I didn't like the oily smoothness of his voice, but what was I to do? "As I was saying, the experiment is just beginning. As a matter of fact, you are the experiment!"
"Eh?" I said, wondering again if the whole thing might not be a joke of some sort.
"You're a mathematician, aren't you?" Strawn continued. "Well, that makes you fair game for me. A mathematician, my good friend, is no more to me than something to be hunted down. And I'm doing it!"

(1)BVIOUSLY the man was crazy! The realization dawned on me as I strove to hold myself calm. Best to reason with him, I thought.
"But why?" I asked. "We're a harmless lot."

His eyes blazed up with a fierce light.
"Harmless, eh, harmless! Well, it was one of your colleagues that did-this!" He indicated his withered leg with his withered arm. "He did this with his lying calculations!" He leaned forward confidentially. "Listen to me, Doctor Aarons. I am a chemist, or was once. I used to work with explosives, and was pretty good, too. And then one of you blasted calculators figured out a formula for me! A misplaced decimal point-bah! You're all fair game to me!' He paused, and the sneer came back to his lips. "That's simple justice now, isn't it?"

Well, you can imagine how thoroughly horrified I was, sitting there facing a homicidal maniac with a loaded gun in his hand. Humor him! I'd heard that was the best treatment. Use persuasion, reason!
"Now, Mr. Strawn," I said, "you're certainly entitled to justice. Yes, you certainly are! But surely, Mr. Strawn, you are not serving the ends of justice by venting your anger on me! Surely that isn't justice."

He laughed wildly and continued. "A very specious argument, Doctor Aarons. You are simply unfortunate in that your name is the first in the classified section of the directory. Had your colleague given me a chance-any slightest chance to save my body from this that you see, I might be forgiving. But I trusted that fool's calculations!"
He twisted his face again into that bitter leer. "As it is, I am giving you far more of a chance than I had. If, as you claim, you are a good mathematician, you shall have your opportunity to escape. I have no quarrel with the real students of figures, but only"his leer became a very sinister scowl-"only with the dullards, the fakes, and the blunderers. Yes, you'll have your chance!" The grin returned to his lips, but his eyes behind the blue automatic never wavered.

I saw no other alternative but to continue the ghastly farce. Certainly open opposition to any of his suggestions might only inflame the maniac to violence, so I merely questioned: "And what is the proposition, Mr. Strawn?"

The scowl became a sneer again. "A very fair one, sir. A very fair proposition, indeed." He chuckled.
"I should like to hear it," I said, hoping for an interruption of some sort.
"You shall. It is just this: You are a mathematician, and you say, a good one. Very well. We shall put your claim to the test. I am thinking of a mathematical quantity, a numerical expression, if you prefer. You have ten questions to discover it. If you do so you are free as far as I am concerned. But if you fail-his scowl reappeared-"well, if you fail I shall recognize you as one of the tribe of blunderers against whom I war, and the outcome will not be pleasant!"

Well! It was several moments before I found my voice, and began to protest. "But, Mr. Strawn! That's an utter impossibility! The range of numbers is infinite-how can I identify one with ten questions? Give me a fair test, man! This one offers not a chance in a million! In a billion!"
He silenced me with a wave of the blue barrel of his weapon.
"Remember, Doctor Aarons, I did not say it was a number. I said a numerical expression, which is a vastly wider field. I am giving you this hint without deducting a question. You must appreciate my magnanimity!" He laughed. "The rules of our little game are as follows: You may ask me any questions except the direct question, 'What is the expression?' I am bound to answer you in full and to the best of my knowledge any question except the direct inquiry. You may ask me as many questions at a time as you wish up to your limit of ten, but in any event I will answer not less than two per day. That should give you sufficient time for reflection" -again that horrible chuckle-"and my time too is limited."
"But, Mr. Strawn," I argued, "that may keep me here five days. Don't you know that by tomorrow my wife will have the police searching for me?"

A glint of anger flashed in the mad eyes. "You are not being fair, Doctor Aarons! I know you are not married! I checked up on you before you came here. I know you will not be missed. Do not attempt to lie to merather help me serve the ends of justice! You should be more than willing to prove your worth to survive as one of the true mathematicians." He rose suddenly. "And now, sir, you will please precede me through the door and up those stairs!"

NOTHING to do but obey! The stubby gun in his hand was enough authority, at least to an unadventurous soul like myself.

I rose and stalked out of the room at his direction, up the stairs and through a door he indicated. Beyond was a windowless little cell ventilated by a skylight, and the first glance revealed that this was barred. A piece of furniture of the type known as a day-bed, a deep overstuffed chair, and a desk made up the furnishings.
"Here," said the self-appointed host, "is your student's cell. On the desk is a carafe of water, and, as you see, an unabridged dictionary. That is the only reference allowed in our little game." He glanced at his watch. "It is ten minutes to four. By four tomorrow you must have asked me two questions. Two questions, and have them well thought out! The ten minutes over are a gift from me, lest you doubt my generosity!" He moved toward the door. "I will see that your meals are on time," he added. "My best wishes, Doctor Aarons."

The door clicked shut and I at once commenced a survey of the room. The skylight was hopeless, and the door even more so. I was securely and ingloriously imprisoned. I spent perhaps half an hour in painstaking and fruitless inspection, but the room had been well designed or adapted to its purpose. The massive door was barred on the outside, the skylight was guarded by a heavy iron grating, and the walls offered no slightest hope. Abner Aarons was most certainly a prisoner!

My mind turned to Strawn's insane game. Perhaps I could solve his mad mystery-at the least, I could keep him from violence for five days, and something might occur in the interim. I found cigars on the desk, and, forcing myself to a degree of calm, I lit one and sat down to think.

Certainly there was no use in getting at his lunatic concept from a quantitative angle. I could waste all ten questions too easily by asking, "Is it greater or less than a million? Is it greater or less than a thousand? Is it greater or less than a hundred?" Impossible to pin the thing by that sort of elimination when it might be a negative number, a fraction or a decimal, or even an imaginary number like the square root of minus one-or, for that matter, any possible combination of these. And that reflection gave me my impulse for the first question. By the time my cigar had been consumed to a tattered stub I had formulated my initial inquiry. Nor had I very long to wait. It was just past six
when the door opened.
"Stand away from the door, Doctor Aarons," came the voice of my host. I complied perforce; the madman entered, pushing before him a tea wagon bearing a really respectable meal, complete from bouillon to a bottle of wine. He propelled the cart with his withered left hand, the right brandished the evil automatic.
"I trust you have used your time well," he sneered.
"At least I have my first question," I responded.
"Good, Doctor Aarons! Very good! Let us hear it."
"Well," I continued, "among numbers, expressions of quantity, mathematicians recognize two broad distinctions-two fields in which every possible numerical expression may be classified. These two classifications are known as real numbers on the one hand, including every number both positive and negative, all fractions, decimals, and multiples of these numbers, and on the other hand the class of imaginary numbers, which include all products of operations on the quantity called 'e,' otherwise expressed as the square root of minus one."
"Of course- That is elementary!"
"Now then-is this quantity of yours real or imaginary?"

He beamed with a sinister satisfaction.
"A very fair question, sir! Very fair! And the answer-may it assist you-is that it is either!"

A light seemed to burst in my brain! Any student of numbers knows that only one figure is both real and imaginary, the one that marks the point of intersection between the real and imaginary numbergraphs. "I've got it!"

The phrase kept running through my mind like a crazy drumbeat! With an effort I kept an appearance of calm.
"Mr. Strawn," I said, "is the quantity you have in mind zero?"

He laughed-a nasty, superior laugh that rasped in my ears.
"It is not, Doctor Aarons! I know as well as you that zero is both a real and imaginary number! Let me call your attention to my answer. I did not say that my concept was both real and imaginary-I said it was either!" He was backing toward the door. "Let me further remind you that you have eight guesses remaining, since I am forced to
consider this premature shot in the dark as one chance! Good evening!

HE WAS gone. I heard the bar outside the door settle into its socket with a thump. I stood in the throes of despair, and cast scarcely a glance at the rather sumptuous repast he had served me, but slumped back into my chair.

It seemed hours before my thoughts were coherent again. Actually I never knew the interval, since I did not glance at my watch. However, sooner or later I recovered enough to pour a tumbler of wine and eat a bite of the roast beef; the bouillon was hopelessly cold. And then I settled down to the consideration of my third question.

From Strawn's several hints in the wording of his terms and the answers to my first and second queries, I tabulated what information I could glean. He had specifically designated a numerical expression. That eliminated the $x$ 's and $y$ 's of algebraic usage. The quantity was either real or imaginary and was not zero; well, the square of any imaginary is a real number. If the quantity contained more than one figure, or if an exponent was used, then I felt sure his expression was merely the square of an imaginary; one could consider such a quantity either real or imaginary. A means of determining this by a single question occurred to me. I scribbled a few sym- . bols on a sheet of paper, and then, feeling a sudden and thorough exhaustion, I threw myself on the daybed and slept. I dreamed Strawn was pushing me into a nightmarish sea of grinning mathematical monsters.

The creaking of the door aroused me. Sunbeams illuminated the skylight. I had slept out the night. Strawn entered balancing a tray on his left arm, holding the ever-present weapon in his free hand. He placed a half dozen covered dishes on the tea-cart, removing the remains of the meal to his tray.
"A poor appetite, Doctor Aarons," he commented. "You should not permit your anxiety to serve the ends of justice to upset you!" He chuckled with enjoyment of his sarcasm. "No matter-you have until four tomorrow for your next two."
"I have a question," I said, more thoroughly awakened. I rose and spread the sheet of paper on the desk.
"A numerical quantity, Mr. Strawn, can be expressed as an operation on numbers. Thus, instead of writing the numeral ' 4 ' one
may prefer to express it as a product, such as ' $2 \times 2$,' or as a sum, as ' $3+1$,' or as a quotient, as ' $8 \div-2$ ' or ' $8 / 2$ ', or as a remainder, as ' $5-1$.' Or even in other ways-as a square, such as $2^{2}$, or as a root, such as $\sqrt{ } 16$ or $\% 64$. All different methods of expressing the single quantity ' 4 .' Now here I have written out the various mathematical symbols of operations. My question is this: Which if any of these symbols is used in the expression you have in mind?"
"Very neatly put, Doctor Aarons! You have succeeded in combining several questions in one." He took the paper from me, spreading it on the desk before him. "This symbol, sir, is the one used." He indicated the first one in my list-the subtraction sign, a simple dash!

And my hopes, to use the triviality of a pun, were dashed as well! For that sign eliminated my carefully thought-out theory of a product or square of imaginaries to form a real number. You can't change imaginary to real by addition or subtraction; it takes multiplication, squaring or division to perform that mathematical magic! Once more I was thoroughly at sea, and for a long time I was unable to marshal my thoughts.

And so the hours dragged into days with the tantalizing slow swiftness that tortures the condemned in a prison death house. I seemed checkmated at every turn; curious paradoxical answers defeated all my questions.

My fourth query, "Are there any imaginaries in your quantity?" elicited a cool, definite "No." My fifth, "How many digits are used in this expression?" brought forth an equally definite "two."

Now there you are! What two digits connected by a minus sign can you name whose remainder is either real or imaginary? "An impossibility," I thought. "This maniac's merely torturing me!" And yet-somehow Strawn's madness seemed too ingenious, too clever, for such an answer. He was sìncere in his perverted search for justice. I'd have sworn to that.

(1)N MY sixth question, I had an inspiration! By the terms of our game, Strawn was to answer any question save the direct one, "What is this expression?" I saw a way out! On his next appearance I met him with feverish excitement, barely waiting for his entrance to begin my query.
"Mr. Strawn! Here is a question you are bound by your own rules to answer. Suppose we place an equal sign after your quantity, what number or numbers will complete the equation: What is the quantity equal to?"
Why was the fiend laughing? Could he squirm out of that poser?
"Very clever, Doctor Aarons. A very clever question. And the answer is-anything!"

I suppose I shouted. "Anything! Anything! Then you're a fraud, and your game's a damnable trickery. There's no such expression!"
"But there is, Doctor! A good mathematician could find it!" And he departed, still laughing.

I spent a sleepless night. Hour after hour I sat at that hateful desk, checking my scraps of information, thinking, trying to remember fragments of all-but-forgotten theories. And I found solutions! Not one, but several.

How I sweated over them! With four ques-tions-two days-left to me, the solution of the problem began to loom very close. The things dinned in my brain; my judgment counseled me to proceed slowly, to check my progress with another question, but my nature was rebelling against the incessant strain. "Stake it all on your last four questions! Ask them all at once, and end this agony one way or the other!"

I thought I saw the answer. Oh, the fiendish, insane cleverness of the man! He had pointed to the minus sign on my list, deliberately misled me, for all the time the symbol had meant the bar of a fraction. Do you see? The two symbols are identical-just a simple dash-but one use means subtraction and the other division! " $1-1$ " means zero, but " $1 / 1$ " means one! And by division his problem could be solved.

For there is a quantity that means literally anything, real number or imaginary, and that quantity is " $0 / 0$ "! Yes, zero divided by zero. You'd think offhand that the answer'd be zero, or perhaps one, but it isn't, not necessarily. Look at it like this; take the equation " $2 \times 3=6$." See? That's another way of saying that two goes into six three times. Now take " $0 \times 6=0$." Perfectly correct, isn't it? Well, in that equation zero goes into zero six times! Or " $0 / 0=6$ "! And so on for any number, real or imaginary-zero divided by zero equals anything!

And that's what I figured the flend had
done. Pointed to the minus sign when he meant the bar of a fraction, or division!

He came grinning at dawn.
"Are your questions ready, Doctor? I believe you have four remaining."

I looked at him. "Mr. Strawn, is your concept zero divided by zero?"

He grinned. "No sir, it is not!"
I wasn't disheartened. There was just one other symbol I had been thinking of that would meet the requirement-one other possibility. My eighth question followed. "Then is it infinity divided by infinity?"

The grin widened. "It is not, Doctor Aarons."

I was a little panicky then! The end loomed awfully near! There was one way to find out if the thing was fraudulent or not. I used my ninth question:
"Mr. Strawn, when you designated the dash as the mathematical symbol used in your expression, did you mean it as the bar of a fraction or as the sign of subtraction?"
"As the subtraction sign, Doctor Aarons. You have one more question. Will you wait until tomorrow to ask it?"

The fiend was grinning in huge enjoyment. Thoroughly confident, he was, in the intricacies of his insane game. I hesitated in a torture of frenzied indecision. The appalling prospect of another agonized night of doubts decided me.
"I'll ask it now, Mr. Strawn!"
It had to be right! There weren't any other possibilities. I'd exhausted all of them in hour after hour of miserable conjecture!
"Is the expression-the one you're thinking of-infinity minus infinity?"
It was! I knew it by the madman's glare
of amazed disappointment.
"The devil must have told you!" he shrieked. I think there were flecks of froth on his lips. He lowered the gun in his hand as I edged toward the door. He made no move to stop me, but stood in a sort of desolate silence until I gained the top of the stairway. Then-
"Wait a minute!" he screamed. "You'll tell them! Wait just a minute, Doctor Aarons!"

I was down the stairs in two leaps, and tugging at the door. Strawn came after me, his gun leveled. I heard it crash as the door opened and I slipped out into a welcome daylight.

Yes, I reported him. The police got him as he was slipping away and dragged him before an alienist. Crazy, but his story was true-he had been mangled in an experimental laboratory explosion.

Oh, the problem? Don't you see? Infinity is the greatest expression of number possible -a number greater than any conceivable. Figure it out like this:

The mathematician's symbol for infinity is a tipsy eight, so: 8

Well, take the question, $8+6=8$. That's true because you can't add anything to infinity that will make it any greater than it is. See? It's the greatest possible number already. Well then, just by transposition, $8-8=6$. And so on; the same system applies to any conceivable number, real or imaginary.

There you are! Infinity minus itself equals any quantity, absolutely any number, real or imaginary, from zero to infinity. No, there was nothing wrong with Court Strawn's mathematics.

## THE ETHER VIBRATES

(Continued from page 10)
years ago, contains some interesting prophecies as to the nature of a World War Two not yet begun and has some remarkable observations concerning the very nature of matter. Also and far from incidentally, it is a darn exciting yarn.

As usual, there will be many other stories by the ablest authors now penning stfstories of current interest and speculation. And Ye Ed will be on hand with his Review of the Science Fiction Fan Publications, to say nothing of this department. STARTLING STORIES for May will be an outstanding issue.


THIS weeding out problem is getting to be a serious one. Too many good letters have to be relegated to a waste-basket which they do not deserve. If it keeps up, we shall have to follow the suggestion of some of you fans to cut out the stories completely and run only letters and comment-though what you fine people would write about in such a case escapes us entirely.

However, do keep them coming and rest assured that if your opus magnus is squeezed out it has been read and appreciated-and there is always a next time. We like evidences of reader interest in what we are trying to do-which means we like letters and lots of them. We'll run them aplenty.

The mail this time is noticeable for its lack of poetic missives . . . perhaps this points a trend but we hope not. We'll open with an epistle all the way from Stockholm, Sweden, the first we recall seeing from the Venice of the North. Here goes-

## SWEDEN LOWDOWN

## by Hans Tombrock

Dear Ed: I have now read your mag for one year and think it is so swell that I now have taken a subscription to your companion magazine Thrilling Wonder Siories too.

Here is what I think of the stories I have read in Startling:

Fall 1946:
THE SOLAR INVASION (Manley Wade Wellman, the third author to write Captain Future Stories ...). Great, and perhaps even more; I like Space-operas. Rates . . . .Jupiter (Pluto is better than Jupiter and Comet better than Pluto :. .)

AFTER AMARGEDDON. Venus (not so good). AFRAID
Terra (Teilus)
Fair. DEPARTMENTS . . . Pluto (they are always that good. TEV best of them). Say, why not keep up STORY BEHIND THE STORY and print photographs of the authors too, so one can see how they look? PICS .... I don't like Marchioni, but the rest is good.

January-47:
STAR OF LIFE . . . Pluto. It simply calls for a sequel. I dunno why, but I simply can't read that VENUS MINES INC. FRIENDS . .. . Pluto. Man what

## a human-interest-story! TRAVELERS TALE

Neptune. That guy Whitley really handled the ${ }^{\circ} \cdot{ }^{\circ}$ swell. TEV .... Pluto. PICS .... the same as for the last issuex

March:
THE LAWS OF CHANCE . . . really a great flop, ranks not even Mercury, WHEN PLANETS CLASHED RACES Mars (MWM is always good), THE SOMA is surely one of the best in the field.

May:
Have not read the novelyet. DISCMEN. . . . ditto. COLUMBUS .... Jupiter. THE ARBITER . ... Pluto.

July:
KINGDOM OF THE BLIND . Venus. Poor to be a lead notel. THE RING BONANZA . Uranus (Binder is swell) THE LIFE DETOUR . . . . Jupiter, DREAMS END , Pluto (what a story, Brrrrr!) PROXY PLANETEERS . Uranus (hooray for Hamilton) SUPER WHOST . . Neptune (That Margaret St. Clair really knows how to write a story). September:
LORD OF THE STORM . . . . Mars (not more.) LODANA . . Mars.

November 1947 (current issue):
MAN IN THE IRON CAP. s'pose it's a good story (about Jupiter or so) but have not read it yet. CHAOS (in other words really good.) ANASTOMOSIS . ... Jupiter.

TEV . $\dot{\text { E }}$ Ed, there is something I haven't told Ye before: I WANT THE OLD SARGE BACK! Or at least, can't you let him make a little comeback now and then??

The Ether Vibrates is always the first thing I turn to when I get the mag. Hey you, don't laugh so nasty, I really mean it) I almost look at the other fans as old pals now. . . Sneary, Ollver, TKC (The Kennedy Clan) and many others. Here is hoping that you soon will get a Cap Space opera again. (Bi Hamilton.) notice the spellin'.
Comments to Mr. Guerry Brown's letter. My dear Mr. Brown, I see in your missive that you are trying to make some very deeply meant remarks (which in fact are very stupid to come from a Stfan) about ammonia-breathing BEMS on Jupiter. Do you know what the "Oxygenburning" of yours really is? No? When two chemical elements react to each other, the result is $\mathbf{A} /$ They combine, and $B / y o u$ get heat out of it. When 20 combines with $C$, heat is created, and we say that the Oxygen has burnt.

Even $\mathrm{H}, \mathrm{N}$ or $\mathrm{H}_{\mathrm{SN}}$ produces heat, when combined with other elements. Under particular circumstances it (or parts of it, e.g.H (3) or N) could be burnt in a similar way as $O$ is in our bodles. Get it?

That was that . . But why in heaven does anybody suppose that the BEMS on Jupiter breathe at all? Would it not be easier to think that they simply eat the oxygen, which, on Jupiter ought to be hard frozen, or at least liquid, and get it in that way.

And then last but not least:
Calling all fans in the world who read this (In which countries are people who read Startling and Thrilling Wonder Stories? And will you please put out this message in TWS too?)!

How about forming an International STFan Club? I think I have got something there! Drop me a letter if you are interested in it. And what's most im-portant-
WRITE WHETHER YOU ARE BLACK, YELLOW, RED OR WHITE, AMERICAN, CHINESE, AFRICAN, FRENCH, GERMAN or what else you may be! EVEN MARTIANS ARE WELCOME TO JOIN. All letters will be answered, even if they bawl me out for my cosmopolitanism and altruism.-Stralgatan 31 Lille Essingen. Stockholm, Sweden.

You may have something there at that, Hans. We sincerely hope you come up with some heavy responses . . . also we believe tentative steps have been taken in this di-rection-at least among American, British Dominion, British and French fans. Maybe you can latch on.

Sorry about the Sarge, but he's safely buried and best left undisinterred. As for
the Story Behind et cetera-reasons for discontinuance of these departments are too obvious to need explanation here. Figure it out for yourself.

We're glad you like us, however, and hone you continue to.

## YOKE OF OXYGEN <br> by Brenton Rice

Dear Editor: Congratulations on your superb magazinel It's getting better all the time. However. I'd like to add my beef to the countless others about that cover. $\mathrm{I}^{\prime} \mathrm{m}$ sure that I 'd enjoy Bergey's art if it weren't so lurid and not representative of the story. It's getting so that whenever I buy the magazine I feel like a dope fiend or a runaway convict, With all the playup that stf is getting in the slicks these days, this sort of policy is extremely degrading.
At this point I'd like to make a slight correction about a statement Guerry Brown made in TEV. As everyone knows, oxygen doesn't burn, but it supports combustion. If oxygen were capable of burning, our whole atmosphere would go up in a flash the first time anyone iit a match.
Also I noticed that in your review of the fanzines you made mention of a British SF mag called FANTASY. How does a person get a subscription and how much does it cost?
In conclusion. $\mathbf{r}$ d like to see more of Margaret Whost-er, that is, St. Clair, and also Murray Leinster. That story of his (The Man in the Iron Cap) while not up to his standard, it seemed, could have been very hacky (real, live, foul-smelling BEMs, yet1) if written by any other author. But the way he wrote it, with suspense and action up to the last plus some good solid science, I couldn't set it down.-148 Alexander Avenue, Crockett, California.

All right, all right, so you don't like our wrappings. As for FANTASY, we regret to say that the fledgling is a casualty to paper restriction of the most recent British "austerity" edicts. Too bad, but let's hope for a speedy revival. You'll find more about it in the Fanzine review of this issue-address et al.

## WE GUARANTEE RESULTS <br> by L. L. Shepherd

Dear Sir: Why doesn't some one tell me these things? I have been reading Science Fiction since, as you say, "The days of the Skylark," and had never met another serious reader of the stuff. Then
you printed my letter in the November issue of Startling Stories and I met two in the town I llve in and have received several friendly letters from other enthusiasts-even as far away as California.
I stated in my last letter that I didn't think the Editor needed help from the readers in putting out a good magazine. After reading "The Man in The Iron Cap" by Murray Leinster, I changed my mind. I got the impression some place or another that SS was a Science Fiction Magazine.
If I am right, then what is that story doing in this issue or any other for that matter. As some of the kids say, "Gad! I couldn't sleep. Little footballs gnawed on my ankles all night." I read where somebody sald there was published a class of magazines called, "Spook Rags". If there is; that is where that story belonged.

Not that it wasn't a good story, because it was, even if I have seen that same plot twice before. However, there was some Science connected with the other stories. See the difference?
The rest of the stories in this issue were fine. Nothing to rave about but good reading.
The illustration on page twelve gives me the shivers. Just to look at it makes me shrink inside. The rest were alright except for the cover page. It didn't follow the story.
The Ether Vibrates is very good. Worth the price of the magazine if wasn't for that guy that got his second
and third person departments confused. This department, it seems to me. makes the readers of Science Fiction a sort of exclusive little family with a special Post Office. a friendly Editor that can crack the whip if need be and an educational hobby. Does anyone want to argue that reading Sclence Fiction is not educational? ra love that.
I know you won't get mad about an honest difference of opinion. Therefore, I want to get in this Margaret St. Clair feud. Her stories are not Science Fiction. However, I thought they were interesting enough to get by until I read her article in the July Writer's Digest about what a bunch of suckers she had found in the Science Fiction field. Didn't someone have something to say once about writing with your tongue in your cheek?

Many thanks to you for getting me acquainted with some of the other Sclence Fletion readers and now I would like to ask another question. How many Editors does it take to get out two very good magazines and still answer and edit all these amateur letters? Five, ten, fifteen or twenty?
I had better quit or I'll be a fan yet. I'm working on that story. I's a doozy.-204 East Ryder St., Litchfield, Illinois.

Well, November was or is the football season, so it seems to us that 亡einster's story was timely to say the least. If you continue to have nightmares, better get some gnawproof ankle braces or wade in a tub of asefetida. That should do the trick. And it was so stf!

One thing about this cover business. We've said it and we'll say it again-the cover is not an illustration. It is a design intended to symbolize the story selected for cover depiction. Oddly enough, this time it did follow the story with remarkable closeness.

As for the vari-colored skies, they are simply designed to enable the would-be reader to spot them on the newsstands. It is definite and understandable policy never to have the same background color on two successive issues. Otherwise a lot of our readers would not be aware that a new issue is out. So, if you get a green, yellow or puce sky, just grin and bear it.

We thought Mrs. St. Clair's articles in WD interesting and amusing-definitely nothing at which to take umbrage, whatever that is. You'll continue to see her work in this magazine and TWS. And yrs, trly, handles the letters by himself. Which is enough neck-sticking-out by us for now.

## APOLOGIA

## by Captain K. F. Slater

Dear Editor: I thank you for printing my first letter and I hope you can find room for this effort as it contains one item of importance, to-wit-The person to whom I sent the dollar bill (see SS, September, 1947) answered me between the time of my writing you and the date of publication. Therefore I tender my abject apologies. He explained the delay and we now do business. I still don't like the other mug. however.
I have also received many offers from other fans to trade, and have answered all recelved to date-my postage account has soared 1!1 Hope that they are all satisfied wtih my offers, because I sure was satisfied with the response to my appeal.

A suggestion re your Hall of Fame-why not publish a list of possible reprints and let your readers vote for suitable stuff? Now that there are so many books with reprints being published I find myself with one story in three magazines as well as in two books. A
good story but not worth five copies at once.
Complaint-these fonetic flends. I can't even spell after reading 'em-having tackled the problem from the language-learning side, I find it falls down. Take a very simple word, M A N. English pronunciation per the International Phonetic Transcription is "M AE N". 1 and a few million other Londoners pronounce it "M A N". Scots variant is either "M Y N" or "MA: N". How an American pronounces it is something else again-depending upon his locality I guess. I have counted in my own company of about 200 men twelve different variations-all of them are English too. So how in the name of Saturn can you have a phonetic language until all people give the same value to the letters we have now?-Fridaybridge Camp, Wisbech, Cambridgeshire, England.

You may have started something, Captain Slater. However, since there are only fortyseven sounds in the English language it seems to us that the true phonetic alphabet should do the trick, regardless of origin or locale. We do not include those Robyn le Roy horrors in any known phonetic language.

## WELL, HARDLY ANY <br> by Leon Idelson

Dear Editor: This is the first time I have ever written to any magazine under any pretense what-so-ever; so I thought I might as well start off with a fifteenth rater. (just kidding).

I have been reading your highly technical stories ever since I was four years old; or was that a mistake?
Now, all joking aside. I have just finished reading the Nov. issue of Startling Stories and I have hardly any complaints.
The lead novel had a rather worn out plot, but I still thought it was entertaining.
The classic was $\mathrm{O} . \mathrm{K}$. only there should have been more theme and story.
Now for the dehydrated series. I thought the shorts were very good, though I like the one about Atlantis the best. It seems it is a new idea about an old story.
The cover was good, though I don't remember anything that could cause such a look of horror on the face of the damsel in distress.
Before closing I would like to make a suggestion. Why not print an issue once every so often that has one good long story, instead of several shorter ones.-2512 N. Natrona St., Philadelphia 32, Penna.

What are you trying to do-put our authors out of work, Leon? As for the look of horror, its cause seems sufficiently evident. The young lady on the November cover, suddenly horror-stricken to realize that her slip must be showing through the rents in her garment, is even more appalled to learn that she forgot to wear one.
Next, please. . . .

## WHAT'S PU?

by Russell Clagett

[^4]to take place. First, the U-235 or Pu-239 must be chemically pure. Second, the size of this material must be greater than critical mass. Once these conditions are satisfied, nothing on God's green earth can prevent an explosion.

In the bomb a gun-like arrangement is set up, in which a lump of pure U-235 or Pu-239 of less than critical mass is fired against a target, which is another similar lump. When these two lumps hit, critical mass is exceeded and:

Boom!
Now to get to the point. If, in order to make a more violent bomb, the size of either the target lump or the projectile lump would be increased, pretty soon each lump would exceed critical mass by itself and that would be awfully hard on the bomb makers. If the number of "guns" within the bomb were increased, then synchronization would become difficult and some of the charge is apt to be wasted. Authors, how do you make a super A bomb?
Obviously, the simplest method would be to use complete disin tegration instead of fission.

Okay, how do you do that?-7508 Hartford Rd., Baltimore 14, Md.

Don't ask us-but we have heard that no atomic bomb has yet been detonated with anything like its maximum efficiency. Frankly we aren't anxious to be in the neighborhood when one is. But we do believe the boys have the equipment and know-how to wreak a lot more ruin than they already have.

## Some fun!

## KRUGERSDORP BE-BOP

## by Eddy van Wyk

Dear Editor: I am a South African but no icky. Listen and get a load of this-me being an ex-volunteer I appreclate SS stories but me and the local fans get kicked for our troubles, thanks to that stuff they call covers by Belarsky and Bergey.

They're out of this world-but out! No hard feelings, ed, the gang agreed that The STAR OF LIFE wasn't bad. About the rest I don't even pass comment. Let me know when you're going to print something with a kick in it. $-76^{\circ}$ Blommenstein Street, Krugersdorp, Transvaal, South Africa.

You and your gang rate another kick in the shins for that one.

## ME NO CUT

## by Joe Kirschnick

Dear Ed: I wrote long letter. You cut. Now Short letter. Save troubl.

Man In Cap ... very gud. First time world saved by pot on head.

Thru Cloud in also V.G. Better if longer.
Chaos. this type nu is SS. Mor, mor.
Anastomosis. . . Idea not nu, purly written.
Bergey's cover (cover?). Horrible. Colors bad. Girl ugly.

Illustrations for Man In Cap fine. Who?
Kiemle on 69 nice.
Napoli on 77 confusing and poor.
Astarita on 87 nice, so, so nice . . nice.
B. L. Randolph crazy. Likes Bergey and (ugh!) Marchioni.
You are unfair! Some letters tu, short. Others at end too long. Cut or don't. Unfair.- 4018 Colborne Road, Baltimore 29, Maryland.

Me don't know what say-should cut whole thing maybe-huh? Maybe you like pot on head, Joe

## DRAW TWO

by Arthur H. Rapp

## Dear Head Cheese: Roscoe (he's muh pet beaver) has been pestering me all day. Sez effen I don't shoot TEV a letter, you'll never get it in time for next ish. I told Roscoe I was too busy to shoot anyone letters, and besides I'd prefer to shoot a few editors, but the pore dumb animule's got a one-track mind, and kept trying to chew off my legs at the ankles until I gave in and said I'd forgive you for the nasty poems you write. <br> Incidentally, there was something fishy about that las t verse. F lounder, carp and sole Indeed! <br> Shrieking of poems:

I've often seen a Bergey BEM;
$I$ wish I'd never saw one,
But I can tell you, fellow-fen,
$I^{\prime} d$ rather see than draw one.
Roscoe sez I can't criticize the November cover too much, though. After all, with the kind of shoes the dame is wearing, she'd hafta be carried, and while the hero is undoubtedly looking so sad because the dame is heavier than she looks, the gal herself is mad cause she just heard about the new long-skirt fashion, and hates to be seen looking like a back number.

As for the literary quality of the ish. "The Gentleman in the Ferric Chapeau" was Startlingly good. (Pun, Ed.) The other tales were, to say the least. unfortunate. As Roscoe put it: GAFHHHHHH!
Please, Ed.. cut down the time-lag on the fanzine reviews, willya? You're breaking my heart.-2120 Bay Street, Saginaw, Michigan.

Defenseless, we no Roscoe own
To drill him who head-cheesed us And so, alas, we must condone The written slugs of him who creased us.

But let dear Arthur yet beware Because when we get loaded
We'll exhale on him poisoned air
A habit when thus goaded.
He'll gag and choke, his arms will flail
He'll fall into convulsions
And then his life will surely fail
Unless we give him warm emulsions.
Which we won't!

## MO' FROM JOPLIN

## by Frances Hubacek

Dear Ed: Hmmm, the cover-could have been better. Bergey did a good job of drawing the man and woman but that's all. Who did the pic on page 11? Rest of the inside illos were good too.

The stories ah, yes! ANASTOMOSIS led the race with THE MAN IN THE IRON CAP a close second, ahead of CHAOS. THROUGH THE PURPLE CLOUD was left at the post. . didn't rum at all.

I liked Leinster's story mainly because it didn't have any mushy love interest to spoil the plot. Glad he decided to kill off the girl before the story got too far along. I had a mental picture of Jim Hunter running around with a waste-basket over his head and pardon me, Ed, but I just had to giggle. It was good tho.
The letter column this ish had some pretty good letters. Anger's note about SS's cover glris looking like movie queens brought another giggle from this fem. The girl on the July cover did resemble Lamarr, didn't she?

Jack Clements seems to know what he wants and I find his letters interesting. I agree with him one hundred percent on nearly everything especially St. Clair. She's super! Keep her busy writing, Ed, 635 Schifferdecker Avenue, Joplin, Missouri.

How old are you, Frances (mighty discour-
teous question that, but our curiosity is overwhelming us)? This business about "mushy love stuff" has us wondering. Verne Stevens did the pic on page 11 and we'll do our best to keep Mrs. St. Clair's stories coming.

## LOVE THAT LEINSTER! <br> by Jim Kennedy

Dear Editor: The November SS is up to your recent average-better than the preceding issue. THE MAN IN THE IRON CAP was by far the best story in the book and one of the best you have published in a long time. I find that, as time goes on, Murray Leinster gets better and better although my favorite author is still Ed Hamilton.

CHAOS runs a close second-a thoroughly interesting short. I didn't care much for THROUGH THE PURPLE CLOUD but it was better than ANASTOMOSIS, which I didn't like at all.
THE ETHER VIBRATES was excellent, but this is nothing new. Best letters were from Chad Oliver, Janice Kennedy, Tom Jewett, John van Couvering. Ron Anger, Virgil Utter and Jordan Green. You must be slipping-how did you ever let three Kennedys slip by you in one issue?

About this Kennedy business-ever since I wrote in about a Kennedy fan club I have received letters from Kennedys. as well as from other fan groups. And I was complaining because I received too few letters. I'm still glad to answer any fan who cares to get in touch with me-General Delivery, San Luis Obispo,
California. California.

We once thought an all-Morgan radio program might be something-what with Henry, Frank, Ralph, Russ and Claudia available to name a few such in the entertainment field. But nothing came of it. So we say, "Kennedys go bragh!"

## REW ARDED AGAIN <br> by R. E. Ward

Dear Editor: Murray Leinster's novel in the latest issue was really tops one of the best stories he has ever written; although i thought the beginning was much better than the ending. The illustrations for the story were superb. Please get more from Lawrenceor Stevens, as you will.
$\mathbf{H}$ of $F$ up to usual standards; Williamson can alWays be depended upon to turn out a good story. Kiemle's illustration nothing outstanding.

Cross" yarn "Chaos" struck me as being one of the most beautifully-written short-stories STARTLTNG has ever carried. Cross has a remarkable gift of stringing words together in the most delightful manner-offhand. I can't recall a single story of his that I did not enjoy. Thanks for giving us this.
"Anastomosis" was also very good. Beck is a new name. Name, I said-probably just another Kuttner pename, rather than a new author. A good story any-way-I thoroughly enjoyed it, and thought the ending well-handled.
The cover was all right, I suppose, though I'm not much for Bergey's Blatant Colors. But he's better than Belarsky anyway. 428 Main Street, El Segundo, Callfornia.

Leinster is currently at work on another novel for SS-so you'll be seeing him again soon unless plans go awry. As for Clyde Beck -he is not another pen-name for Kuttner nor anyone else. He lives in Lakeport, California, and his ANASTOMOSIS came to us in the mail.

We liked it too and hope he comes up with
more like it-well, not exactly like it, but just as good.

# MAN WITH GOLDBERGS <br> <br> (Rube, that is) <br> <br> (Rube, that is) <br> by Joe Pygman 

Sir: I wish to present to your magazine an idea which I think will better 1t. It's quite simple and would only take one page of the magazine. It would be devoted to the exploration of inventions probable in the future.
To glve a general idea how it would go here are a few illustrations of what I mean.
(1) Slumber cabinet: it would be shaped like the present day bed with the exception that it would be more modern in design with a curved effect and colors pleasant to the eyes and mind. The style and color would be scientifically made for the individual by a trained expert.
The machine itself would use electrical waves and vibrations to put the owner into an instant and completely relaxful slumber. A special device will take the heart and brain duties putting both in complete rest. The main advantage of the machine is that with it the period of sleeping is shortened from 8-10 hours to 4-6 hours.
Another advantage is it works on insombianests as well as the ordinary man.
(2) Librarette: This one is a small unique library able to obtain any known information. There are four large centers from which the information is telecasted. They are New York. Chicago. Salt Lake City, and Los Angeles.
It works somewhat on the order of a telephone. First the inquirer asks the operator his question. For example, What's Ty Cobb's lifetime batting averager The question is relayed to the nearest center. The center depends on the locality of your receiver.

There, operator gives it to the Sports Librarian. The librarian looks up Ty Cobb's life in the reference books. It is then placed on a televisor which relays it to you.
Now you have one of two choices, you may read the information and release it or you may use your builtin camera or wire recorder for further use.
On your machine you will have a special unit for the storing of useful information. It is about the size of a small phonograph. It has an equally small index which is readable by the use of a magnifier and small bulb which enlarges the miniature on a screen near the top of the machine.
Other such things as records, movies, baseball games, etc., may be kept for future enjoyment by the use of the camera and wire recorder. Both the recorder and camera may be used again after demagnetizing.
The fee is quite cheap. beling a nickel for each movie or record running over five minutes. The information costs $\$ .005$ per question. A full book costs only a nickel. The company pays the authors, owners, etc. on a percentage basis of the amount of use of their material. 153 South Jasper, Decatur 6, Illinois.

Well, Joe, we cannot escape the conclusion that a good memory and a few key books in the shelf are a whole lot simpler. Just to fix your wagon, we are going to suggest a collapsible cart guaranteed to break down en route only to the race track, thus preventing its owner from squandering his wherewithal on dogs masquerading as blooded steeds

A special mind-scanner alongside the dashboard will note when its owner's mind is bent on the sixth at, say, Pimlico and will cause the chassis to lower itself to pavement level upon contact with which small grappling irons will become firmly fastened in the ground.

As a matter of fact we once built such a wagon but the wheels fell off. You and your slumber cabinet!

COUNTER ATTACK by Pfc James Evans

Dear Editor: This missive is undoubtedly destined for your wastebasket like the very decent one I wrote to you about the July issue of SS. The ones I've written since then will suffer the same fote, and yours truly is at a complete loss for an explanation. Without the slightest delusion that any were superior to some of the better letters you run. yet no degree of modesty could prevent my thinking that they were more intelligent and worthwhile than quite a few of the poorer ones.

Insults wouldn't explain it as you seem completely impervious to anathema and slander in any form, ramification, or degree. Something causes you to dislike my letters, though, and this last useless one will conclude my literary efforts in this direction. It may go unread as perhaps the others were. Qui salt?
"The Man in the Iron Cap" more than compensates for the frightful inadequacies of the other stories. Previously 1 had liked Leinster in general but in a more or less passive way. Now I can say that he has my unqualified admiration. This latest opus was absolutely superb. It was certainly not original as r've read stories using the various ideas and dodges for years. As a matter of fact, the familiarity of all the science and of the themes is one of the factors that made it so good.

Nearly everyone has read plenty of sloppy efforts along these same lines and has moaned to himself, "Why, oh why doesn't somebody write a readable story about these intriguing themes!" That's precisely what Leinster has done, and he has spared no effort to make it the very story we've all dreamed about. Anyone who tries it from now on will be laughed at uniess he can equal Leinster, and that's a doubtful feat.

The HoF story causes me to wonder. Who asked for its reprint? What insane reason could you have for calling it a classic? Utterly pointless it was, and without even a plot to place it in the space hack category. Surely it doesn't represent the best that the antiquify of stif has to offer! You must have had a severe hangover or else domestic troubles.
The two shorts were harmless, at least, and could well have been worse. However, they should be avoided in the future. I begin to see that you are at the mercy of your writers, but you ought at least to print an apologetic and explanatory note at the beginning of such makeshift stories.
TEV was more interesting than in the September issue. Many fans that I'd considered incapable of anything but unintelligible gibberish came forth with decidedly acute comment and theory. Must be some reason for it. Mutations, maybe. I bid you a lachrymose farewell.-Co. G-STR, Ft. Monmouth, New Jersey.

Lachrymose, my foot! Well, we put you in print anyway, waste basket or no. Glad you liked our Leinster lead and TEV at any rate. As for the HoF squawk, we were on the wagon when it was selected and are still happily wed. So I dunno.

Actually, much of the old stuff was terrible by modern standards. STF was new in those days and authors, editor and readers alike were too enthralled with the idea to care much about literary merit. However, occasional fine yarns were written and printed and we are seriously doing our best to get them into the HoF.

## THE WARREN VIEVJPOINT by Bill Warren

Dear Editor: This is my maiden voyage. First time I ever wrote SS or any other magazine. Pve been a fan for years, but, somehow, I never got around to telling who-wants-to-know about it. Now, however, I'm a
changed man. Just got done reading the November ish, and I thought I'd write in and give you the Warren viewpoint. These other beavers do it-so why shouidn't I?
Anyway, here we go.
The Man In The Iron Cap? Good. This Leinster has a good-very good-style. He knows how to write, and it's my idea that the other beavers will agree. If they don't, they can soak their addled heads (no offense, boys). I'll admit that this "alien invades earth" idea is old, but that only adds to my respect for Mr. Leinster. The guy took a shopworn plot and shined it up to look like new. The iilustrations for this novel were the best in the book.
Through The Purple Cloud? It's easy to see why this Williamson Wonder is a HFC. The excellent treatment of a not-so-old idea. I think I've only read one other story using the same basic plot. I don't say, however, that there are not others. I see why the beavers clamor for Mr. Willfamson. I do object with your policy of reprinting. Your magazine would be improved if your policy were changed. I know most of the beavers don't agree. Just one guy's opinion.
Chaos was better than Anastomosis. Better style and better presentation. Mr. Cross also had a worked over plot. Atlantis, Atlantis, Atlantis. But Cross did the same thing that Leinster did to his Cap opus. I just couldn't get hepped up over Ancstomosis. Maybe I needed'some adrenalin.
The cover? Good. No outlandish monsters, no green hands. Conservative. Only a nice, little purple flying saucer. The gal had plenty of clothes on, and the man was an ordinary human-though the expression on his face indicated that he suffered from acute indigestion. Bergey's Okay Can't understand some of the beavers' attitudes- 314 West Main, Sterling, Kansas.

You and us both, Bill. Probably, they just like to howl.

## ERRATUM

by Hugh McInnis
Dear Ed: Well, I've just finished the Nov. SS, and it was really swell. Your novel was the best in the issue, but all the stories were good. I especially liked Anastomosis.

As I said. I think The Man In the Iron Cap was the highlight of the issue (by the way who illustrated it? I couldn't find any name) but I caught one slip in it. On Page 13, Murray Leinster says that Jim Hunt fell thirty-two feet during the first second of his fall from the dirigible, and that his speed increased thirty-two feet each second. Frankly, it isn't so. An object (any object; when dropped will fall sixteen feet during the first second, and its rate of fall increases thirty-two feet per second, making it fall forty-eight feet the second second, seventy feet the third, etc,-c/o Y M C A, Warren, Ark.

Leinster, confronted with your letter, Hugh, says that your reasoning is perfectly correct-except that Jim Hunt was jest propelled. We're still trying to figure out that one. Where's the jest anyway? Actually, apologies for a first-year-physics blunder. It should have been caught in editing or proof.

## NO MERIT IN MERRITT <br> by Wanda Reid

Dear Ed: Believe it or not, I can't find a single thing wrong with the November SS. Leinster's novel was equal to THE LAWS OF CHANCE (can't think of higher praise).

Now for a more controversial subject-after reading some fans' glowing account of the great A. Merritt. I expected something terrific to say the least. I have just finished reading BURN, WITCH, BURN. How could anyone in his right mind call that style better than Kuttner's? Merritt had good ideas, yes, but his style was Juvenile.

Okay, fellows, go ahead and pan me. I can take anything you dish out and and return it doubled.- 540 Market, Salinas, California.

We're afraid you asked for it, Wanda, but let's wait and see. Come to think of it, Merritt never has rated serious literary con-sideration-but he could and did pack in the old atmosphere. Wonder why so many of the old "masters" were verbose beyond the styles current in their own eras. Bulwer Lytton, Lovecraft and the rest. Even Dunsany had a certain fondness for over-dulcet prose at time and as for Rider Haggard . . . !
Personally, while no apostle of Hemingway sparseness in stf writing, we don't see that this verbosity helped.

## HEY, RICK! <br> by Rick Sneary

Dear Ed: Well now that the formal stuff is over I'll get down and talk.
I didn't have room to say I am beginning to agree with $y$ ou about this Miss. (?) St. Clair being a find. Her first couple stories struck me as sort of flat and wishy-washy. I figgered you must have more good ones on hand to cause you to talk like you did. Then I read NOON. It is one of the best short stories you have run this year. I can remember few that have moved me so. I even read it over twice to see if I got the same afect. Was sorry personal matters kept me from writing soon enough. She is really good.

I was sort of wondering if you missed me. I had a vacation, and then some relation came to vacation with us. And so time to write was cut down. And with club work coming before this stuff I had to let it ride.

There is talk going around that you are planning to inlarge the mag. "Grate. Hope you can both add to the pages and the nomber of copies printed.
Say specking of peinting that cover is really nice. If they keep looking this good I may leave them laying around with the covers up. And are you/we lucky to have Finley on two stories. Gad that man must spend days on just one picture. Eee I'd like to own the one on page 13. Any of them for that mater. Gee. But you don't give them eway I suppose. No. Well thanks any way.

I hope your office is air-cooled. If you have had to wade through this in hot weather. .. Tish, I might as well forget about a letter. -Ho. A. N. Y. friend of mine says he was up to see you about a month ago. So people can huh. Well I have a Uncle that lives in N.J. so maybe I'll be able to drop in sometime my self.

If this sounds odd it is the heat. It has been $90^{\prime}$ today. And I have been writing all day too. (It is now about 10.00 P.M.PST) And I'm wornd down. So good by and thanks--2962 Santa Ana St., South Gate, Calif.

It's a little late in the season for air-cooling now, Rick. Should you get to Manhattan, by all means drop in.

## QUERY ON WEINBAUM <br> by F. C. Benson

Gentlemen: I should like to inquire whether you have in any form the compiete scientifiction works of Stanley G. Weinbaum:

## THE WORLDS OF IF <br> THE BLACK FLAME <br> A MARTIAN'S ODYSSEY <br> THE VALLEY OF DREAMS <br> THE CIRCLE OF ZERO

And a number of other stories once published in Startling Stories. I am interested in prevision and prophesy in those wonderful tales of the land of time to come.-P. O. Box 5184, Chicago 7, Illinois.

We are sorry to say that, at present, we can tell you of no complete version of the late Stanley G. Weinbaum. To obtain them, you might check the Fanzine Review in this issue for addresses of amateur publishers in touch with dealers in old stf material. Some of them should have all or part of what you wish. Note especially FANTASY ADVERTISER and THE KAY-MAR TRADER.

## FANTAPHOBE

by Jordan Green
Dear Ed: Just read November Startling Stories Bergey has done it again!! The cover fits the story and the colors and artwork are as usual, a perfect Bergey job. Bergey is the best of them all! (Any arguments?) Thanks, Mr. Bergey!

1. The Man In The Iron Cap-Leinster. FANTASY AGAIN!! BAHHHHHHHHH!
2. Through The Purple Cloud-Williamson. A. HofF, Liked that one, but why ring in a dafty? There are enough "nuts" on the loose now, (including me.) Very good story and want more by 'Lil Willee'.
3. Chaos-Cross. A-1 Plus. Best this issue. Top place for Cross.
4. Anastomosis-Beck. Can't even pronounce it. but the story was real good. It goes to show what troubles greed can bring on.

Ed, you are a blt in error. I do like shorts, but not on a Fem. As for me being in the wrong magazineha, you know me! I am all over the place. That's how come I turned up in SS. The 80 degrees in the shade was only the beginning. We had it 90 and 100 for a long time, and on shorts either.

Thanks again for a swell issue.- 1139 East 44th Street, Chicago 15, Illinois.

Jordan, we would like to know if you simply reverse your judgments to be against the field and have a rousing old argument, or really like 'em that way. We don't pretend to understand how you like what you do and vice versa. But then, we have always enjoyed living in a pleasantly befuddled condition.

## WHAT'S Mcl FF? <br> by William L. Mclff

Dear Sir: I am writing in connection with your book "CA PTAIN FUTURE." Sir, I was able to get this magazine up to Winter of '43, after which it seems to go off the news and Magazine stands here in Utah.
I am wondering if you can tell me wherel may get the copies from Winter of ' 43 up to date of last issue published.
I like this magazine very much and I am interested in it, so any help you can give me on this I will appreciate very much.- 86 E . 3 rd Ave., Murry, Utah.

CAPTAIN FUTURE has been suspended for several years now and we are not in a position to offer spare back issues for sale. Sorry. . . .

## ARE WE ZIMMERING?

by Marion E. "Astrafiamente" Zimmer

Dear Editor: Congratulations on the cover! There, I said it and I'm glad. Bergey has, on the November issue, produced a cover that I am not ashamed to bring into the house even under my mother's watchful eyes. The girl has a dress on. It is a bit torn in places, but it is a dress and couldn't be called anything else. The man is weartige not red flannels but a man's blouse-
shirt and a pair of trousers. No naked dame, no BEM, and the only thing that spolled it was the letters splashed all across the top. And that just had to be there, because this was so alien from the usual Earlurid Bergey, that I would never have heard it!

Comment on the inside will be necessarily brief, as I go back to college tomorrow and am feverishly trying to set my fanaffairs in order tonight. THE MAN IN THE IRON CAP was excellent-far, far better than KINGDOM OF THE BLIND. The description of the conquest of the "Little Fellas" was eerily terrible. When I finished reading the story I was all goose-pimples-next time I feel happy and "contented" I think I will put on my wastepaper basket a la crash helmet and look in the attic.

THROUGH THE PURPLE CLOUD. Tsk, Tsk. What I would like to know is, WHOSE popular demand dragged this-this THING from its deserved limbo?

I have always been a sucker for Atlantis stories, so to me CHAOS rates just after the novel. Perhaps a little higher. Just one thing struck me as ringing false. How did it happen that the inhabitants called their city "Atlantis" when the Atlantic ocean didn't receive its name till long after the Christian era? Never mind. I liked it anyway. So THAT'S how the Sphinx got in the Desert!

ANASTOMOSIS. Very diverting. Another of those "gadget" stories, but I fail to see what value or point it has. And DON'T tell me they have bubble-gum in the other dimension!

THE ETHER VIBRATES. I read the other day that science had disproved the theory of ETHER. So how can it vibrate, sir? Now let's just see you answer THAT?

Okay. A soma rack is a rack to hold a soma bottle. A soma bottle is a bottle to hold soma. All I want to know is, soma what? (eeeow! even you never made a pun THAT bad!) Seriously I wish Margaret St. Clair would let us in on whether "soma" is a beverage, a household cleaner, a disinfectant, a hand lotion or a perfume. Soma-ny things come in bottles. (You put that pencil (red) down!) Has it anything to do with Huxley and his "taking soma till I'm in a coma?"

Despite the above silly questions, I like St. Clair. Her humor is not vet hackneyed. and as I read I have the feeling "Will I be like that in 1957 ?" Somehow, Oona and her antics make me think of the cutely dumb tricks of Pam North. Or "Claudia". Give us more.

Besides I am loyal to my sex. If I know my stf history, St. Clair is the only femme writer to succeed since Brackett went on to greener pastures.
The BLUE FLAMINGO promises better than anything since VALLEY OF THE FLAME. Hannes Bok, like Kuttner, has done some fine "Merrittesque" work, and if It is as "Merritorious", I'11 gladly concede his supremacy. Will he illustrate his own story? I can dream.

Isn't it about time Kuttner did another novel? -or am I still dreaming? - R.F.D. 1, East Greenbush, New York.

Okay, okay, Marion, Kuttner appears in full panoply in our next as announced. And, believe it or not, Leigh Brackett is again writing stf-but good. Our companion magazine, TWS, is soon to run a fine novelet by la Brackett and she is currently at work on a novel for us.

Do I hear the sounds of cheering in the distance?

Sufficient at any rate to make the ether vibrate whether it exists or not. Have you ever taken any? It's odds-on you suffered some vibrations when coming out of it-or have you?

The soma St. Clair's conclusions on her effervescent beverage is that we'll have to wait for its invention to have a definite idea of just what it is.

So make with the marks back at college this year and write us again.

# SNOWFLAKE FROM FLORIDA by Lin Carter 

Dear Ed: I won't do it. I won't. No sirree. I just won't say anything about the cover. I've got willpower, I av. Even if it was a gaudy concoction. $\hat{T}$ can just see Earle $K$. chuckling over his easel. "Now, lessee: sky, a nice gory red to attract attention! And let's put in a gal in a green. strategically-torn dress, for the masculine interest! And-uh-a small, lavender spiral nebula, an overgrown green snowflake
. etc." I just won't say anything about the cover.
The novel was good. Nice, plausible plot, realistic hero, smooth development, and-horrors-no love interest! "Twas a refreshing change to do without the formula boy-girl relationship. Pix fair.

Through the Purple Cloud had no plot whatsoever ., the crudest of love interests... but I liked it. I'm always a sucker for Williamson's fullblown descriptions. I enjoyed it more than the novel. 'S 'truth.

The shorts were both above average; Chaos quite good, original, clever, etc. Good Pic, but reproduction on low-grade pulp kinda ruined it, didn't it? Anastomosis . . . amusing and engrossing. Padgett-ish, kind of.
The letters were not too hot. Oliver, Jewett, Brown, Anger, are always good, but most of the rest were dull, I thot. Mine was certainly no exception- 1734 Newark St. So., St. Petersburg, Fla.

Most of the cover stuff that has you burbling into your bubble bath was taken directly from the story-snowflake et al. Back under your stone, Lin, and pull your will power in after you.

## VINDICATION <br> by Rosco Wright

Dear Ed: This time Bergey pulled a fast one. The purple and the red came from the story. Doggone you, Jack, look what you did to the cover!
As for the Ethergrams: Dear Chad: Pal, you wouldn't want all stf stories to conform to a formula would you? I like heavy science and cosmic hypothesis too but Margaret St. Clair does add a needed variety to broaden the scope, does she not? Dear Mr. Jordan Green: I defy you to repeat: "I don't like shorts," after you have read some by Bradibury.
Now the stories in order of preference:
"The Man In The Iron Cap", by Leinster: the suspense in this story was terrific. The characters were suitable for what one expected. The basic concept of the dangers of halting research was and is quite accurate.
Such a "halt" fails to acknowledge the fact that mankind is not capable of assimilating all data and phenomena in the universe, therefore the halt amounts to an invitation to have the race wiped out by one of the many unforseeable factors in the cosmos. It may be improbable but certainly not impossible that such creatures as Leinster described are now en route to Earth.
"Anastomosis," by Clyde Beck, a new name which mlght be our pal Murray Leinster in his true form of Will F. Jenkins redisguised as the Hon. Clyde "Classics" Beck. Superior characterization, that is "supertor to most str", pleased me greatly.
"Chaos" by old timer Polton. Cross after a rather dull start developed into a highly fascinating off-trail yarn.
"Through the Purple Cloud" by Jack Williamson: well, it was a theme that got worn out in the old days: "I done been to a land where the emerald sand rolls in waves over an ivory city with parsnip-shaped towers but I couldn't do anything to anything while I was there because of a red fiame that made everything intangible. However nobody will believe me so I ain't gonna tell no one." Frankly, Ed, I wish the Hall O Fame would die now that the newer stories are of such increasingly high standard.
Hannes Bok? In my opinion, which may or may not be so humble the begt part of the entire sssue wass the

INGO" is scheduted or the next issue. $\mathrm{I}^{\prime} \mathrm{m}$ getting an extra copy, paper shortage or no, and the fact that Bok is a friend of mine has nothing to do with my opinion. I like his yarns next to Bradbury and his art work next to none. Fi Cartier and Borls Dolgoff may run a close second but Bok is number one on my list.-350 West 6th St., Eugene, Ore.

Hope you liked the Bok yarn as anticipated. We did. As for your remarks re continuance of the HofF, let's have some fanopinions on the subject-hokay? You may have something there, as stfiction has improved.

It seems to us that the oldsters, for the most part, merely dreamed up a fantastrophe and solved it. They troubled themselves only in the smallest possible portions with such vital matters as character, story line, logical development of suspense, interest and the like.

Oddly enough some of the ablest current practitioners of science fiction were among the wor'st offenders. But we'd like to know how the bulk of our readers feel about continuing or abolishing the feature.

## SOMETHING TO SHOUT ABOUT <br> by Jack Clements

Dear Ed: My goodness, has it been two months since the last SS? Hardly seems possible, but leave us get at it.

First, you've really got something to be proud of this trip. I'm referring to "The Man in the Iron Cap". That was really an enjoyable and well-plotted novel. It WAS a little like "Kingdom of the Blind" in basic plot construction, but is that bad? The science was palatable, and the story was doubly good because it had no love tripe. The absence of a giddy heroine was appreciated. I was overjoyed when the dame died.

Stevens' pics were just a little below par, but they were good enough. Astarita was second best. He's pretty good. The rest were okay. Better'n they used to be, anyway.
The H of F story could have been a lot better. The writing was surprisingly modern. but the plot was rather poor. Still, at that tlme the plot was a favorite, and the story fared better than most of the average oldies.
"Chaos" was a pleasant and subtle little satire. I liked the take-off on the Fortean items. A lot of times writers give such corny explanations, and Cross' were the best and most humorous yet. It WAS a satire, wasn't it?

The remaining short story was more or less a waste of space. Must everyone copy the Bradbury idea of slipping kids into stories? And speaking of Bradbury. where is the boy? Surely the greatest writer in stfdom can not be excluded from the ever-improving SS.

I'm glad, to see Bok coming up next issue. While the lad never learned to draw, he is a wonderful writer. I only hope that the illo's aren't by him.
I am mortified. In my little epistle last ish I sounded off on the letter column being poor, and what happens but all the better letter hacks jump in the beckoning column with some darned swell letters. Oliver is always welcome in this corner, and the same goes for Jewett. But where were Sneary and Ward? Oh well. you can't have EVERYTHING.
The fanzine review (oh come now, GORGON isn't that good) was veddy good indeed, but I gotta bone to knaw on with you. Wassa idea of reviewing the first issue of 2000 AD again? Slip-up, no doubt. but I think you should know that since the review, something new has been added. (humph humph)

While we're on the fanzine review, isn't there any way of cutting down the length of the time of the receipt of the zine and the review? I can understand the letter business but not the fanzine tardiness. The review of Vortex (which came out in March) didn't appear until July, and a lot of other examples can be given.
I see that I haven't commented on the cover yet. Well, nothing to say, save that it was perfectly accu-
rate and rather well plotted. Color warn't bad, and overall effect was favorable.
Tsk. tsk, only a half a page and nothing to say. I depart, with a plea for Bradbury and longer novels. 6310 Mhd ison rd., Cincinnati 27, Ohio.

Well, you'll have Bradbury soon if you haven't already. His stuff has been coming in regularly of late and excellent too. Your beef on the lag in fanzine reviews is a valid one and one oft repeated.

However, we have no solution in sight as, being bi-monthly, we go to press about three months early and that, as the boys say, takes time. Somebody came up with a timemachine or else-else meaning take them as they have been coming. Sorry, Jack.

Don't know how the double review of 2000 AD got by, but apparently it did. Sorry again.

## DOUBLE HEADER <br> by H. H. Haley

Dear Ed: Comments on Sept. \& Nov. ishes. Sept ish. Cover horrible, inside ills fair, stories not what they used to be. Lord of the Storm was very good stf but slightly drawn out.
From bad to better. Nov ish shows that Bergey is recovering from the Sept. hangover acquired on leftover Xeno. The Man in the Iron Cap by good ol Murray Leinster was excellent. even to the ills. We should have more like the stf-dish on page 11. Leinster's explanations were overiy long and unnecessary but the qualty of the story overshadowed any minor faults (atter all, they all can't be masterpleces). Through the Purple Cloud was overrated, fair ills. Chaos terrible. Even the ills. Anastomosis was great. There should be one of these in every ish. Good ili.
Now my favorite section (which I always read first) the Ethergrams. Why don't you publish two mass? One for the stories and one for the letters. I'm sure you'd sell more of the latter (no reflection on the stories). When is SS coming out monthly? f'f'x stf'ns are looking forward to that Even me. See you in TWS-Box 403, Faitfax, Calif.

There's little likelihood of a change in schedule for SS and TWS. As it is, the two magazines combine to put an stf book a month on the newsstands-which is really the idea. We've already covered the separate letter-department idea. All in all a good letter.

## WEBER AWAY <br> by Wally Weber

> Dear Editor: The November Startling just happened to find its way into my hands. I thought it was rather readable myself. At least there is some doubt in my mind that yours truly could do any better. Quite a bit of doubt. As for the cover- tis well drawn but that remains as the only complimentary remark able to be made about It. I still think a color photograph of the author But what can one expect for three-twentieths of a dollar? TEV has improved. Poor me was left out this issue. Cleaning house? I'm for more humor in the letter columns. Why print the things if they don't entertain? (Oh, I thought so.) Here is a swell idea for solving the paper shortage. Instead of printing the stories on paper, send the author to each fan and let him read the story himself. Collectors can make recordings. Saves on printers too. Can you understand how one person can be so clever? Before I forget-Jick and Oona give me a pain


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where a pill can't reach. What care I for home life in the future? Give me the ordinary trash with Earth invaded, Sol exploding, plagues plaguing, inventions invented, mad scientists, space pirates, time travel, extra dimensions, etc. I hate literature.

A parting shot. Paint the next cover a transparent color so we can see through it-P. O. Box 858 Ritzville, Washington.

Well, poor you (and we do mean poor you) is not left out this time. Highlight of your letter, to us, is the rating of M. St. Clair as literature. As for your paper-saving idea, how many authors do you think can readour authors, that is? However, we may send you a nice bale of wire recording tape-red tape-to entangle yourself in.

## UNDER PAR <br> by Gene A. Hyde

Dear Editor: Well, well, so your hobby is collecting gramaphone records. Now I know how to make sure my letters will be published-all I have to do is enclose an Armstrong original.

Frankly this issue, with the exception of the lead novel, wasn't up to snuff, par, or anything else. "The Man in The Iron Cap," as I said. was an exception. The plot, the style, the characterization, in short, everything, was almost perfect. The way that the gluttony of the "Things" was played up and repeated untll it was hammered into your head was nothing short of genlus.

Let us now turm to the shorts. Oh, brother, what a let down! If I must rate them, they come in this order: "Chaos", "Anastomosis" and "Through The Purple Cloud". Williamson's yarn was way below standard, even for a HoF story.

I find it rather hard to believe that the people of Atlantis, being as well versed in science as Cross would have us belleve, would be content to build an idol to their God out of stone.
"Anastomosis" might have been better had it been written differently. As it was, it was an old plot written with weak theory and in a second-rate manner.
The HoF yarn was another good example of the "good old days" not being so good anymore.
Welcome L. L. Shepherd. Glad to see a fellow Illinolsian in TEV. I was beginning to think that I was a lone wolf. As for that article in Herper's, let me say that no matter how good or well known something or someone becomes, it or they can still be ruined by too much adverse publicity.

Welcome, also, to Wanda Reid. It's nice to know that I'm not the only fan to rate St. Clair tops.
For the information of Guerry Brown Ammonia burns readily in pure $\mathrm{O}_{\text {. }}$. Burning it in air is somewhat more difficult. however, unless a hot platinum wire is used as a catalyst. In which case the reaction continues satisfactorily. In case this disappoints you, I'll also add that you are right in thinking that $\mathrm{NH}_{3}$ plus $\mathrm{O}_{2}$ will not yield $\mathrm{CO}_{2}$.

But then what makes you think that the theoretical men of Jupiter need CO.? For instance, they could have sodium in their blood instead of sugar, the ammonia would then combine with the sodium to produce sodamide and hydrogen, the hydrogen then being exhaled in place of CO? In case you're interested, the equation looks like this:

$$
2 \mathrm{Na}+2 \mathrm{NH}_{3}=2 \mathrm{NaNH}_{2}+\mathrm{H}
$$

This is only one of the many possible reactions, so you see that ammon ia-breathing life is possible.

And by the way, for that pun about my letter, you are hereby diallenger to a dual. You may choose your own weapors.- 915 N orth Main St., Bloomington, IU.

After the way you spell "dual", we'll make the contest a spelling bee, Gene-with Rick Sneary referee, umpire, field judge, head linesman and anything else needed in an official way. A contest between two people is a "duel" for your little black notebook.

As for your opinions anent the short stories
in the November issue-well, they're your opinions and as such respected (oh, yeah?).

## DEPARTMENTAL MIND

by Dan Mulcahy
Dear Editor: Just a few lines (say two or three hundred) to Inform you that the November issue of SS has met with my approval. THE MAN IN THE IRON CAP was quite a rellef after LORD OF THE STORM, that bit of superhack which disgraced the September ish.
The short stories were well worth reading too. CHAOS was a novel speculation on the answer to the Riddle of the Sphinx. ANASTOMOSIS (whatever that may be) was fine but none-too-novel. The Hoff story comes up to the new standard set by Weinbaum's superb CIRCLE OF ZERO. Sad to say, most HofF stories In the past were good arguments for the abolition of the Hall of Fame. But we'll let bygones be bygones as long as all the "classics" are as good as the last couple.

This mo's TEV seemed rather abbreviated. Come now, we can't have this. A good long TEV is one of your most enjoyable features. I notice a good many Vibrators aren't content with the new letter section. Permit me to offer my solution. which I hope you'll give some consideration.
My plan is simple: Divide TEV into two sections, the proportionate length of each to be decided by popular vote. One part of this would be devoted to the more staid letters, under the management of yourself. The other would be devoted to the old kind of letters, presided over by Sargeant Saturn or an unreasonable facsimile thereof.
Readers could read whichever better suits their taste, and all controversy will be stilled. I, for one, would reach both sections. The new-style column is all right but a lot of real humor, as well as some corn, has departed with the Sarge. There's my plan. Well???
Next month sounds good. I've never read a Bok story, but I hear he's agile with the typewriter. I've never heard of the HofF tale, but I trust it'll be as good as the last two. I think you should print one of the old novels occasionally. Not many classic shorts have been written.
By the way, Ed., if you've got a little space left over in TEV, why not print my letter? What's Wlgodsky got that I haven't got (besides being the editor's nephew, I mean?)

I nearly forgot to tell you to congratulate the art editor. Not a single Marchioni in the whole mag. Oh blissness. it's too good to be truel Bergey has done better but the cover wasn't too bad. -1170 Utah St., St. Louis, Mo.

So you want us to split up our pride and joy. Have you never heard of the Fall of the House of Usher or that a house divided against itself cannot stand or that we'll all hang together or we'll all hang separately? Did we hear a murmur that hanging was too good for us? Well . . . maybe.
Well, we won't do it. The very thought of teeing off again on all that space lingo is enough to give us and most of our readers the galloping gremlins. You should try it on your typewriter some time. It can and does get pretty gruesome-in fact a lot more gruesome than pretty.

## FROSTBITTEN

by E. J. Frost

[^5][Turn page]

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Suggestions and constructive criticism are always in order, hence, may I recommend that you take under immediate consideration, either a separate magazine or, preferably, a larger, higher-priced one, having an origInal story but, above all, a reprint of some of the gems of Fantasy, including the COMPLETE BOOK LENGTH novels of Kline, Cummings, Merritt, etc. Please permit me to reiterate-the complete BOOK length novels, not "complete novels" per present custom.

With the various and sundry magazines covering this type of literature available in all the different magazines, we invariably encounter new stories, some of which are outstanding, others very mediocre. This necessitates our wading through reams of material to ascertain what are desirable. Matter of fact. I personally glance through the main story in the book (magazine) and by scanning, elther buy or reject the entire issue-this being. obviously very detrimental to your sales.

In a bibliography being prepared after 7 years of research by an authority in Chicago, (soon to be offered for sale, I understand) he has found a comprehensive file of 5400 titles of Fantasy stories which were good enough to be bound in book form-hardly a claim which can be claimed by the mill-of-the-run story, These are not of the length of the average "complete novel" featured by Fantasy magazines. These are full book length which could be set in smaller type to fit into limited space. The publication of such reprints would give you a virtually inexhaustible file from which to draw.

In view of the terrific demand of reprints of classics by members of the fast growling Science Fiction and/or Fantasy Clubs, your circulation would increase. May I therefore urge you to consider this problem very closely. Please understand, I do not condemn the practice of new stories. Who knows but what you might discover a new Merritt?-4941 W. Melrose St., Chicago (41), Ill.

Nice of you not to condemn our running new stories over reprints. Well, one of our rivals does have the policy you suggest-and they can have it. We'll take our chances with what current fiction practitioners send usand with authors like Kuttner, Edmond Hamilton, Leigh Brackett, Fredric Brown, George O. Smith, Murray Leinster and others on the docket, it seems unlikely that we are in the throes of lowering the stfiction level.
If you must know, our "complete novels" in this magazine are in almost exact alignment with current book publishing requirements -which are a lot shorter than the old padded and dragged-out tedium which has endured from the days of James Fenimore Cooper to the romantic historical horror of today. So you really needn't feel gypped.

## UNSULLIED GAMS

by A. B. Krueger

Dear Sir: In your November issue, to my great surprise, I found my former letter to you. Thankee kindIy, sir, for the plug on my profesh.

I finally doped out your answer to my critique and in reply to that I am still digging out the "errata" in my love for "trivia," if it is what $I$ think it is. Engineering is an "exact science," my friend. Trivia and errata are what I eat and drink on. They are what keep me from having to take some hard labor job like editing or pick and shovel for my daily bread and oleo.

So to work. . George and Juanita have had a very tough time, (see text). They travel over rocky terrain after the plane they are in crashes and burns. George's face and hands are burnt (see text). Their clothes are in tatters (see cover). AND YET-the lady's high heels are intact, her stockings show no runs and the faces of both are clean. If she had no stockings on, still her legs are unsullied. TUT-TUT.

I'll give you this. Nobody trying to kill somebody
on the cover. Bless your progressive soul for that.
No comments on the stories. I read each one and they were entertaining. I bought the mag for that purpose. It has done its work and done it noble and I'll buy the next one when it comes out. Just this comment-I'll be willing to raise the ante a dime, if you'll put in more tales. Why not ask your fans about that idea??-Route 2, Box 618-8, Sante Cruz, California.

Juanita must have been wearing an impervious futureworld leg paint. And George may not have been burnt on the cover but he certainly had a swell tan. Suntan makeup again? We doubt it.

As for your Erratum on the Trivia (or was that ours originally) it has for long been our favorite etesian pelagic resort-sort of a Portestan by the Sea as it were-where we can practise our riparian rites.

If anyone knows what this means, please inform us via St. Bernard dog-complete with brandy, soda and bromo seltzer.

## CORN AND HIMSELF

by Michael Wigodsky
Dear Sir: This time I'm using Goldfrank's Whost system this time.
THE MAN IN THE IRON CAP.................... 2
A good plot, fine characterization, conceivable motivation, loathsome invaders . . . but just a little bit too grim.
[Turn page]

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THROUGH THE PURPLE CLOUD
Good characterization, fine description, believable science . . . but no plot.

CHAOS - but no plot.

I don't usually like Cross, but I have to admit that this time he certainly pulled one.

ANASTOMOSIS
Who is this Beck? He's wonderful! Original time travel slant and Bradburyesque "screaming children."
Average for the magazine: 2507 . THROUGH THE PURPLE CLOUD took it way up. Where do you find such lemons for the "Hall of Fame?"

Illustrations: Cover: 99; page 11: 74; page 12: 0 ; page 15: 5; pages 18-19, 99; page 69: 54; page 77, 21/2; pages 86-87: 1.

Average for Illustrations: $83 \mathrm{5} / \mathrm{s}$.
The letters are the usual mixture of corn and myself. Hoho.

Well, this ends 1947, a very good year, memorable chiefly for Kuttner-Hammond's two novels and the introduction of Margaret St. Clair. Undoubtedly, about fifty years from now, some aged and creaking ex-fan (possibly Mullen or Jewett), will say to his grandchildren, "I read her first story." - 306 Evans Avenue, San Antonio, Texas.

Okay Michael. As to where we get such you-know-what's for the HofF, they come right out of the so-called classic mag of yore and they're the best we can find. Let's see how the readers' poll on that feature of SS comes out.

## ORCHID MAN

## by Don Hutchison

Dear Editor: Orchids to Leinster for his easy-toread story, THE MAN IN THE IRON CAP. It was a genuine treat to find a yarn in which alien beings attempt an invasion of Earth by subtle means rather than slam-bang soclrum stuff. ML's thought-iransmitting Little Fellas were considerably more unusual than most authors' ideas of the inhabitants of other planets. Perhaps that's because the other authors pattern their foreign entitles after we Earth people for purposes of a less-complicated story.

Actually, if there is life on other plants, you can bet your bottom dollar that it won't be anything like Man as we know him. Any races we encounter or that encounter us will almost certainly be either undefinable, subhuman or superhuman-most likely superhuman since another culture would be far older than ours.

For purposes of discussion it seems to me that the average sif author's idea of interplanetary warfare would be impossible, because only with a race at a level of technical development near our own would confliet be possible.

Of course, a race much more technically developed than us might be able to wipe us out as easily as we trample an ant-hill in the dust, but that wouldn't be war, that would be anninilation. Anyway, I'd like to hear someone else's ideas on the probability or improbability of such a conflict.

Oh yes, I like your present series of editorials very much-interesting, but not ultra-technical. And your fanzine reviews quite often furnish a neophyte's first glimpse of fandom and in that respect constitute about the most important feature in any stf prozine.- 7 Tacome Avenue, Toronto 5, Ontario.

For exhaustive comment on the possibili-

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ties of alien (i.e. extratellurian) civilizations and conflict, better delve into Charles Fort. He really kicks the old gong around with that one. Otherwise, thanks for a kindly missive.

## REHMNANT

## by Roger Rehm

Salutations, dear editor old piece of gloom in an ocean of joy: Well. I've bought the latest issue of your intrepid bit of magazinery. The cover, hmmmm, after pondering for several seconds. I've come to the conclusion that Bergey couldn't paint his way out of the open end of a paper bag. Let himislither under the carpet from whence he crawled.
The novel started out all right, but the ending gradually oozed to an uninteresting and doleful conclusion. The thing dragged after the wire cap episodes.
"Through the Purple Cloud," I read in the original mag. a copy of which I somehow acquired. Not so bad, better than a lot of the new vile slop and slather that you present to your burbling readery.

The two short stories were spectacularly mediocre. The reader department seems to have bogged down. Not an interesting letter to be read, some were tolerantly readable. Jordan, Green \& Tom Jeweth.

The fanzine reviews were pretty good. "Stellarite," aaah, now there is a real fanzine. Watch it for more and better tales of the same type featured.

As for the interior artwork, well. page 11 is lusciously disconcerting, except for the expression on her, which I do not appreciate. But below the facial expression, $\quad \mathrm{mmmmmmmmmmmmmmmmmmmml-2837}$ San Jose Avenue, Alameda, Callfornia.

Head in a slop bucket for you, Roger. Or pass through a purple cloud and get beaned by a spiked snowflake.

## NEOPHYTIS

by Kenneth Stein
Dear Editor: Well, I've just flinlshed reading my first issue of Startling Stories. It's the first time I've ever read an stf magazine and, boy, I'm going to keep it up. They're swell stories!
I like especially the section called "Ethergrams". section up, it's very entertaining.

Now down to the stories. CHAOS was the flrst I read and I rate it as being a very good story. Full of excitement. Only one thing I don't get. Everything exposed to the rays disappeared, why didn't Nal and Grifa vanish when they walked into them?
THE MAN IN THE IRON CAP comes in second. I like stories describing invaders from outer space.
The third best story was THROUGH THE PURPLE CLOUD by Jack Williamson. Very interesting, this idea of dimensions. I still can't understand how two worlds The letters are interesting and humorous. Keep this can be thousands of miles apart and yet touching in dimensions. A little too involved for my unselentific brain. I guess.

My last choice is ANATOMOSIS. Another story of dimensions, but not as good as THROUGH THE PURPLE CLOUD.

Please explain to me what exactly a Fanzine is. I don't get it.
The art was good on the whole especially those pictures fllustrating THE MAN IN THE IRON CAP. The only one that wasn't so good was the one on page 69.71 Bellingham Street, Chelsea 50, Massachusetts.

Listen, bub, Nal and Grifa did vanish-one to a planet circling Antares, the other to another spot on Earth. But since the author permitted the reader to accompany them, they didn't seem to vanish-get it?
[Turnpage]


Ifrow to ute the ateel scuaro-How to file asd set envi-How to build lurniture-How to use a mitire box-How to use the chalk lino-HIow to yes rules sad ocaleo-How to mako jointe-Carpentors arithmetio-Solving, mensuration problems-Ege timatiag atrength of timbers-How to eet girdets end silla-How to frame houses and roofo-How to estimate ecsta-How to build houses, barns, garo
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Seriously, we're glad that you have discovered us and seen fit to write in. Keep it up. As for what is a fanzine-it is an amateur magazine written and printed and distributed by an individual or a group of devotees to science fiction. There are scores of themrecent issues reviewed in the department of this magazine devoted to that purpose. Why not send for one or two if you are interested? Prices and addresses are included in the reviews.

## ROBBED!

## by James F. Gossett

Dear Editor-Bergey (that ****\&\&\$! ๙ece?\$\$\&!*...) has at last caused the uitimate disasier with his covers of "LADIES" of the future. Some bug-eyed monster In the form of a mere two-legged sophomore, not being able to resist Bergey's (cere* ${ }^{*}+1^{+} \& \& \& ? ? ?=-111$ ) girl friends, has had the nerve to steal from me one of your greatest masterpieces in the form of the July issue of Startling Stories in which appears the great story "Kingdom of the Blind".

I wouldn't have minded it but he should have let me finish it first. If Anyone has this issue please send it to me and they will remain my friend until death do us part.

I call upon you, my fellow mortals, who have suffered a similar tragedy, in the name of Science Fiction to come to my aid in this my hove of erief and dire need.-213 Bellevue Street, Danville, Virginia.

Let's hope someone takes pity on you in your forlorn plight, Jymes.

Once again we come to the good old "thirty" -the end to those of you who are uninitiated. Only one thing about the letters we have printed this time puzzles us. To wit-

Not so many issues back the mail to SS included scads of poetry, that to our companion mag, TWS, virtually none. Now the process seems to have reversed itself. How come?

Let's see some of you Dantes andante once more.

Well, having thus asked for it, we'll retreat in confusion until the next trip to the Etherial Vibratorium. So long and please keep writing, even if it doesn't rhyme.
-THE EDITOR.

# Read Our Companion Magazine of Science Fiction 

## DONT LDOK NOW

(Concluded from page 75)
man said. "What I'm hoping is that the Martians don't really like to kill-unless they have to. I'm hoping they won't kill without proof. 'But-" He tapped his wrist-watch.
"There's two of us now, though," Lyman said. "We've got to stick together. Both of us have broken the big rule-don't look now-"
The bartender was at the back, disconnecting the juke-box. The brown man said, "We'd better not be seen together unnecessarily. But if we both come to this bar tomorrow night at nine for a drink-that wouldn't look suspicious, even to them."
"Suppose-" Lyman hesitated. "May I have one of those photographs?"
"Why?"
"If one of us had-an accident-the other one would still have the proof. Enough, maybe, to convince the right people."

The brown man hesitated, nodded shortly, and opened his watch-case again. He gave Lyman one of the pictures.
"Hide it," he said. "It's-evidence. I'll see you here tomorrow. Meanwhile, be careful. Remember to play safe."

They shook hands firmly, facing each other in an endless second of final, decisive silence. Then the brown man turned abruptly and walked out of the bar.

Lyman sat there. Between two wrinkles in his forehead there was a stir and a flicker of lashes unfurling. The third eye opened slowly and looked after the brown man.

[^6]

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## CLIMATE - DESORDERED

(Concluded from page 103)
It was the President of the Chamber of Commerce who broke the news to Wiley Cordes, after summoning him to his office in early December. There he simply tossed a telegram at his high powered promoter. No words were needed to explain his mood-it was evident enough from the jut of his beetling gray brows and the bayonet-angle of his Corona Corona.
"Read this," he said laconically. "Read it and pack."
Startled, Wiley complied, felt himself go gray and sick and shaky as he scanned the contents of the wire.

It read:
TO CHAMBER OF COMMERCE WHEEDONVILLE BY THE SEA THANK YOU STOP ESPECIAL THANKS TO WILEY CORDES FOR TRIPLING OUR OFFSEASON RESORT TRADE STOP HIS SNOWMAKING FLIGHTS NO LONGER NEEDED STOP WE HAVE ADOPTED IDEA OURSELVES STOP ONCE AGAIN THANKS FROM THE ONLY SKI RESORT ON THE COAST STOP COME AND TRY OUR NEW RUNS AT OUR EXPENSE AS SMALL RETURN FOR YOUR FAVOR STOP BURDEN BAY CHAMBER OF COMMERCE.

## Get Aboard the FREEDOM TRAIN



## REVIEW DF THE SCIENCE FICTION FAN PUBLICATEONS

wELL, the impossible finally has happened. The A-list of fanzines in this month's review tops the Blist by a good four entries-fifteen to eleven to be exact. It is the first time this has happened since 1945, when a larger A-list seems to have been the habit rather than the exception. Let us hope it marks a new and a return to an old era simultaneously.
The improvement is remarkable, however, and a number of current B's would probably have rated A-listing in leaner times. Oh,

how much more blessed it is to give praise than to tear fanzines limb from limb-not that we don't intend to go on a tearing jag when needed.

Before tackling the reviews proper (or otherwise), something new has come in from Walter Graham, editor of the STAR, a fanzine which won hearty A-commendation in our November issue. Along with a note explaining more fully the aims and policy of his fanzine, he has sent us a brochure explaining what the STAR is to interested parties.

It promises to be not only a meeting place for scientists and others with real ideas and problems to propose in all fields of science but is in constant search for undiscovered scientific brains as well as opportunities for those it uncovers. A wholly commendable idea.

Those interested should write Walter Graham, Box \#7046, Station G, Los Angeles 37, California. Copies of all three issues published are still available to contributors and others.

Now, to work. Here's the A-list:

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ham, New Hampshire. Editor, Boff Perry. Published irregularly. $10 ¢$ per copy (Annish 20\%).

Good solid stuff behind a fair Fred Warth cover. Disregarding James R. Adams' wild and woolly Red Spot of Jupiter, fiction and articles hit high levels, especially Rick Sneary with his Pacificon Diary and the second installment of Damon Knight's Worid of Van Vogt. Nice going, Boff.

DREAM QUEST, 496 North Third Street, Banning, California. Editor, Don Wilson. Published irregularly, $10 ¢$ per copy, 3 for 25 ¢, 6 for $50 c$, 13 copies $\$ 1.00$.

A big well-packed fanzine, containing large orders of just about everything-fiction by Gordon Elliott and John van Couvering, articles by J. J. Fortier and one on Logic in Scientifiction (a lulu) by Ralph Milne Farley, verse by Amri and Marijane Nuttall and a number of features, including an elaborate and thoughtful prozine review by Glibert Swenson and a Fanzine Writer's Guide One of the best of a fine crop except for a botched Van Couvering couver.

THE FANEWS, 1443 Fourth Avenue South, Fargo, North Dakota. Editor, Walter Dunkelberger. Published irregularly. $2 \varphi$ per sheet, 55 sheets $\$ 1.00$.

Continuing his regular excellent news service for stfans, Dunk has come up with one of his super-specials-a whopping big 64-page summer issue packed with features, gossip and advertisements of faninterest. Obit for M. P. Shiel tops the contents and book reviews are excellent. One of the fanyear's big moments.

FANOMENA, 200 Williamsboro Street, Oxford, North Carolina. Editor, Andy Lyon. One-shot. Price unlisted.

A special deal which gives a good running account of the late Philcon and lis doings. Well if simply presented and very easy to read.

THE FANSCIENT, 3435 Northeast 38th Avenue, Portland 13, Oregon. Editor, Donald B. Day, Published quarterly. 15 per copy, 4 copies $50 ¢$.

A truly handsome "Iittle" magazine published for the Portland SFS, this is a newcomer which, we sincerely hope, meets with the success it merits. The articles and features, save for items by van vogt and Stanton Coblentz, show the earmarks of being rushed into print to make the Philcon Book, but the artwork by Donald Day and G. Waible is yummy to put it mildly. Bon voyage!

FANTASY ADVERTISER, 643 South Bixel Street, Los Angeles 14, California. Editor, Gus Willmorth. Published bi-monthly. 50 c per year.

Well up to the standards of one of the most vital of fanzines, this issue contains a pleasant resume of Philcon activities by Editor Willmorth (well illustrated with photographs) and the best printed, most exhaustive amount of fantrade advertising extant. Those of you who want back issues et cetera should pay especial attention. Good stuff, Gus.

FANTASY REVIEW, 15 Shere Road, Ifford, Essex, England. Editor, Walter Gillings. Published bi-monthly. Price (for Americans) $15 \$$ per copy, 6 copies 75 ¢ .

Possibly the best fanzine of all, certainly the most mature, issue 4 of this postwar British entry contain a fine study of "the Lovecraft Cult" by Arthur F. Hillman, a study of postwar British condition by John Carnell (they are plenty rugged), first class book reviews and an excellent news column by Editor Gillings. This one really rates USupport as it keeps a close but detached view of US stf doings and presents the British slant as well.

PANTASY TIMES (Nos. 57 \& 58), 101-02 Northern Boulevard, Corona, New York. Editor, James V. Taurasi. Published monthly. $10 ¢$ per copy, 3 copies 25 s, 12 copies $\$ 1.00$.

FANTIMES rates the A-list easily in its new format, which is neat, of wide general fan interest and contains excellent swap and for sale advertising sections. David Kishi's Fantasy in the Theatre is the peak feature in both issues, which rate about evenly in this reader's bloodshot orbs.

THE GORGON, 4936 Grove Street, Denver 11, Colorado. Editor, Stanley Mullen. Published bi-monthly. $15 \%$ per issue, $75 \%$ per year.

Still the best printed and presented of fanzines, although there is less artwork than usual. We missed it, but what there is is fine. The demon cartoon is dropped, for which Allah be praised. The issue runs heavily to pretty lurid fiction, featuring the second and final installment of Landell Bartlett's Vanguard of Venus, which left us cold. Poetry runs to purple patches but gets by. The cartouche of John Campbell, Kennedy's Ideal Prozine piece, the book reviews and the current prozine analysis are all of high quality. All in all a good issue.
ICHOR NO 2, Apartment 20, 1116 Georgia Street, Los Angeles 15, California. Editor, Dale Hart. Published irregularly. $10 \%$ per copy, free to FAPA members.

An all-poetry issue, featuring such well and unknowns as Sidney Johnston, Harvey Gross, George Ebey, Dale Hart, Robert W, Lowndes, Redd Boggs and others. A neat little fob featuring purple patches that do or don't rhyme. Occultish.
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Editor, K. Martin Carlson. Published irregularly. $5 \$$ per copy.

A so-called Philcon issue with little about the convention, this is still a must for back issue hounds and swap artists in stf. Advertising coverage excellent, with good pro-gossip by Rex Ward and an interesting page on Celestial Music.

SHANGRI L'AFFAIRES, 6371/2 South Bixel Street, Los Angeles 14, California. Editor, Charles Burbee. Published irregularly. $10 e$ per copy, 3 copies 25 .

The Los Angeles Science Fantasy Society adds a Philcon supplement to its August, 1947, issue that doesn't make any sense. But the regular edition, featuring an intriguing piece on extra-sensory perception by Arthur Cox, is up to its usual strident, chattery, gossipy, amiably vicious and always amusing self.

SPACETEEN, 18261 Outer Drive, Dearborn, Michigan. Editors, Bill Paxton \& Lin Carter. Published irregularly. 104 per copy, 6 copies $50 ¢$.

A promising juvenile newcomer to fanzinia as its title suggests. Best items are a Jack Clements slap at the ribaldry of the late Thorne Smith (for shame. Jack! ) and an uproarious Joe Kennedy howler entitled The Shooting of Hangdog Jones. Departments and features need building up but the ingredients of a successful fanzine are all present.

2000 A. D., 428 Main Street, El Segundo, California. Editors, Rex E. Ward \& Jack Clements. Published irregularly. $10 ¢$ per copy, 3 copies $25 ¢$.

The second issue of this neophyte looks a lot better than the first, which won B-rating. Articles, features and fiction by Joe Kennedy. Harley Sachs. John van Couvering. Forrest Ackerman, Redd Boggs, E. E. Evans and many others are built around an horrendous science flction quiz which threw us for a heavy loss. A good big busting youngster in the fleld.

VARIANT, 122 South 18th Street, Philadelphia 3, Pennsylvania. Editcr, Allison Williams. Published bi-monthly. 206 per copy, 6 copies $\$ 1.00$.

An excellent eerie cover by Robert Tshirky leads off the best issue yet of the omplal mazagine of the Philadelphla Science Fletion Society, recent host at the Philcon. Local and topicat stuff of limited interest is wisely mixed with more general articles by Dr. Keller, Pud Waldo, Milton Rothman and others who know their stuff. An anonymous item entitled The Silly Questionaire highlights a very good issue.

Which brings the A-list to its more or less logical conclusion. A brief pause while we entrain for the nether regions where B-list denizens lurk, most of them with red-hot pitchforks ready to pierce Ye Ed's tender hide and make same smoke.


JANUARY 15.30

Well, we might as well get it over with. Here goes:

BLOOMINGTON NEWS-LETTER, P. O. Box 260 , Bloomington, Illinois. Editor, Bob Tucker. Published irregularly. No price listed. The one-time editor of LeZombie, a fanzine titan, clowns around and airs his prejudices amusingly in a small-timer.

THE BURROUGHS BULLETIN, no other information this time. This oddity is okay-if you worship at the shrine of the author of Tarzan.
FANDOM SPEAKS, 428 Main Street, EI Segundo, California. Editors, Rex E. Ward and Jack Clements. Published irregularly. 10 c per copy, 12 copies $\$ 1.00$. This ambitious pair of fanzimaniacs have undertaken a laudable project-the replacing of a letter-box-for-fans magazine in the field vacated by the lamented VOM. They seem to have made a good start.

GLOM. Box No. 6151 Metro Station, Los Angeles 55, California. Editor, Forrest J, Ackerman. Published irregularly. Se per copy. Brief but meaty item containing critical reviews of stf subjects in literature, the movies and the theater, suh.

LOXYGEN, 1822 Bathgate Avenue, Bronx 57, New York. Editor, Joe Schaunburger. Published quarterly. 10 c per copy, 6 copies 50 c . A newcomer of juvenile cast save for a piece by Joe Kennedy on the movie version of H. G. Wells' The Shape of Things to Come. Probably must improve to survive.

NECROMANCER (supplement), 428 Main Street, EI Segundo, California. Editor, Rex E. Ward. A one-shot apparently explaining why the magazine to which it is a supplement is not published more often. We scratch our collective pate over it.

PORTLAND SCIENCE FANTASY SOCIETY, 3435 Northeast 38 th Avenue, Portland 13, Oregon. Editor, unlisted. Published monthly. Price unlisted. Local stf news sheet by the publishers of The Fanscient reviewed in the A-list.

THE ROCKET NEWS LETTER, 91 Pine Avenue, Riverside, Illinois. Editors, Wayne Proell and George Whittington. Published monthly. 10 e per copy, $\$ 1.00$ per year. The journal of the Chicago Rocket Society is packed with talk of rocket doings, of flying dises, of facts, figures and diagrams having to do with its own style of flight. Holds considerable interest for rocket fans.

THOTS, 13618 Cedar Grove, Detroit 5, Michigan. Editor, Henry Elseer. Jr. Published irreqularly. No price listed. A newcomer, successor to the ill-fated Scientifictionist, this umpretentlous job deals apparently in equal parts with prozines, technocracy and fan controversies. It might go.

SPACEWARP, 2120 Bay Street, Saginaw, Michigan. Editor, Arthur H. Rapp. Published monthly. 10 c per copy, three copies 25c. An enlargement of format and increased number of pages mark the difference between issues six and seven of this hektoed job. Where Rapp, Bill Groover and Robert K . Paris dominate issue No. 6 almost alone, they are abetted by Wilkie Conner, Redd Boggs and Jack Clements in the larger issue which follows. Needs a nudge for the A-list.

TYMPANI, 2215 Benjamin Street, Northeast, Minneapolis 18, Minnesota. Editors, R. L. Stein and Redd Boggs. Published bi-weekly. 5c per copy, 6 copies 25 c . A neatly printed news-zine which should keep a lot of stfandom up to date as to what is happening to their companions hither, thither and yon. Keep it up.

And so, as James Fitzpatrick has wont to say at the conclusion of those picture-postcard movie travelogues of his, we bid a fond farewell to the activities of the fan-mag publishers for another two months. A good list this time. We hope the next tops it. Thanks, fellows.
-THE EDITOR.

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    a Check here if Veteran of Worid War II

[^2]:    "No!" cried Virginia, as Bronson probed into the apparatus (CHAPTER XIII)

[^3]:    J OHN Cauldron made contact with Peter Moray shortly after Virginia had gone. Moray, busy with the details at hand, had not given much time to thinking out the course of the future. Besides, it was Moray's business to act upon orders from above. His was

[^4]:    Dear Editor: 1 would like to be permitted to make the following observation:

    In a number of science fiction stories, published in the last two years, various authors have described future A bombs as "making the one that fell on Hiroshima look like a firecracker," or other assorted similes. Now in ordinary fiction this sort of writing would be perfectly acceptable without question.

    But this is SCIENCE fiction.
    The present bomb uses as its explosive charge, either Uranium 235 or Plutonium 239. These are the only known elements which will sustain a chain reaction, and there are only two conditions necessary for fission

[^5]:    Gentlemen: Have your November 1947 issue and was particularly pleased to notice your "Hall of Fame" story, Many more of them and I shall continue to buy STARTLING STORIES as issued.

[^6]:    Next Issue's Headliners -

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