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THE WORLDS OF GEORGE O.

Ed By Frederick Pohl

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Introduction

It is a widely known fact that Arthur C. Clarke inspired the modern communications satellite, but how many people know what inspired Arthur Clarke? I think I do. I think it was George O. Smith. Of course, George Smith's comsats were on a vaster scale. They were not in any measly low-Earth orbits, they were out in deep space—in the Trojan position of Venus's orbit, to be exact, wherefore the best known of them was entitled *Venus Equilateral*. And they were manned, too. Manned, in fact, by as wisecracking a bunch of slipstick-slinging and busbar-welding engineers as ever space saw.

And what inspired George O. Smith?

Well, that's where I come in. As a (very young) boy editor around 1940 I published, in my magazine *Astonishing Stories*, a couple of novelettes about a wisecracking bunch of slipstick-slinging, variety-hybridizing biotechnicians in a hydroponics plant. The author was a young man named John E. Harry. I thought him really promising, but he wrote only a few stories—as far as I remember, I published all there were—and then he disappeared from view. (He may have been discouraged by the kind of money science fiction writers were being paid around 1940, although I gave him my top rate—half a cent a word.)

Although Harry's career was brief, it was not without consequence. Out in Chicago, a young radio engineer named George O. Smith read the stories. He liked them, and he realized that such wisecracking technicians were all around him in the laboratories where he worked. So inspiration struck. He transferred the lot of them to outer space in a story, and readers liked that, too, and a whole career was born.

So you see how it worked out? If I hadn't published John E. Harry, Smith might not have written "Venus Equilateral," Clarke might not have published his 1945 paper on communications satellites—and all the rest of us might still be carrying on our long-distance communications by semaphore.

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Of course, George O. Smith was (and is) too fine a writer to stay with one setting, a single set of characters, and an unvarying style. He became one

of the most prolific and best-liked writers in John W. Campbell's stable of wonderkids during the Golden Age of *Astounding*. Then he went on to broaden his appeal with such fine and various novels as *Hellflower* (derring-do on Venus) and *The Fourth R* (an impressive and thoughtful look at what learning is all about)—not to mention the stories collected in this volume.

I wasn't lucky enough to publish a great deal of George's work, especially in his most productive years—John Campbell competed most unfairly; he paid more than I did. But we were good friends anyway, and we still are. For the best part of two decades I had a standing date every New Year's Eve at George's house. What great parties! What marvelous company—Fletcher Pratt and Willy Ley, Sprague de Camp and Lester del Rey, plus wives and friends and occasional drop-ins, and especially plus George and his really fine wife Doña to see that everyone's champagne glass was always full. These were not mere drunken brawls, you know. They provided much culture. At least once on every New Year's, George and I would sing all the verses of *The Road to Mandalay*. It was our most popular party turn. Sometimes the rest of the guests wouldn't start throwing things until the fourth or fifth stanza.

One of the great charms of this collection is that George has supplied his own headnotes for his stories, and, in between episodes of roaming the starlanes and investigating the future in the stories themselves, we have the chance to wander through the worlds of science fiction writers, fans and technologists, and to relive some of science fiction's past. They are great fun; but George has not told us everything. He has left out some details which I, as an eye-witness to part of them, feel I must supply, since there is a great moral lesson to be drawn from them.

In 1948 George Smith and I drove to the World Science Fiction Convention in Toronto, stopping on the way back to pay our respects to Niagara Falls. A decade or so later he settled down in a house near the seashore in New Jersey, a few miles from my own.

Great bodies of water exercise a strong hold on human minds. George feels that pull more than most. At Niagara, George was impelled to give something of himself to the immense cataract and so, since we had been driving without stop for several hours, he seized the opportunity to lean past the guard rail and offer some of his own bodily fluids to the falls. A Harmless gesture, perhaps; but the waters do not forget, and over the twenty-odd years he has lived on the seashore they have returned to remind him, two or three feet of waters in his living room at a time. The

Smith house is charming. But at certain seasons it is better adapted for eels and turtles than for human beings, and the moral is: "Never relieve yourself on anything bigger than you are."

Because George O. Smith is technically trained, his stories have that insider's view of scientists at work that science fiction is so very good at giving us laymen; because he is the sharp, observing human being he is, they tell us much about ourselves; because he is gifted, they inspire our imagination with his own. C. P. Snow used to complain that the two cultures, the humanists and the scientists, could not understand each other because there was no point at which their interests met. Probably Snow didn't know much about science fiction when he said that. Certainly he did not know George O. Smith.

—Frederik Pohl

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The publishing of a book is a slow process. While this one was moving through the stages from manuscript to bookstore I received a phone call from Lester del Rey, to say that George O. Smith had been found dead in his home in Rumson, New Jersey. Apparently he suffered a heart attack. He was seventy years old.

A few weeks earlier I showed George the manuscript of this introduction. He was pleased by it. Still, the fact of his sudden death put a new light on the subject. Did it now sound too flippant? Should I rewrite it in more reverential tones?

It wouldn't have been hard to touch on some of the more dignified aspects of George's career—his forty years as an engineer, his wartime work for the OSR on guided missiles and radar, his National Defense Council awards—but I decided not to. The George O. Smith I remember saw the world as a pretty comic spectacle. There are those who might look askance at comedy under these circumstances... but George was not one of them.

—Frederik Pohl

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THE WORLDS OF GEORGE O.

I am going to violate that old rule about beginning at the beginning, because

if I begin at the beginning, we'll all be back in the Venus Equilateral days—and until someone twists my arm for another Channing & Franks tablecloth engineering session, *The Complete Venus Equilateral* tells it all. But I don't mind telling you how it all began:

I'd been reading science fiction since Hugo Gernsback used to fill the center section of *Science & Invention* with a story or the episode of a serial every month. I graduated to *Amazing* when it arrived, and took up the old Clayton *Astounding* with equal pleasure.

Professionally, I'd worked my way upward from the day we all wound wire on oatmeal boxes and used a chunk of galena crystal as a detector to the point where I was designing what we'd call "entertainment" electronics; meaning radio receiving sets for home and household and the family automobile. And somewhere along about 1935, designing radio sets all day and then playing with radio as a hobby in the evening got to be just too damned much radio. I swapped a couple of bushel baskets of radio gear for a camera, which came in handy because I'd acquired, in the following order, one wife, one typewriter, and a daughter named Diane. When I wasn't taking my weekly pictures of my daughter and sloshing up the house with developer, hypo, and the rest, I'd try my hand on the old Woodstock. Because, you see, Doc Smith didn't write as much as I'd have liked, and John W. Campbell had become editor of *Astounding* with a firm clause in his contract NOT to write science fiction. For anybody, including himself. Ergo, someone had to write the science fiction I preferred, and it had to be me.

Meanwhile, back at the ranch, John W. Campbell was going through his way of living. I learned the process later, but I'm told with the highest authority that as far back as his college days, John took up concentrated hobbies and rode one until it fell to the ground, whereupon he abandoned it, climbed onto another hobby, and took off in another direction. He'd been trying to develop the fuel cell, and the house had been sloshed up with beakers of acid and alkali, and various salty messes. He swapped the fuel cell for photography, and the house became sloshed up with developer, hypo, and the rest. Then he'd met Harry Walton, one of the home workshop editors of *Popular Science* who occasionally tossed off a story for *Astounding*, and Harry got John interested in building things, taking pictures of them, writing the article on how to build the-----, and John took up home electronics, somewhere about 1939 or 1940.

John's way of living was to get up in the morning, breakfast, catch the train to New York for work, come home, eat dinner, and then disappear into

the workshop until it was time for bed. On the weekends, the only thing that changed was that John did not catch the train to New York.

Now, I said that I'd been toying with science fiction, but not very hard at the time. I was designing automobile radios for the Automobile Radio Laboratory of The Philco Corporation in their special design center in Detroit. It was a fairly good job, and all went well until the spring of 1941, when the special studies group designed a brand new automatic tuner. Everything had to be new, at least on the visual point, and the standard push-button radio had been around a long time. The interest was on floor control, with six pre-set stations on call in a sequence; one whiffled through the sequence by pushing a button on the floor and stopped when the station one wanted came on.

Unfortunately, this model didn't work; instead of staying put, each station-setting moved, with slow but alarming regularity toward the total high-end of the broadcast band where it stopped because it couldn't wander any further. We filled lab books with data, trying everything. I built a switch run from an old phonograph to click off the push-button routine: fifty times around the sequence in one minute, pause and measure how much each station-setting had drifted.

Studebaker and Chrysler had been sold and others were interested, and the Oak Manufacturing Co. had the basic tools built and were turning out tuners (that didn't work, but hardly their fault!) that were to go into production as soon as we got the bugs out. As a consequence, with a few million automobile sets awaiting a successful tuner, you can't rather quickly gather just how much time I had free to take a hard stab at writing science fiction. Very little, if you're not sure; and guess where we all were on that Sunday afternoon, 7 December 1941? Following the wandering turret tuner toward the high end of the broadcast band!

But things changed as soon as it was known that this war was not going to be a six-week pushover. The turret tuner died and left no address, and we began to get strange-looking equipment, designed as a functional prototype by government laboratories, to be reduced to mass production design.

Our lives changed, too. From the day of my first steady job in the first lab, we'd worked regular overtime, with additional overtime when something came up with problems. When (I think it was the Labor Relations Board or its equivalent at the time, say 1939 or so) ruled that overtime work must be paid for unless the worker was a supervisor, we engineers were appointed to supervise mechanical draftsmen, each of whom supervised one model

shop machinist, who didn't have to supervise anything because model shop mechanics belonged to a union that got paid overtime no matter what. But with government contracts coming in, there were government auditors who supervised the supervisors, and overtime work without pay other than "supper money" stopped. Further, they could hire more engineers and draftsmen, but at no greater pay than we regulars were getting, so it was economically sound to hire help instead of paying time and a half for overtime.

With time on my hands, I took my first real thrust at writing science fiction. I took off on one, double spaced and all, and finished it; a job that might go off today with science fiction's trend toward strange cultures on distant planets, but in 1941 it didn't work.

It came back—but not with a rejection slip. It came back with what I found to be the case: if John W. Campbell were interested (in anything!), one got a six-page letter, single spaced. This one said that he couldn't use the story I'd written, but he liked my style, and he had the firm notion that I had a technical background, and couldn't I write something that used my education and experience as a foundation.

The result was "QRM—Interplanetary." They paid me money for it. I've never been the same since.

And that is how the beginning began.

"QRM—Interplanetary" was purchased in the early spring of 1942, and appeared in the October, 1942 issue. Through that time, Philco closed the laboratory in Detroit, and we were given the offer of moving to Philadelphia or going elsewhere, and I had received an offer to operate as project engineer on one of the programs to develop the so-called "radar" proximity fuse, at the Crosley Corporation in Cincinnati.

Moving and getting settled into a new job kept me busy once more, especially since the program was a flat six-day week, eight hours each, on a job that took everything out of us, both physically and mentally, because by then it was known that this "six-weeks war" might go on for six years, and we'd been hurt so bad that the United States might come out second.

My writing lagged until Campbell wrote me another of his six-page letters, generally asking about his electronic home workshop, and suggesting that he was waiting for another story of the same kind I'd turned out before. Hoping, then, not to be hauled off before a firing squad, I took some liberties with what little was known about radar, and wrote "Calling the

Empress.” I got the check in Cincinnati in February 1943, on a cold, cold morning after an icy rain-hail storm. I opened the envelope as I hit the front steps—and the ice—and landed with two feet forward, both arms waving, on the bottom step—no, I mean with my ass on the bottom step. I don’t know whether it was worth the check; I was once five feet eleven, since then I’ve been five feet nine.

Here, once more, came a change in my way of living. Since August or September of 1942, when the proximity fuse program began to shape up, there had been some haphazard scurrying back and forth between Cincinnati and Washington. Now, oh, about the spring of 1943, the haphazard scurrying was replaced by a schedule in which I was sent to Washington for a few days once each month.

Meanwhile, John’s response to my reply to his letter was another letter, asking more about electronics, and from there the correspondence went absolutely wild. John found that he had a writer, and a tame electronic engineer, and late in 1943 it became expedient for me to arrange my monthly trip to Washington so that the conference closed on Friday night, and I made arrangements to return to Cincinnati on Monday morning in time for work.

It was on that first trip that I discovered John’s way of life. I was promptly escorted into the cellar, where I played supervisor until I damned near missed my reservations to get me back to Cincinnati because they’d played that “double daylight saving time” process on the clocks for the war effort, but the railroads adamantly stayed on standard time.

That was my first sight of John W. Campbell. The stunt of making weekend reservations went on, neither the government nor the company cared very much how I spent my weekends, so long as two important points were kept. First, there were no expenses vouchered for whatever I did from Washington on Friday evening through Washington on Sunday night, when I picked up my reservation to arrive in Cincinnati on Monday. And second, both the government and the company knew where to find me all the time.

And so, once each month, I traveled to Washington, and on Saturday morning I was hauled into John’s home workshop electronics laboratory until it was time to be raced to transportation on Sunday night.

Once I hit Washington without a confirmed railroad reservation home. The Baltimore & Ohio railroad didn’t have a place for me, so instead of leaving for New Jersey on Sunday evening I had to stay in John’s basement

until Wednesday. On Monday morning, I was hauled into John's basement workshop after confirming my position, and my lack of reservation, and the Campbell telephone number, while something called the War Reservation Board (or something like that) tried to pull strings to get me a bunk on a train.

At about 10:30 that Monday morning, I asked whether John was going in to Street & Smith. His reply:

"No. You see, I'm entertaining an author."

That baffled me. You see, I'm an engineer by profession, and I've always thought that way. My writing science fiction was an avocation, and even now when I'm retired, I'm a retired engineer who happens to have a talent for the typewriter, and can happily make a buck out of it.

"Author?"

John nods at me. "You, George."

Well, now, the word "author" is like the word "esquire." That is, bestowed by others but never used himself, like the word "mister." I'm George O. Smith, and I sign my name that way and answer the telephone that way, and one never calls himself "*Mister* Smith" unless one is being haughty. So the word "author" is reserved for fellows like Bill Shakespeare or Charlie Dickens. Fellows like Alex Dumas who wrote swords and sorcery are writers. And if I am asked about such as Winston Churchill or John F. Kennedy, my reply is that they are "politicians," and neither writers nor authors.

So I'm a writer, and I write because I like to write, and as I look back upon the past, I must say with cheer that I hope that my readers have had as much amusement as I have had fun in creating.

Late in 1943, the United States was on its way back from the drubbing it took on 7 December 1941. We weren't winning, but we were no longer on our back with all four feet in the air. While the production lines on the proximity fuse were running on three shifts, six days per week, the engineering part worked on improvements, building small quantities on a pilot line for test-firings, and—with a great sigh of relief, the engineering department was put on the old five-day week. This, of course, cut my total pay, since everybody was getting one day of overtime on the six-day week.

That gave me more time to write, and since both John and the

readers were yelling for more Venus Equilateral, that's what they got.

So here comes a bit of a slip-up in the chronology to the later days when I took off from Venus Equilateral to try something else.

Robert A Heinlein wrote "Lifeline" long before this. It was the story about the gentleman who built a time machine, looked forward himself, to find that he was to be killed by an automobile accident the following morning. After explaining his future to his friends and fellow-scientists, he calmly walked out on the street to meet his fate. Calmly, fatalistically; hope not, for there is no future, pray not, for there is no salvation.

But I am not a fatalist, but then no one has ever told me that I am to die precisely on tap, at what spot, and how. My opinion is that if there were any possible choice, I'd be in a slow oceanliner heading for Hawaii if my fate were death on Fifth Avenue by time machine fortune-telling.

John said that I'd pulled my punch, but that it couldn't be helped, but he bought it because of the gimmick of using time machinery as a manufacturing tool.

So—?

Blind Time

The man behind the large, polished desk nodded as Peter Wright entered. "Wright," he said, "the Oak Tool Works will require an adjuster. You're new in this office, but I've been given to understand that you have experience, are willing, intelligent, and observing. The Oak Tool Works has a special contract, and it is always taken care of by Mr. Delinge, who happens to be having a vacation in an inaccessible spot. Therefore, you will pinch-hit for him."

"I understand."

The president of Inteplanetary Industrial Insurance nodded.

"Good," he said. "You are to be at their Charles Street plant at eight o'clock tonight. They are to have an accident then."

Peter Wright nodded. He turned to go, his head mulling over the myriad of questions used by the average insurance adjuster. The questions designed to uncover any possible fraud. Those designed to place the full blame of the mishap, to ascertain whether it was covered by the existing contract, to determine the exact and precise time of the accident.

“What?” he yelled, turning back to the executive.

The president of I.I.I. nodded wearily.

“I heard you right?” asked Peter incredulously.

Edwin Porter nodded.

“But look, sir. An accident, by definition, is an unforeseen incident, which by common usage has come to be accepted as misfortunate, although the term ‘accident’ may conceivably be applied to—”

“Wright, after you have been to the Oak Tool Works, you will become violently anti-semantic.”

“But look, sir. If this accident is forecast with certainty, why can’t it be averted?”

“Because it has happened already.”

“But you said eight o’clock.”

“I did,” said Porter. “And I mean it.”

“But... but it is now about three-thirty in the afternoon. At eight o’clock this evening there is to be an accident that has happened already. The Oak Tool Works is in this same time zone; they’re running on Central Standard Time, too. So far as I know, the Oak Tool Works is not manufacturing time machines, are they?”

Porter grinned despite his weariness. “No, Oak is not manufacturing time machines.”

“I am still in gross ignorance. If anybody is capable of truly predicting the future on a basis of ten percent accuracy, he’d put the insurance companies out of business—unless they hired him.”

“The future, in some senses, can be predicted,” said Porter.

“Only on a statistical basis,” answered Wright. “The prediction that tomorrow will arrive at precisely such and such an instant is a prediction based upon the statistical

experience gained by several thousand years. So is the prediction of what will happen when sulphuric acid and potassium nitrate are mixed. But an accident, sir, is unpredictable by definition. Therefore, he who can predict an accident is a true prognosticator, who needs no statistical experience to bolster up his forecasting.”

“Wright, this argument gets nowhere. It, incidentally, is why Delinge always hands the Oaks contract. He knew, and there was never an argument. No, I’ll tell you no more about Wright. You’ll be incredulous anyway, until you’ve seen it in person. Eventually, you’ll understand.”

“I doubt it,” replied Peter. “Seems to me that there are a couple of very obvious factors. One, if an accident can be predicted, it can also be avoided. Two, if such an accident is foreseen, and nothing is done about trying to avert it, then it is a matter of gross negligence, and the contract may be voided on those grounds.”

“With but one exception to your statements, I agree,” said Porter. “The accident that will take place at eight o’clock has already happened.”

“What you really mean is,” said Peter Wright, more by way of question than by statement, “is that the accident has occurred, but will not become evident until eight?”

“I’d hate to try to explain it in a few words. Let us try by analogy. A man atop of the mountain sees an avalanche start toward a railroad track. The avalanche takes out the train, preventing a meeting between two emissaries on a vital question. The vital question is never settled, and two countries go to war. In the war, one country discovers a means of nullifying gravity, which after the war is used to start interplanetary travel. Several years after interplanetary travel starts, the rare metals are discovered in plenty, and the cost of shipping is such that the monetary system fails, and the system enters a trying period of depression. Now, could you, a man suffering because of the depression, go back and turn aside the avalanche?”

“No, but I fail to see the connection.”

“There isn’t any, really. In that case the depression was due to a concatenation of events. In the case at the Oak Tool Works, the accident per se has already happened. The accident will happen at eight o’clock. You, Peter Wright, will witness the accident that will happen. You will make a suitable settlement.”

“Let’s hire the prognosticator,” suggested Wright.

“The laboratory is working full time on a means of utilizing the principle in our business. To date they are not successful. For me, I hope they are never successful. I don’t believe in the statistical experience, since true prognostication depends upon some sort of predestination, which, if true, makes a mockery of all effort.”

“All right,” grumbled Peter Wright. “I’m going. What sort of accident is... will it be

“Go prepared for anything from simple abrasion to loss of limb. I doubt the possibility of death, but—”

“I give up,” groaned Wright.

* * * *

“Where’s Delinge?” asked the man at Oak Tool Works.

“Vacationing on Mars, I believe.”

“No offense, young man. I’d prefer him only because he has experience in this. I have to spend some time in explaining to you, as a newcomer, just what really goes on

“What I’d like to know,” said Wright, “is some means of averting these predictable accidents.”

“We’ve tried. We’ve also failed.”

“Look, Mr. Simpkins, I’m of the legal profession. I am not too much of a scientist. I know about nothing regarding machinery—let alone the kind of plant that makes tools or makes tools. I took a course in mech, of course, and forgot it as soon as I made my grade

“Do you know what a blind rivet is?”

“Ah...er...one that can’t be seen from both sides?”

“Right. A sealed tank, for instance, usually has a manhole in it for the buckler. The buckler holds a bucking tool against the rivet while the riveter rams it over. Similarly, bolting structures together requires that a counterthrust or torque be applied to the nut or bolt on the other side. Unless the structure is equipped with tapped holes, which are expensive, a tank cannot be made with driller beams.”

“Driller beams?”

“An outgrowth of the war laboratory. What used to be called a Buck Rogers. Does not really disintegrate the metal, of course, but dissipates the binding energy between molecules and lets the metal float away in a molecular gas, driven by its own heat energy. The beams are sharply defined as to diameter and depth of penetration; you can set ‘em to a thousandth, though it takes cut and try methods to do it. We don’t really drill or cut metal any more. We beam-drill it and beam-cut it. It’s possible to set a screw-cutting beam, I

tapping a three-quarter-inch hole is not for any construction company.”

“I follow.”

“Well, in setting blind screws and blind rivets, we have a method whereby the bu need not crawl around on the inside. Actually, we don’t use a buckler any more. The riv does it all from one side.”

“I’ve heard of blind rivets.”

“This is not a self-setting rivet,” said Simpkins. “This is a real rivet-set system. W I’ll show you one.”

Simpkins snapped on the intercommunicator. “Ben? Look, Ben, we’ve got a new man from I. I. I. here who doesn’t know the ropes. Can you bring up a blindy?”

“Sure, but it will be dangerous.”

“I’ll have the signs posted.”

“OK,” answered Ben. “I’ll be up in a minute.”

“Look, have you got one that is about to reform?”

“I would get that kind anyway. No sense in tying up the corridor.”

“OK.”

* * * *

It was about a minute later, no more, when a knock came at the door. Simpkins called the knocker to enter. The door opened, and a man in overalls stuck his head in. There grin on his face and a smudge of grease on his nose. “Can’t, Joe,” he said. “You didn’t the door open.”

“I couldn’t be going to forget that?”

Peter Wright swallowed. “Going to forget?” he gasped.

“Ben,” said Simpkins in a very tired tone, “through the door glass, huh? Let’s sho this man what we’re up against.”

“Right.”

Simpkins snapped the communicator. “Tony? Get a new glass for my office ready.”

“How soon?”

“Within the hour.”

“Right. I’ll have it cut and waiting.”

Peter shook his head, and then watched Ben enter with the riveting tool. He looked at it, and Ben, with a grin, held it up in front of Peter’s nose.

There was a regular air ram with handle. That was standard. But the second air ram hitched in opposition alongside of the standard job was new. It projected out, its business end projecting in a caliper arc beyond the standard ram, and returning to buck the standard ram. With this tool, one man could both ram the rivet and buck it with the same tool, and since both hammer and anvil were driven, the effort was in opposition mechanically, and a great effort would be required of the operator.

But the thing that stopped Peter Wright cold was the... the—

The missing link!

Several inches of the caliper were missing.

Ben nodded.

Peter reached forward gingerly and passed his fingers through the space. He felt the ends. They were microscopically smooth, true planes of cleavage. The far end, which acted as anvil for the main ram, was solid and immobile despite being separated from the framework by six inches of—nothing.

“You see,” said Ben, “we need only a small port in the item we’re building. For instance—” and Ben opened the closet door a crack, slid the far end inside, and then closed the door. He shoved forward and rapped the door panel with the main ram. Then pulled back and—

Rapped the inside of the door panel with the hidden end.

“If we were riveting, now, we could slip in our rivet and pull the trigger. Follow?”

“I follow, but where’s the missing piece? What holds it that way?”

“The missing piece is coming,” said Ben, retrieving his instrument and sitting down.

“I.. .ah—” started Joe Simpkins, and then, taking Peter Wright’s arm in a viselike grip, pointed dramatically to his office door. “The wind,” he gasped.

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Wright shook his head. It was far too much for him. He was strictly out of his element, struggling madly to keep up. The door, he saw, was swinging shut, propelled by the wind. He recalled what they had said at the portal upon entry, something about the door should be open. With a shout and a leap, Peter raced for the door.

It slammed, and Peter grabbed for the knob.

Then the glass erupted in his face; in shards, it fell to the floor, and a metal piece came soaring through the air, through the glass, and circled the room. Peter’s jaw was slack as he watched it flying about with no apparent plan. It poised for a minute before his chair where Ben had held up the blindy riveter for his inspection. In Peter’s imagination, he saw himself sitting there, passing his ghostly fingers through the spot where that piece of steel was now hung immobile. It headed for the closet, and Ben, watching, opened the door wide. The piece slid in, moved this way and that, rapped forward against nothing, and then rapped backwards toward the room—against nothing, and then floated rapidly toward the riveter itself.

With precision, it approached the riveter. It came to rest easily, slipping into place with no shock, and the cleavage lines disappeared. The blindy was complete again.

“See?” said Simpkins.

“Yeah,” gulped Peter, weakly.

Laconically, a workman entered, cleaned up the glass on the floor, and started to replace the shattered panel.

“I see—but I don’t really believe it,” said Peter, flopping into his chair.

The two men laughed uproariously.

Ben sat down, and Simpkins started. “You see, the time field,” he said, by way of explanation. “I haven’t the vaguest notion of how it works or why. I admit it. But what does happen is that, during the workday, the missing sections of all blindy tools are stored in the tool room. At the end of the day, their respective tools are returned to the tool room, where they restore completely. About seven to eight o’clock, the midsections emerge from the tool room and go through the motions made by the entire tool, eventually following their ah... owners... back to the tool room, where they join. At this point, those tools required for the following day are placed in the temporal treater, and treated for whatever period of

action is required.”

“If it takes four hours for work, they’re treated for four hours,” put in Ben.

“And once the day’s work is finished, the work itself must be moved, since where the tool fits across a barrier, now the missing piece occupies that same space. If it does not fit in the room, the man handling the tool several hours before will not be able to set his tool.”

“Which was why I couldn’t enter with the riveter,” added Ben.

“It acts quite normally,” said Simpkins, though with some doubt. “You couldn’t bring the thing through a barrier if no time-difference exists. Actually, there is a temporal offset of the thing. It may pass through the same space at another time, but not at the same time.”

“And you can’t lick it,” said Ben solemnly. “I purposely left the door open. But if I really left the door open, I’d have had no resistance in the first place—I found no trouble hooking it over the closet door—because when the mislink appeared, I opened the door for it. It does help, sometimes,” grinned the shop foreman, “because we can tell when a piece of work is not going to be moved. Then it impedes the work.”

“How do you know whether the impedance caused by not moving the work is responsible for the work not having been moved?” asked Simpkins wonderingly.

“I don’t mind being on either horn of a dilemma,” said Ben. “But I’ve yet to see the dilemma that I’d ride both horns simultaneously on.”

“Urn, a bad animal, the dilemma,” laughed Simpkins. “Well, Wright, I trust the demonstration was successful?”

“Successfully confusing,” admitted the insurance adjuster. “I gather that the injured party got in the way of a missing link?”

“Whoever it will be was in the way of a mislink from a box-car crane.”

“Bad, huh?”

“Could be—we’ll know in a while.”

* * * *

Ben lit a cigarette and said, “The box-car crane is a gadget made possible by the temporary treating. Prior to its use, they put heavy machinery into the box car by running to the door, a crane, and then they dropped it on a dolly and slid and levered it inside and in place. They have a crane with a mislink between the pulley block and the grab hook. They hook

on, lift it up, and slide it inside the car, suspended on the mislink that permits the roof of the car to intervene.”

“And the victim fell afoul of one of these?”

Ben nodded.

“You’re absolutely certain?”

“Of course not,” he said. “A number of things might have caused the trouble. This is a boom-type crane. The mislinks are in the booms, and when it was swinging back and forth dropping a case inside, it hit something.”

“Something? Can this be identified?”

“With a minor interference, we can feel it,” said Simpkins. “With a mislink screwdriver, we can feel the interference. If it is hard, we know that someone has—or has dropped something in the way.”

“And if it is soft, and moves, you can estimate it to be animal,” added Ben.

“Can’t you probe with a feeler of some sort?”

“We do—and did. There was a body on the ground after the accident.”

“No identification possible?”

“None. Probing with a rod in the dark makes identification difficult. We’ve tried to make some sort of study, such as wearing a magnetic badge with a key-impression on the face—the magnetic to locate and the key to identify, but frankly,” and Simpkins frowned deeply, “it’s psychologically dangerous. The accident cannot be averted. After all, it has happened. And we tried it once, and the man who was hurt—well, knowing he was to be hurt, he went into a mental funk far worse than the accident.”

“Why didn’t you send him home or have him guarded carefully?”

“We tried, kept him guarded closely. Aside from putting him in an air-tight case, we did about everything. When the accident occurred—well, he and his guards went to work the first time that the thing could be fooled.”

“It happened, all right,” said Simpkins. “First, another man caught a mislink on his shoulder, which laid him out slightly. That, we thought, was it! And if it was, the time-factor was all screwed up. But we all ran forward to measure, and as we did, our man got clipped with another. The first accident had gone unnoticed by the operator.”

“How can you tell that such an accident will happen?” asked Peter. “Seems to me that a hundred tons of crane might not notice a few pounds of human in its way.”

“We erect guard wires that register. That is for one reason only. We use it to surround the medicos and the hospital ambulance, and prepare for action. That’s about all we can do.”

“I wonder if you could take a picture of such?” suggested Peter.

“Huh?”

“Take a picture with a camera controlled by the operator— you know, temporal-timer, the camera, film, and all but the range finder and the shutter release.”

“Look, fellow, that would take a picture of the accident as it happens, all right. It’s done. Makes excellent records. But as for pre-accident stuff, know what happens?”

“No, of course not.”

“Well,” smiled Ben, “you’ll, see. Anyway, the camera comes roaring out, is poised midair, and is snapped. The timing isn’t too good, however. Well, you’ll see the camera come out and snap around the place when the accident happens. Remember this is not time travel, and you can’t go forward and take a picture and then come back.”

“For what good it does, we can tell about when a piece of goods will move by leading a long-time mislink against it and waiting for it to fall.”

“Does electricity cross the gap?”

“Nope. Only force and motion. The television idea isn’t good either, young man.”

“Um, how did you know?” asked Peter.

“We go through this regular. You’re not the first that has been trying to avert accidents.”

“You understand that I represent I. I. I.?”

“Yes,” said Simpkins. “As such, it is your responsibility to do as much as possible to save your company money. That is your job.”

“Right. I still say that there is some means of averting the accident, somehow.”

* * * *

“Well, Ben, we’ve always claimed that we’d tried everything. But they didn’t try the electric light until Edison got the idea, and the airplane was a new science when they went to work on it. Young man,” said Simpkins, to Peter Wright, “you are a young man with a bright mind for legal intricacies. It usually makes little difference, so long as the mind is capable of handling the intricacies, just what the mind was specialized in. You are a fresh mind, and we’ve all seen fresh minds enter and lick a problem that stuck the original men for months. You think you can lick it?”

“I don’t know. It just seems to me that there must be some way.”

“Don’t forget,” said Ben, “that this is not much different from a regular problem. In construction, I mean. We have accidents where a man is hit by a flying grab hook that is in any way temporal-treated. Common accidents. The real problem, Peter, is to stop accidents. Not to try to avert them after they have happened.”

“But this one—”

“So far as the temporal treatment goes, is—or has happened.”

“Could you temporal-treat the stuff so the mislinks pass through first?”

“Sure,” laughed Ben. “Not practical. They have no forewarning then. They just go where the tools will go when used. We can’t tell when one of the men will try to grind a mislink chisel. As it is, we can clear the area where the tools have been.”

“Just remember that this is fact: For a one-hour mislink, we treat the tools for one hour. They are then ready for use for one hour. At the end of that time, the mislinks start to follow, and follow for one hour, at which time the temporal difference decreases on a fourth-power curve, and the mislink catches up with the tool and falls back into place.”

“Uh-huh. Well, I’m new at it, gentlemen, but it is my guess that this accident you anticipate need not happen.”

“You forget,” corrected Ben. “It’s happened.”

“Then where’s the body?” demanded Peter Wright.

“It... ah—”

“Has it really happened?”

“It will, with certainty.”

“Thus proving the utter futility of all effort?”

“Ah—”

“See?” laughed Peter.

* * * *

They left the office and proceeded into the factory. Here, where things should have been humming, all was at a standstill. Men sat on the benches and smoked nervously. They looked into one another's eyes with that “Will it be me?” stare, and they worried visibly. An electrician who tinkered hourly with lethal voltages sat and chewed his fingernails. A machinist, sitting on the bedplate of a forming press large enough to stamp out an automobile body around the place where he sat, was biting his lips and looking through the opened door to the shipping platform. Men outside were working feverishly, however.

“Why?” asked Peter.

“They want to get done. They must get done so that the engine can remove the wreckage where the accident will happen.”

“Where is this scene?” asked Peter.

It was out on the loading platform. A mislink crane shunted large cases from the platform, swung around in an arc, and the missing section passed through the door, and the crane ran down the length of the car, dropping the case at the far end. The mislink crane returned, the far end reappeared, and another case was hooked to the boom. The operation was repeated. The cases were fitted in the box car with neatness and dispatch. The platform cases diminished, and the box car was sealed as the crane went to work on the next car on the line. It took time, though, to fill each car, and the men working out here sweated visibly in fear, and partly from the hurried work.

They had little time to stare into one another's faces and wonder which of them would be taking the brunt of the accident. As time wore along, the siren of the ambulance arrived, caused some nervousness. The doctor and his corps of nurses came slowly forward, inquired as to the scene, and proceeded to lay out a fairly well-equipped emergency operating set-up.

“I'm beginning to feel the morbidity of this,” said Peter. “The doctor, the ambulance driver, the insurance agent. We're like a bunch of vultures awaiting the faltering step of the dejected wanderer.”

“A bunch of undertakers waiting for the accident to happen,” said Ben. “No, I’m not calloused. I’m scared slightly green. I can’t take it unless I joke about it. It’s the uncertainty—the wondering just which one of us gets caught in the certain accident.”

“It seems uncanny to talk about the certainty of accident,” said Peter.

“The training at I. I. I. would instill a bit of the perfection of the statistical method on you,” nodded Simpkins. “By the time your statistical bureau gets all done checking the chances of a new account, no one would bet against it. I. I. I. also puts the kiss of death on you too. Just try to hire men for a plant that can’t be insured by your outfit. They’ll ask a thousand credits a day.”

“What time is this affair going to happen?” asked Peter.

“Not too long. They’re about finished. Then they inert everything as usual, and we retreat to the inside wall and wonder.”

“Why not all go home?”

“You can’t win,” said Ben solemnly. “We did all go home once.”

“And the accident happened anyway?”

“Certainly. A thief broke in and it clipped him. Just don’t forget that this isn’t a probability, it’s certain. And the same mob instinct that makes people gather around an injured man will keep the entire gang here, morbidly waiting to see who gets it in what way. There is that element of wonder, too, you know. Every man in the place knows that someone is going to get clipped with that crane. They’re all cagey and very careful. It will be an accident despite planning, and therefore the unforeseen something will be out of the ordinary.”

* * * *

“Quite a problem, Peter,” said Simpkins.

“I see it is.”

“A lot of this veiling is sheer psychiatry. We’ve consulted the best behavior specialists in the system. Keeping the fact secret is worse than permitting free knowledge according to them. But identifying the victim is far worse than to have everybody in a state of tizzy.”

“Why?”

“Well, when it happens, we have a victim who realizes that part of the chance was his and shock is not so great as it would be if no warning took place, in light of the manager knowing all about it beforehand. On the other hand, all the men who were not hurt get a much uplift after it happens as their downswing of anticipation. On the third hand—partly the numbers, Peter—if the victim were positively identified, the rest would be no better but the victim would be a mental case from then on, and shock would set in prior to the accident. Then we’d be likely to run up the casualty rate. Follow?”

“It seems like a hard row to hoe.”

“Well, usually we keep people out of danger areas. We know where they’ll be, of course. It’s these darned accidents that happen twice in time.”

“Twice in time?”

“Yes. The accident happens once invisibly, and once visibly. Once in the future controlled by the present, and then, as the future unfolds, it is an accident happening in the present, controlled by the past. It’s blind time, and there is nothing we can do about it.”

“That fatalistic attitude again.”

“Well—”

Ben interrupted. “They’re stopping now.”

They turned to watch. The final box car was loaded, and the engine drew them away. The mislink crane returned for the final time, and was stowed on the platform. A hush fell over the crew, and the windows in the back were filled with faces, watching.

The silence was intense. Peter realized that practically every man was holding his breath, and yet it would be at least a half hour before the mislink began to follow the crew, and some time after that before the mislink caught up to the scene of the accident.

He let his breath out with a sigh, and mentioned the fact to Ben and Simpkins. The foreman nodded and agreed, saying, “We know, but there isn’t one of us who won’t try to hold his breath for the next two hours.”

“Impractical,” muttered Peter Wright. “There must be a way.”

* * * *

The mislink was a husky section in its own right. The crane boom was no weakling. The rods, jointed on toggles, floated about ten inches from the main I-beam, just as long as the temporal-treated section itself. It made an eerie sight, this monstrous slab of solid me-

moving back and forth with determination and ~~purpose~~ *with purpose* *visible means of support*. To add to the alien sight, the telltale rods maintained their ten-inch separation with a metallic rigidity, though no connection was visible to the main girder.

On the loading deck were three painted circles. The inner one was a four-inch strip of brilliant red. The circle approximated the scene of the accident. Outside of that by a considerable safety factor was an orange stripe, almost yellow. Another safety-factor distance away, the third stripe of green inclosed the area. As the mislink crossed the green stripe, all eyes fastened on it. As it crossed the yellow-orange stripe, the watchers tensed and as the mislink crossed into the danger section, there was a sudden, audible indrawing of breath, which was held solid until the mislink passed across the red line on the way. The out-go of breath was definitely audible.

The tension mounted. A large clock, set up for the case, swept around and around toward the estimated zero hour. The watchers no longer looked into one another's eyes when eyes met inadvertently, they both fell with a sickly smile that lacked courage.

Why were they there? Peter asked himself, and he knew. They were there because of morbid curiosity. The thing that made people watch three-hundred-foot dives into a large washtub of water; people watching a tightrope walker somersault on the wire above Niagara; watching the high trapeze artists performing with no net. That one of them was certain to be called into the act, the element of chance and the element of danger always a gamble, made them stay. With nothing to win, they stayed to watch, which is a basic characteristic of human nature.

They were there because they were human!

And when the accident came, the laws of the lines would be broken, though everything in every man's power would be done to maintain the safety. For the mislink would stop, after the accident, just as the crane had been stopped automatically by the contact of the telltale rods in their temporal extension of the crane itself. The green line, across which no one must pass save the authorities, the yellow line across which only the medical crew may cross, and the red line across which only two men may cross and then only to take the victim to the medical set-up on the dock. Men would rush forward, crossing the lines, and the victim would be carried away with a trailing number of watchers. Then someone would have to forget the victim to keep the rest of the men from getting in the way of the mislink as it resumed operations. But, of course, no one else had been hit, so this, at least, would be successful, and the men were very confident that no matter what they did, they would not be hit.

The minutes wore on interminably. Coffee came in great tanks, and sandwiches came in stacks. The men ate in gulps, swallowing great lumps of unchewed food, and all courted indigestion. The strain was terrific as the timing clock drew close to the minute.

Who— ?

* * * *

Then—came the zero minute.

There was an intake of breath as the clock chimed once, to mark the beginning of a period of probability. No man moved a muscle, yet all muscles were tense with expectation. Nervously, Ben felt in his pocket and took out a cigarette, stuck it into his mouth, and fumbled for a match. "Match?" he grumbled.

Simpkins fumbled and shook his head.

"Nope," he said, and his voice was loud and raw.

Peter felt in his pocket and found a match.

He lit one and held it over. His eyes were solid on the scene; he did not want to blink it.

"Look out!" someone cried in a strident voice.

The mislink was approaching the circles again.

Peter turned and faced the place squarely, casting an eye across the men's faces. They were all set, and in every man's body were muscles tensed against moving forward.

*How, asked Peter of his mind, can they expect anything to happen now?
Every man is psychologically unable to move forward.*

There came a stabbing pain, and Peter whirled with a wordless scream. The shock was searing. Instantaneously, he whirled, hitting his upflinging elbow against the wall. The obstruction in motion set him off balance, and he automatically moved a foot to regain his balance. His foot hit the foot of Ben, who was standing solidly, partly turned, his face just changing from solid-set to one of surprise.

The solid foot tripped Peter, and he fell forward. He flung the still-burning match with his fingers as he put both hands forward to break his fall. The loading deck came up to him, and his forward-flung hands went down toward—

The red line!

There was a coruscating flare of stars, bars, and screaming color in his mind, which contracted to a pinpoint and then expanded to infinity, leaving only peaceful blackness.

He returned to consciousness in the ambulance, but his return was brief. He was conscious only long enough to hear:

“Some day we’ll lick it,” said Ben.

“Only when you lick the regular accident rate. The trouble is,” mused the medical attendant, “that people think there’s something about mislink accidents that is different either predestiny or something that makes you able to change the future. Fact of the matter is, it is the past that they’re trying to change. Funny, to think of this guy getting it.”

“Last one got it by a different set of factors,” said Ben, “but you can’t stop an accident that’s already happened.”

Peter Wright, adjuster for the solar system’s greatest insurance company, Interplanetary Industrial Insurance, went under. His mind was whirling with a mixed desire to argue about temporal accidents, and the certain knowledge that he was in no position to mention the avoidance of same.

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* * * *

This is the third part of the beginning. Chronologically, it is in the spring of 1944. The outcome of World War Two was looking up; it is not easy to say exactly when the war in Western Europe took its turn, it was about as low as it could get after Dunkirk, and things stayed that way for a long, long time. But in the summer of 1944, the invasion of the Continent was on, and the Allies were on the offensive. The war in the Pacific had its turn at the Battle of Midway, when what had been left of the United States Navy after Pearl Harbor clobbered the Japanese Navy down to the same point of military inactivity. But here in the spring of 1944, the Allies were taking the offensive in the Southern Pacific.

Ships, designed to fight the war in the Pacific, were built on clockwork time, and equipped with the latest models of radar and sonar and communication equipment— but without the manuals for instruction, maintenance, and repair that are necessary to run and keep running such equipment.

The need was specific. The Navy had to have these manuals, but manuals had to be written. Preferably, they were to be written without taking the engineers off their development job to do the writing. In addition, one can generally say that, unless they're writing for other engineers, and not for some bright technician who has been handed a piece of machinery which needs to be explained, engineers (aside from a rather few) make a whole mess of the language.

The Navy needed these manuals, and the emphasis on the war in the Pacific centered on the American West Coast, and the Navy, with sound reason, figured that there were a lot of writers on the West Coast. Like in Hollywood, for instance.

Nothing official is done simply. One doesn't write a memo saying, "Hire me some technical writers to create manuals—" One works through channels.

So the bureau that wanted the maintenance and repair manuals went through the Naval Development Research Council, who, in conjunction with the Office of Scientific Research and Development, contracted with the University of Southern California, Los Angeles campus, to start a crash program to produce these manuals.

UCLA promptly ran into an interesting difficulty. Seems yes, 'twas true, there are a lot of writers in Hollywood and environs, and what they knew about rescuing the heroine from a fate worse than death and getting her into the sack with the hero was one thing, but none of them had ever gone to bed with an electron. Well, that was the ~~cat~~ ~~and~~ ~~stand~~ ~~over~~

again. So the selected group of professors of rhetoric, lexicography, and electronic physics left California to come east, where the best-known and highly recommended publisher of technical books could be found. They picked McGraw-Hill, and hired Keith Henney, the editor of *Handbook for the Radio Engineer*. Keith Henney, a long-time science fiction reader, promptly hired John W. Campbell, who promptly got in touch with those he knew had technical background and experience, and invited them in.

In July 1944, I moved east. Housing, in 1944, wasn't merely impossible; it didn't exist. John suggested that if I didn't mind sleeping on a pull-out bed-sofa, I could stay there until I could find a suitable place to live.

Once more I went into a change of living. Where I'd been hauled into John's cellar once each month, it became every night and the entire weekend. But even that pattern began to change, for very good reasons. The first was that John didn't want to become an engineer, all he wanted was the technical knowledge that would enable him to build stuff in his workshop for his own amusement and a possible profit if he could sell an article. It has been said that the best engineer, in any field, is the one who knows more ~~about~~ things that work, and why, than his fellows. John had a good beginning with his earlier misguided attempts. Now, with help, he wasn't just trying everything in mind, only those things that sounded reasonable, and most of my time was explaining just why this or that either wouldn't work or was not too good an idea. The other reason is that it had been nine years since I'd swapped my collection of radio parts for my camera and had given up home electronics, and I wasn't about to dive back in.

In that summer, John developed a habit that made me hoarse. As the train loaded up in Westfield, John would ask, "But why can't... work?" and the train would take off with a roar, and I'd spend to the next station at the top of my voice explaining. As things quieted down, he'd pose another question.

But mostly, during the latter part of that summer of 1944, John tinkered until he ran into trouble, and that's how I spent my time in his cellar, getting him out of trouble. As he grew more experienced—that is, discovered more things that wouldn't work—his need became less, and I began to use his typewriter instead of his soldering iron.

Here it becomes necessary to take a look at the distaff side of the family. What did Doña Campbell think of all this?

As I said, John's operations were his way of life, and he'd been at it since before he graduated. Doña put up with it, or possibly had become used to it. Let's put it in a series of sentences. For example, John did not drink, but he didn't object if his wife had some of her neighbor friends over

for Saturday-afternoon cocktails, so long as he wasn't involved. Or she went to one of the neighbors' houses—and one of John's projects when I arrived was a wired-radio pickup system with the transmitter in the kid's room and the receiver with Doña up or down the block.

Then, one weekend afternoon, with the living room full of neighbors, I had to go to the—well, Campbell used to get fluffy over the misuse of his name, so I won't say it—and on my way back, I was asked if I'd stay and have a drink. I didn't reply, "I thought you'd never ask me," but about three hours later, John came up to ask about something and found me in the kitchen, where I'd taken over the task of refilling the glasses.

In that early autumn of 1944, things took another change. The Heinleins (Robert A. and wife) and the Campbells had for long celebrated a birthday coincidence in September. Bob Heinlein had been Navy Reserve, and at the outbreak of the war (and possibly earlier, although I'm not quite sure) he'd asked for a reinstatement of his commission, been refused for medical reasons, but had been accepted as a civilian employee at the Philadelphia Naval Yard. With them came L. Sprague de Camp and wife, and it became a very merry weekend. It closed with an invitation that I visit Philadelphia the following week to attend a house-warming party, which was another merry weekend.

In the meantime, Henry Kuttner and C. L. Moore were living in a house in Hastings-on-Hudson. One of the writers of the Campbell Troupe in the UCLA installation in the Empire State Building was one L. Jerome Stanton, a former radio telegrapher who'd taken the pitcher to the well once too often on the Murmansk run—the ship took a stick of bombs across the foredeck and, happily, the one that landed next to the radio shack was a dud. L. Jerome got out; the next one might go off. He was, and is, an excellent guitar and banjo player, so he was always welcome. In October I found a house in Scarsdale, warmed it up properly, and started to live socially. Somewhere, I don't recall exactly where. Theodore Sturgeon, who had been running a D-7 'Dozer down in the Virgin Islands for a Seabee battalion, wrote the novelette "Daisy Etta," which is a sort of pun since it's the way the Islanders say D-7. John changed it to *Killdozer*, since puns in Latin-American Spanish aren't likely to be understood in the United States unless one pauses to explain why they're funny.

Among-them-present now-and-then was A. Bertram Chandler, who was first officer in the British Merchant Marine—the "Wavy-Navy." He used to turn up with a couple of rations of H. M. naval stores when his ship hit New York. On one such occasion, with L. Jerome on the banjo and Ted Sturgeon on the guitar, I was giving my bathroom baritone a go on "Abdul

Abulbul Ameer,” and at the end Chandler said, in his BBC accent, “I say! I’ve never heard *that* version!” The musicians started over again, and Jack Chandler came out with about the rawest, dirtiest version of anything I’d ever heard—and that’s the only way he’d ever heard the epic sung.

And so autumn went into winter with the social life going on fine, here and there and back and forth in a cheerful, closed, merry group that included Will Jenkins (Murray Leinster) now and then, and Isaac Asimov, infrequently.

By that same late autumn, the war in the Pacific had become a matter of time. The war effort hadn’t slowed down, indeed, it was going ahead as fast as it could, because slowing down when you’re ahead is what the hare did. But there were plans to take care of things when the shooting stopped, and one of these plans was to prepare for the occupation of Japan by setting up a school to train interim military governors. They set it up at Princeton.

Now, Lafayette Ronald Hubbard had been an adventurer and a soldier of fortune, and he was a skilled seaman, and one of the areas he knew very well was the Aleutian Islands. During the war, L. Ron Hubbard skippered a number of small warcraft, destroyer escorts and landing craft, personnel or tank or what-have-you, through the Aleuts, and had gone through some shooting scrapes, since the Aleuts lie uncomfortably close to the enemy’s home territory and the enemy had, at one time, invested the outland island Attu.

And Ron, like L. Jerome, had one too close. Unlike L. Jerome, the one too close put L. Ron in the hospital, where, the cheerful fellows they were, they suggested that he might be wise to study Braille.

Since L. Ron had signed up for the duration, he was sent to the military government school at Princeton, instead of giving him another ship.

In the background, but seldom part of the bunch, was Fletcher Pratt, far too busy writing about naval warfare, building as his hobby the scale models of whatever warships he could get pictures of plans of. (This collection was purchased and donated to the U. S. Navy by Lt. Commander Marsden Perry after Fletcher died.) Unhappily missing by now was Willy Ley, whom I’d met when John and Willy (during my Cincinnati, Washington, New York trips) had been interviewing Dr. Felix Ehrenhaft, whose theories on magnetism might have caught John’s hobby-riding habit if they had a chance for success. Willy was missing because Willy, wife, and family had gone to Washington because the helicopter had become popular, and one

of the finest ways to save horsepower and give the chopper a whopping take-off without that counter-rotation prop in back would be to put a small liquid-fuel rocket on the end of each blade and let the chopper rotate itself.

So in the summer, autumn, and winter of 1944, my whole attitude changed. I'd been reading the stuff written by the names I met in that period, but now here I was, both socially and professionally accepted by them.

This had its backlash, and I must recount another event that I shall spend as little time upon as I can. I'd been raised in my own home on the South Side of Chicago that my mother held together by hook and by crook until she died in 1930 after a long illness. From 1930 to 1935 I lived in rooming houses, and I hated them but that was what I had. One of the pleasures of life was to sit on the front steps in the evening. When things began to turn toward the better in 1935, I mentioned the fact that my job was way the hell up on the far West Side and that it was silly of me A) to live on the South Side with an hour elevated ride, that B) I was sick and tired of living in a four-by-six room with one window looking out on an air shaft, and C) I was tired of living alone and if I found someone who agreed with A, felt the same way as I did about B, I'd suggest C and we'd cancel all three of them. No, I wasn't introduced to her. We'd met all along, before. But, there being a distinction, I now *met* my first wife.

Skipping the middle, it was not until the social fraternization began, with weekend party after weekend party, that it came unglued. For there are two reasons for wanting a home and a place. One is a home with the latchstring out, the windows open, and coffee, tea, or 100 proof to the visitor who enters. The other is a castle with the drawbridge raised, the portcullis closed, and boiling transformer oil to pour down upon he who has the temerity to rap upon the closed and barred door.

Selah!

* * * *

To clear the air, let me tell you a tale. It was in the rolling-around period toward the last of the war, and Henry Kuttner and C. L. Moore were beginning to think about going back to Los Angeles (Their home had been rented, which is why they stayed in Hastings-on-Hudson for the duration). L. Jerome, Theodore the Sturgeon, and some of the rest had been invited to a sort of pre-call house-cooling party for Saturday. Hank suggested that if I weren't busy, why not come out Friday, because he wanted to talk about something that would be better off without a noisy gang.

The subject wasn't much. He'd heard about fire lanes cut in the woods to fight forest fires, and he knew that I'd been raised in the Illinois, Wisconsin, Michigan, Minnesota areas, and— although no one will believe me today—I was once a Boy Scout. Hank wanted to know how-come they sometimes used dynamite, and I explained that fire lanes take a long time to cut.

Okay, Friday night passed quietly.

I now admit that I am one of those wholly unbearable people who waken at the first sign of sunshine and, as Fred Pohl once said, "At six o'clock in the morning, he's making home-fried potatoes and cooking four pounds of bacon..." and so I awoke and couldn't find the Kuttners' four pounds of bacon, nor the potatoes, and while I was wondering where the coffee, tea, et cetera was, two things took place. Hank came feeling his way downstairs, and, as he located the coffee, the typewriter upstairs began to make noises. One half hour, maybe three-quarters, we'd had our morning coffee, and Hank said something about going upstairs and getting dressed. He disappeared.

They didn't pass each other on the stairs, but Catherine turned up very shortly afterward, reconstructed the coffee, which Hank and I had finished, and I had my second wake-up with her—with the typewriter going on at the same rate upstairs. Once more, say three-quarters of an hour passed, and Catherine said something about getting into day clothes, and disappeared. Hank came down, dressed, and said something cheerful about breakfast—with the typewriter going on as usual. This went on. They worked at it in shifts, in relays, continuously, until about two o'clock that Saturday afternoon, when the one downstairs did not go upstairs when the one upstairs came down. This time the typing stopped.

They had been writing the novelette "Vintage Season" which was about time travelers who came back to witness some awful epidemic of some sort of plague that was so contagious that the city authorities dynamited plague lanes.

I learned later, from John, that they always worked that way, and worked so well at it that the only way he could tell who had written what was if the word "gray" came in the story. One of them habitually spelled it "grey."

L. Jerome and Ted Sturgeon turned up late in the afternoon, and once more we had a merry weekend.

It was Sunday afternoon when I was asked why I didn't write more, and I told them that the job of preparing technical manuals took some of the steam out of me, and besides, the day was too damned short. That started a discussion with Hank Kuttner, Ted Sturgeon, and me re-doing Life. We were to have a thirty-hour day, nine days a week, and so on and on until we'd run out of alterations. At which point, L. Jerome put the guitar down with the remark that "If we were to wake up tomorrow morning with eight fingers on each hand, by noontime some guy would have invented a twelve-string guitar."

It was also about the period when it was considered possible that we could exist on Venus and Mars, although it was generally accepted that native extraterrestrial life did not exist in this solar system, and one began to wonder what, if any, good are the other planets.

I got to pondering, and tried the following under the title "The Plumber's Helper," but it didn't go at the time. Later, in the period after the war, I tried it again, under a new title and with new characters. This time it worked, but it goes here now because it was in this period that the idea came to me that, if one tries, one can find a use for anything.

As Don Channing said, "The navel is a good place to hold the salt when eating celery in bed."

The Planet Mender

I

She looked at Phil Watson thoughtfully. "You're the most restless man I've ever met," she told him.

Phil smiled sourly. "Sorry," he said. "I'm—just always looking, I guess." He tried to straighten up his smile because he wanted this date to run off happily. The attempt only pointed out his unease.

"What are you looking for?" asked Louise.

"Damned if I know," he said. He contemplated her thoughtfully. She

was a good looking woman of about twenty-three or thereabouts, brunette, slender, high-breasted, and long-legged. Pretty, but no startling beauty, he decided. Brains she must have, and Phil's interest lifted for a moment as he wondered how she used them. She was a schoolteacher. It had been a long time since Phil Watson had been in a position to observe how a schoolteacher used her brains, and then he had not been intellectually equipped to study the process. He smiled wistfully, then, and started to say, "Everything seems so staid and uneventful. I—"

The music from the radio came to a dreamy halt, and the voice of the announcer said, "This is the Mars-Week program, brought to you by the Mars Chamber of Commerce. Remember to stay tuned to this station; be sure that you don't miss the announcement of the century! Some time this week—within the next few days—the one billionth space traveler will set foot on Mars! So be ready for the Mars-wide celebration. Be ready to greet the one billionth person! Who will it be? Who will be the—"

* * * *

Phil walked over and turned the radio off. "That's partly what I mean, I think," he said, and then joined Louise Hannon's rueful laugh. He added. "That's no less addled than I am."

"I know," she said.

"I wonder if you do," he murmured. "Look, Louise. Here we sit in a city on Mars waiting for the one billionth visitor. It should be wonderful. It ought to be a breathless moment—something soul-stirring. So what do we have? A radio program doing its best to whip up some enthusiasm for something that would have made people bug-eyed a hundred years ago."

Louise nodded solemnly. "A hundred years ago it was the first man on Mars. That was exciting. But you can't go on and on in a breathless state forever. What do you want?"

"A little excitement. Everything's so smooth and well-controlled. Mars was an adventurous place back then. Now? Now we have a planet full of bank clerks and farmers and machinists and hot water and gin mills and apartments and—"

"You'd prefer it if we had to hack our lives out of the planet's crust, fighting the cold nights and the thin air and the arid red desert?"

Phil shook his head. "That's where my seeking falls flat on its face. I

like my comforts, too... but there ought to be something left to chance.”

Louise laughed. “In other words you want to hang your cake on the wall after your dessert?”

“Maybe. Maybe.”

Louise went to the French doors and looked out on the Martian landscape. It was dark. Hazy-dark, with just enough luminosity at the horizon to show the flatness of the land. She took a deep breath and lifted her arms to the night air. Her gesture was unconsciously alluring, and Phil went over to stand beside her. He put an arm around the slenderness of her waist and turned her to face him. Her arms came down, her hands squeezed his shoulders gently; but she held herself at arms’ length from him, leaning back and looking solemnly into his eyes.

“You’re seeking romance and adventure,” she told him. “And I represent—which?”

Phil felt some of the wind go out of his sails. Lamely, he said, “Which will you have?”

She leaned forward suddenly and pecked him chastely on the lips. “A little romance first—and then the adventure of motherhood,” she told him. “Is that enough?”

These were not exactly the plans that Phil had in mind, but he could not tell her so. Besides, she knew darned well already.

His mental fumbblings for something to say were interrupted by a slight flickering in the sky, followed by a muttering of thunder. A few pelting drops of rain—large, wet ones—struck Phil on the head and splashed from Louise’s cheeks.

Startled, they turned out of the half embrace and peered into the night.

* * * *

The sky was split by a jagged streak of blue-white and the roll of thunder crescendoed to an artillery-crashing. Phil drew Louise back into the shelter of the door frame as the rain increased to a steady downpour.

“Talk about your careful controls and your planning,” said Louise

uncertainly.

“This can happen,” he said matter-of-factly. “So one of the circuits went out. Chances are that it went out an hour ago and is now repaired, but the time lag let this catch up with us only now. If it were bad they’d have let us know. Everything’s under con—”

The lightning and the resulting crash came simultaneously, and the heavens opened up. Water lashed down at them in sheets, driven by the wind. Startled, they retreated into the living room, and the rain followed them, soaking the rug and the floor, and driving all the way across the apartment to fleck the far wall with darkly wet blotches that tried to run down but soaked into the plaster before the wetness could reach the floor. There was a banshee howl as the wind changed direction; driving rain lashed in through the back windows and slammed the French doors shut. Panes of glass shattered, and fell on the tiny balcony outside. Then the wind whipped around again, and slashed rain in through the open panes before it banged the doors inward and against the wall, finishing the job of ruining them completely.

Water churned along the baseboard molding like a small flood. The wind whipped a picture from the wall, and hurled it against the floor. The shade blew from a floorlamp, and mere was the warning sizzle from the wall plug, enough to call their attention that way in time to see blue-white smoke issue from the socket before the lamp went out.

“It’s all right—the fuse blew—” said Phil, groping in the semidark. The back of the apartment still had light; the place was on two fused circuits.

They went into the kitchen by the roundabout way, to close whatever windows there were; they sat in the kitchen and eyed the water running on the linoleum.

“This is to be expected?” asked Louise in a cynical tone.

“Something must have happened. I’d better—”

The wind howled again, cutting him off. They went to the window and looked out. Between the lashings of rain that completely obscured the glass in a running sheet of water, the landscape was flashed on and off in the lightning. In its flicker they could see the red mud leaping and churning as the cloudburst whipped down.

“You can’t go out in this,” said Louise.

“They’ll be needing me.”

“But you can’t—”

Phil rubbed his damp scalp unhappily. “Open roadster,” he gritted. “Damn it!”

Louise laughed. “Funny,” she said. “Screamingly funny.”

“What’s so damned funny?” he demanded.

“The gentleman comes a-wooing. Nothing could better fit the gentleman’s plans than to be entrapped with the lady of his desire so that she, hard-hearted as she might be, would not suggest that he leave. But the gentleman happens to be big cheese in Weather Control, and in the case of emergency he must forego pleasure for business, no matter if he gets drowned for it!”

Phil grunted. That just about pinned it down pat. “Wouldn’t do me much good to stay,” he grumbled. “Atop it all, every darned bed in the joint is soaked to the springs.”

He left her and went to the telephone. He tried it, but even Louise could hear the constant rattle of static that chattered out of the earpiece. The telephone was useless.

The lights flickered a bit, went dim, then came on again at about half-brilliance, wavering slightly. The semidarkness and the wail of the wind and the constant roar of the rain made Phil’s nerves grate. The helplessness of his position added to his state of nerves; he knew that he had no chance to get to the weather control station some twenty miles away in his open roadster.

Louise was visibly jittering. Phil poured a stiff jolt from the bottle on the sink and put it in her hand. Louise tossed it down without wincing; it seemed to iron her out a bit. Phil tried a jolt himself, but it was raw and bitter instead of the smooth stuff he knew it to be. It did not help him at all.

With a false feeling of confidence, Phil smoothed her damp hair and patted her shoulder. He could feel the damp warmth under the thin dress, and he dimly realized that this sort of thing should have aroused him, but it did not and he knew why. “Take it easy, Louise,” he said with a wry smile. “We’ve got a bunch of good bright eggs at the station and they’ll have this

ironed out in no time.”

She shivered.

Phil pushed her gently in the direction of the bedroom. “Get into some dry clothing.”

Rain sprayed in through the ruined French doors and filled the apartment with mist, and Phil suddenly followed Louise into the bedroom. She was toweling her bare back as he came in; she looked around, wonderment on her face. Phil grabbed a light blanket from her bed and went out with it. It was only after he had the blanket nailed to the frame of the French door that he realized that she had been completely undressed.

The blanket did not cut the deluge completely, but it helped.

Louise came out in a skirt and blouse, with a towel wrapped around her head. She handed Phil another towel, a huge one. He nodded.

* * * *

||

The rain had not decreased; the wind was still howling, and the lights were still flickering. Phil sat on the kitchen table wrapped in the huge towel while Louise tested the clothing she was baking dry in the oven.

“Well done or rare?” she asked him.

“Well done, please.”

“I think you can try them now,” she said. She left the kitchen while he donned his shapeless trousers and rumpled shirt. He called her, and she came back with the towel gone from her head, fluffing out her hair with her hands. “Dry?”

“Dry—but for how long?” he mumbled. “I’ve got to get—”

“You’ll wait here until you can get out without being drowned. Pour me another, will you?”

Phil did, and he poured himself another, too. It went down more smoothly than the previous drink, but it still lacked something.

Hours passed; the rain got worse; and Phil could no longer comfort himself with his oft-repeated statement that the boys in the station would have it ironed out in jig time. Something was completely wrong with this picture. Man and man's science had brought water to Mars; but it was never planned, never intended, never computed to deliver water anywhere in quantities approaching this deluge. It was more than blown fuses or a dead vacuum tube or even a ruined servo-amplifier. This was a major catastrophe, and Phil Watson was trapped away from the scene of activities.

And then eventually the doorbell rang, and they went to answer it. It was Tommy Regan who came in like a ghost, cowering beneath a white rubber poncho that swirled around him like a wet tent with the tentpoles removed. He stumbled into the living room and threw the fore edge of the rubber sheet back and over, flinging a spray of water.

"God!" he gritted. "Phil—come on!"

"How'd y' get here?"

"Covered jeep-wagon. I— Come on!" Tommy Regan tossed a small folded package at Phil and it opened partly on its flight. It was another poncho. Or, more properly, it was a rubber sheet from the station's dispensary. "The process is involved but interesting," said Regan grimly. "You lift the front and aim, then you plunge it blind until you have to take aim again. Ready?"

"Not without me!" wailed Louise.

"You'll drown," said Regan flatly.

"Wait—" Louise went into the bathroom, and came out wrapped in the shower curtain. "Let's go," she said.

"But—"

She shook her head. "I'm frightened bright purple," she said shakily. "But I'm with a couple of people who might be able to help; I'm not going to stay in this mess of an apartment alone while they go out to stop this thing. I'm going along."

"It's rough," said Regan.

“Staying here alone would be rougher.”

“But—”

“Come on, then,” Phil broke in. “There’s been too much time wasted already.”

* * * *

They stood downstairs in the lobby while Regan explained. “The crate’s out there,” he said, pointing through the glass doors. “You can’t see it, but it’s there. You’ve got to cover your face and plunge. I’ll go first. I’ll open the door and get in. Miss Hannon comes second, and I’ll swing the door open for her. You come last, Phil. Each of you count twenty seconds so I’ll be able to time your arrivals. Got it?”

They nodded, and Tommy Regan left.

Twenty seconds later, Phil held the lobby door for Louise; she flopped the edge of the shower curtain over her face, put her head down, and disappeared into the wall of downpour. And twenty seconds later Phil covered his own head and went out into it himself.

It was like trying to run in a swimming pool; it was like trying to make time through a haymow. The rain hammered at his head through the rubber sheet. The air he took in was heavy with water, and the wind whipped the edge of the sheet around his legs, and the swirling sheet carried wetness up into his face. Water tore at his ankles and made him stumble, and the lashing sheet turned him this way and that so that he lost his direction.

He lifted the fore edge for a brief second.

The car was there before him, seen briefly before the water pasted his eyes closed and the wind beat down the uplifted edge of his poncho. He lurched forward and stumbled into the car. Louise slammed the door shut as he fell into the seat.

Regan drove slowly, peering through the rain-pelted windshield. The wipers cut brief arches on the glass and left a bit of transparency just behind them through which the eye could see if it were fast enough. There was, of course, no traffic to contend with, which was a good thing, because Regan swerved from one side of the road to the other. It was only about twenty miles from Louise’s apartment to the weather control station, but they took a full two hours to fumble their way along the water-strewn road.

Going in was no problem. The station was equipped with a garage. They were inside with the big door closed against the rain before they opened the door of the car.

Upstairs in the station was the mess.

* * * *

The acrid smell of burned-out electrical components floated in the air like cigar smoke in a night club. Hogarth was wrist-deep in a panel-assembly, Forsyth was changing relays as fast as he could unsolder and replace them, Jones was checking blackish-looking cables with an ohmmeter, Robinson was making a run-down on the terminal strips, Merrivale was probing deep into the guts of a meter with a slender pair of watchmaker's forceps, and Wadsworth was chopping the ruined leads from transformers and dropping the things on the floor behind him. Hansen, the janitor, was stolidly pulling burned-out vacuum tubes from their sockets and replacing them from the large sack he had slung over his shoulder. Two of the station's stenographers were there; elderly Miss Morgan, whose only familiarity with machinery was her knowledge of how to run a typewriter, was trekking back and forth from the stockroom to the operations department bringing replacement parts; and Miss Larrabee, the station's glamor-girl, whose highest asset was her ability to take dictation and keep her stocking seams straight at the same time, was delivering pliers, cutters, screwdrivers, and wrenches from one man to the other as they were needed.

"What happened?" demanded Phil.

Regan threw out his hands. "Who knows?" he said plaintively. "All at once everything went to hell. There was a sizzle and then a f-f-f-t! and the whole goddam shooting match went to hell in a five-gallon bucket. Overload, I think—"

"Tried the radio?" said Phil.

"I tried the telephone. No dice."

"Radio's worse," Regan broke in. "It's—"

"Mercury," said Phil flatly. "Something's wrong there."

Regan said, "But how—"

Phil looked around the station. “Someone’s got to go. You’ve got the thing under control as best you can—I’ll hit space.”

“Okay. But tell ‘em to shut the damned water off!”

There was a flurry and a fuss of voices from the stairway leading from the garage. A group of men in rather soggy business suits came in. They were—literally—as mad as wet hens.

The foremost of them looked the situation over with the baffled eyes of the layman, and began to sputter. “Who’s in charge here?”

“I am,” said Phil.

High blood pressure became apparent. “What on Mars do you thing you’re *doing*?”

“We’ve had a bit of trouble.”

“You’ve had—” the gentleman choked up. His face purpled, and his throat bulged over the edge of his damp collar.

Phil eyed the group with just a trace of cynical amusement. “As soon as we can find my magician’s wand, which is somewhere in the toolroom, we’ll have this fixed. In the meantime we’re doing all we can with the standard, old-fashioned things like long-nose pliers and side-cutters.”

“Who are you?”

“I’m Phillip Watson. Who are you?”

“I’m John Longacre. I’m chairman of the Senatorial Committee on Internal Affairs, and I’ll have you know—”

“I’m glad to meet you.”

“You’re in charge here?” demanded Longacre sharply.

“Yes.”

“I should think that an older, more responsible man would be in charge.”

"I believe that I am responsible enough. I've been told so by Solar Weather Control. They didn't pick me for the shape of my head or the size of my ears. I'm also capable of doing everything that can be done."

"Are you?" demanded Longacre sourly. "Why aren't you helping? Why isn't this young woman helping?"

"I'm not helping because I'm talking to you, and this young lady is not helping because before any work could be assigned to her you gentlemen entered and interrupted the proceedings."

Longacre harrumphed, took a deep breath, and tried to get hold of his blood pressure. "There is no sense in bandying any more words," he said. "I am empowered to instruct you to cause an end to this debacle."

"Thank you for the privilege. I assure you that we do not care for it any more than you do."

One of the other gentlemen behind Longacre stepped up while Longacre was regaining his breath. "I'm Senator Forbes. Do you realize that billions of dollars' worth of damage has been done already?"

"Of course—"

"You must put a stop to it."

"Look," said Phil Watson gently. "Please be assured that we are not sitting here with folded hands hoping it will go away."

Senator Longacre regained his breath, and used it to say, "Whether or not your attitude is sufficiently acute will be decided later. At the present moment I carry authorization from the Martian Senate to deliver unto you the right to do whatever is necessary to cause the abatement of this catastrophe."

"Senator, we're wasting time. I assure you that if I needed anything that the planet Mars has to offer I would not wait for a senatorial authority to demand it. You're a little late with your offer."

"This is a deplorable situation," said Senator Forbes. "Some time this week we will have the arrival of the billionth space traveler to Mars—and what will he find?"

Phil snorted. "Nine hundred and ninety-nine million, nine hundred and

ninety-nine thousand a few odd hundred persons have put their good right foot on Mars and found the place in about every stage of development from hell to breakfast. Your billionth visitor doesn't faze me."

"But the Mars-wide celebration—"

"How about the Mars-wide deluge?"

"This must be stopped!" roared Senator Forbes.

Longacre added, "You have every authority. Until this terrible thing has been culminated to the satisfaction of—"

"Why not forget the high-flown language, Senator?"

"We'll see about this attitude of yours, young man!"

"I've got every authority?"

"You have. Use it!"

"Miss Hannon, Mister Regan: you have heard this. I have authority to use whatever measures I deem necessary to cause the satisfactory conclusion of this cosmic catastrophe. So, gentlemen, my first order under this authority is to impress you as workmen."

"Impress us?" roared Senator Longacre.

"Impress you. We have one hundred and sixteen thousand vacuum tubes, all of which must be replaced. There are ten of you, which makes eleven thousand six hundred tubes each. I think you may be able to average about five hundred an hour after you get some practice, which will take you approximately—"

"We are issuing you an ultimatum, Mister Watson. We—"

"The title is Doctor Watson, Senator, and no relation to the friend of the brilliant Sherlock Holmes. As to your ultimatum, no one can ultimate to sheer arithmetic, nor especially logical mathematics. One man may dig a hole in ten hours, but that does not mean that thirty-six thousand men can dig the same hole in one second. So I am impressing you as workmen. If you have not completed this job within the time limit of your ultimatum, you have only yourselves to blame. Hansen!"

“Yes, boss.”

“You are in charge of this group. See that they get these tubes replaced in the shortest possible time.”

“I get it, boss.”

Senator Forbes spluttered. “We’ll answer to no underling—”

“You’ll have to.”

* * * *

Senator Longacre eyed Phil sourly. “And what are you going to be doing?”

“I’ll tell you. When there’s trouble, the proper place to stop it is at the source. I am going to Mercury to stop the flow of water!”

“Mercury?”

Phil said patiently, “I’ll take another minute and a half to explain. We get water from Mercury via matter transmitter. The way a matter transmitter works is too involved and complicated for any simple explanation, but the gist of the argument is that the damned things have to deliver what’s put into them or violate the law of conservation of energy. Since the water is stuffed into the transmitter on Mercury, the only way to stop all this wetness is to go there and stop the input, see?”

“Haven’t you got men on Mercury?”

“Darned right, and a darned good crew, too. So something must be fouled up, or they’d have shut it off themselves. So—work hard, gentlemen!”

“Wait. If the transmitter is on Mercury what’s all this equipment we’ve got to fix?”

“Briefly, this is the hygrometric integrating averager and primary servomechanistic feedback control originating device.”

“Huh?”

“You asked for it. I’ll explain it after we get dried out.” Phil snorted derisively. “We mustn’t let our billionth visitor get his dainty feet damp, must

we?”

He turned on his heel and left the senatorial group spluttering.

At the door he was halted by a cry from Senator Longacre. “But, Doctor Watson, this man is the janitor of this station!”

Phil Watson turned with a laugh. “That’s okay. I consider all of you gentlemen unskilled labor.”

He got into the car and closed the door; it was opened again almost immediately and Louise got in. “Maybe I can help?”

“Maybe. But—”

“But what?” she asked.

He shook his head. “I’d like the company,” he said. “Normally there might be a fuss about taking unauthorized persons on a jaunt like this, but I think it will probably be overlooked because this is an emergency. And you might be able to help.”

“I hope so,” she said soberly.

* * * *



The trek was not as bad as the original run from the apartment to the station. The station’s fast little spaceship stood on the field a couple of hundred yards away, and the jeep-wagon made it in a matter of a minute or so through the blinding rain. The rough part was getting the spacelock open; it did not flip open, but moved ponderously. Phil was completely wet even under his poncho by the time the door swung wide; Louise suffered less because she waited in the car until she could run for it.

And then, for the first time in hours, the roar of the rain and the rumble of the thunder was muted. The dome of the ship was a blind-running river, but Phil did not care. All he was going was straight up, and there was nothing flying that night.

He touched the console buttons, and they rose through the blackness and the rain.

“What was all that string of long words you used?” Louise asked after a moment.

“Doubletalk. They wouldn’t have understood the real name, either, so why bother?”

“But if the matter transmitter is on Mercury, what is your station?”

“Primary control,” he said. “Simply and easily, it measures the amount of surface water on Mars, and sends out signals accordingly to control the input. You see, Louise, Mars is as dry as a sponge. This guff about drying sea-bottoms and so on is so much food for the birds. Mars never had enough water to begin with. So the boys computed how much water Mars would soak up, and came up with a rather staggering figure. It couldn’t possibly be fed in all at once. It’s got to go in very, very slowly, otherwise we have a recurrence of this evening’s floods. Furthermore, the additional mass of the added water is changing the Martian year and the Martian day ever so slightly, because the angular momentum of the water is not exactly equal to the factor of Mars.”

Phil stretched in his pilot’s chair as Sol burst out from behind Mars. He watched the course integrator trace its line around the planet and towards Mercury. Satisfied, Phil relaxed again and went on:

“To top this all off—there are some places where the water soaks in faster than others, so we have to make allowances. All over Mars there are hygrometers. Some are on the surface, some are buried deep. From each and every one comes information about the water seepage and how it progresses. These signals are all combined, added up, divided down, multiplied by a bugged-factor, and compared to readings of yesterday and the day before so that an all-comprehensive sigma curve can be drawn. The result of all these shenanigans is that the control station sends forth a signal to Mercury, who then delivers water according to the need.”

“But where does the water come out of?”

“The receiving end of the matter transmitter is on Phobos. Phobos points one face to Mars all the time, you know, so the water sprays out of the face of the receiving plane right at Mars, like a gigantic water sprinkler. It falleth like a gentle rain from heaven upon that place beneath in a finely divided mist... Ah!”

“Ah!—what?”

“We’re on course at last. Now we make feet. This is going to darned near burn out the drivers, and the power-pile is going to diminish like the proverbial snowball in hell:” Phil shoved a lever all the way home, and the ship surged beneath them. “I’ve always wanted the opportunity to try a spacecraft on emergency drive. It’s tough that we have to have a catastrophe to make it possible, but unless there’s good reason for using the emergency power, it’s verboten. Costs too much per hour, gets the guy involved in a board of investigation, where he had better be darned well prepared to give good and sufficient reason for depleting a pile. M’lady, can you brew coffee?”

“That I can.”

“Then go brew. We make Mercury in two hours!”

* * * *

The place where the water came from had never been, nor would it ever be, a vacationland. The best that man had been able to produce in the way of redesigning the Solar System had not gone far towards humanizing the cosmic hell that was the planet Mercury. Maybe the complete humanization of the planet would never take place simply because Mercury might better remain the way it was—with certain minor improvements. Mercury was an economically sound proposition; there is nothing in human history that suggests that an economically sound proposition has to be even remotely acceptable from the comfort standpoint. Mercury had its important imports and its important exports, and it was necessary. Perhaps a necessary evil, but there it was.

Someone, writing in a sensational vein, had once compared the Solar System to a large apartment, and had called Mercury the boiler room.

He had not been too far off the trolley. Mars, for one, is not a warm planet. Mercury is. So the water that went to Mars carried heat. The result--Mercury is the boiler room for the Solar System. Thirty, end of statement.

Above the landing spaceship, Sol hung in the sky like an incandescent washtub. Below them was a roiling floor of mist, white mist that made the boiler room of the Solar System look as though the main steam pipe had sprung a rather gaudy leak.

It was into this misty maelstrom that Phil Watson dropped his ship, flying by the seat of his pants because the radio beacon was

non-functional. There was no beacon, and probably for the same reason that Mars was now having a first-class cloudburst. Something had more than blown a fuse.

The cloud layer was not as thick as it had seemed from above. The sun still shone through, redly, fiendishly hot. Below, the cloud layer parted and thinned, until finally Phil and Louise could look down and see the source of the water that was being delivered to Mars.

“Down there should be the terminal of the Mercury Canal,” said Phil.

Instead was a roiling lake which filled the rock-rimmed valley and spilled over the edges into the valley next, where the water boiled away against the hot rocks and produced the clouds of vapor.

The Mercury Canal was not properly a canal; a real canal is a channel cut out of the face of a planet by man. Nor was the Mercury Canal a natural waterway, for if Mercury had ever had any water, it had boiled away and gone elsewhere sometime within a few minutes after the first day of creation. Instead, the Mercury Canal meandered along what might have been a natural waterway, following a couple of thousand miles of normal declivities in the rocky surface of Mercury. It collected in broad pools here and there, and dropped magnificently in a couple of waterfalls, spreading out to collect the heat from Sol as it flowed from Inlet to Outlet.

Here at Outlet Station it should have been a pleasant sight.

The rim of the canal had been cooled by the water, just as the water had been heated by the planet and the sun. So the combination of water and sun and the general hardness of life in general had produced a rather lush rain-forest growth along this end of the Mercury Canal. None of this was visible now. The Outlet Station was immersed completely, too, in the vast lake that churned and tossed.

The tropical sea in a typhoon, or the North Atlantic lashing at the rock-bound coast of Maine in a Nor'easter, or the Mississippi on a rampage were nearly as violent as this lake below.

“What,” said Phil tonelessly, “do we do now?”

Louise pointed over to one side. There were men and a line of parked trucks which looked very puny against the elemental violence. Phil slid the spaceship sideways and landed on the ridge near them.

* * * *

Tom Britton came running with the rest of his crew behind him.

“Phil!” cried Britton. “God—”

Britton looked exhausted. The rest of them were all the same; weariness and fear were in every face, in every step.

“What happened,” he asked gently.

They all began to talk at once. “Flood—control circuits shot to hell—overload—water spilled over the ridge—cool water on hot rock—earthquake—lost the spacecraft—station covered— can’t get to it unless—”

Phil held up a hand. “I get it. Okay, fellows. Let’s—”

An ear-splitting crash came from more than a mile away along the ridge. They turned to look, fear in every face.

The water had risen to the level of the ridge; through a little rill, an uncertain pseudopodium of water had trickled, wavering back and forth with the rise and fall of the waves, steaming briskly as it advanced onto the uncooled rock, reinforced as it was thrust back by the rising water behind it. It rose until it crossed the ridge and started to spill down the decline on the far side, hissing and steaming as it poured over.

Then the meeting of three cross-chop waves at the rill sent a twenty-foot curler over the ridge into the valley beyond. The water plunged down the decline in a torrent, and there was the shrill-pitched chatter of tearing glass as the ridge divided and opened to let the waters pour from the Mercury Canal into the hot valley beyond. Ton after ton of water poured through the crevasse, and the sound on the hot rock was like the feeling of walking on sugar. The fault line spread, and the next table of rock slowly uptilted and turned over, sinking like a raft capsizing. It slid into a glare of magma, with the water behind it, and the resulting explosion hurled rock and lava into the sky with a planet-shattering roar.

“Krakatoa,” muttered Phil, awed.

The blackness billowed upward in a mighty column.

Their own ridge trembled.

“Inside” snapped Phil. They made it in a scramble, and the spaceship rose just as the ridge they left split into three uncertain blocks that gutted steam and incandescent gas after them.

“We’ve got to stop it,” said Phil.

They looked down at the mud-churning water and nodded. Tom Britton tried to speak, but only a croak came from his dry throat.

“We’ll go in,” said Phil flatly.

“In there?” cried Louise.

“No other way. Cross your fingers and deliver us a prayer. Strap down, fellows. This is going to be rough!”

* * * *

With a flip of his hand on the lever, Phil dropped the spaceship into the angry water. The torrent caught the hull and slapped it back and forth, turned it over, and rolled it sidewise. Phil fought the levers and righted his ship, only to lose control again as the flood changed in flow and skirled around like the maelstrom that it was.

Far down at the bottom of that lake there was an outlet; the system was no more than the washbowl of a titan, and the Outlet Station was its drain.

“Careful,” said Britton. “You don’t want to follow this flow into the transmitter-plane.”

“I won’t. I have no intention of returning to Mars through this pipe, and raining down out of the sky in a hodgepodge of my component molecules and junk aluminum and iron and stuff, all neatly divided molecularly.”

“Ain’t funny,” grunted Britton.

“I wish we could see,” complained Louise. The murky water pressed against the dome of the ship; it was a terrifying thing to see.

“We’ve got radar,” grunted Phil. “But sonar gear is something that spacecraft don’t pack, for obvious reasons. And radar is no good under water. I think—yeow!”

A girder had probed for their glass dome; a large jagged thing as wide as a desk-top, which would have poked through the dome with the ease of a needle piercing a toy balloon. The result would have been as fast and as deadly.

From below there came a shout: "Phil—up! Up, goddammit! The plane—"

Watson jockeyed the lever; then he moved the ship to one side, slowly. And out of the murk there appeared the edge of a building of concrete.

"We were low," said Phil in a dry-throated voice.

Terrifyingly close below them was a broad plane of force that shone like a perfect mirror, if seen in the daylight. Above this plane, now, was a madness of angry water falling into it and falling out of a similar plane laid face-flat on Phobos. It was the down-drain of this monstrous washbowl.

Below the plane was a room, cylindrical and dry. The plane filled the metal-lined cylinder from wall to wall, and there was no pressure because the plane did not attempt to hold the water but let it pass through, frictionless and free. In this cylindrical room, protected from the water by the matter-transmitting plane, was the equipment that generated the twin planes that delivered this torrent of water to Mars.

It must be shut off.

First they had to find the pathway to that room below the plane.

It was somewhere up on the top of the building, a tall castlement rising like a turret above the building itself. The word "building" is not essentially correct, for Outlet Station was like no other building in the Solar System. It was more like a well-proportioned and nicely machined lunar crater perhaps a mile in diameter. Or maybe a squat angel's-food cake, much flatter and much wider across the hollow center. Normally, the water from the Mercury Canal flowed across the top of this "building" and fell in a Niagara-dwarfing circle upon the plane of the matter transmitter to be hurled upon Mars as a mist from the sky, while the entrance to the underwater equipment rose above the flowing waters like a tall, squat chimney.

They found it now, covered completely by the rise of the water.

“Ram it,” said Britton. “Ram the door and let the water in—it’ll ruin the damned gear below.”

“Not if we can save it,” said Phil.

“But how?”

“I can get down there through the watertight doors, and turn the transmitter off.”

“You turn it off and that water will drop on you and—”

“I’ll turn it low.”

“Ram it and bust the watertights,” snarled Britton.

“Let me try it my way. Can you hang on to this crate? Keep it against this casement?”

“I can try.”

“You can’t just try. You’ve got to do it, Tom.”

Louise looked frightened. “You’re going out into this horror?”

“I’ve got to.”

“But—”

“Just have a couple of prayers on tap, snooky. I’ll be back.”

“You’re sure?”

He nodded. “We got a date to finish.”

He left. He did not hear Louise complain to Britton that “a date” was all she represented to Phil Watson.

* * * *

IV

Down below, Phil donned a spacesuit. Hugson stood by, alternately shaking

his head and suggesting that Phil bust the watertights and let the whole damned thing go down the drain. Phil went on stolidly.

He blew up the spacesuit until he was spread-eagled in the spacelock. Hugson closed the inner door and Phil was alone.

Gingerly, Phil opened the scuttlebutt, and the water lanced in. It drove across the room and splattered against the inner wall and broke into a dashing spray. It ran down the airlock into a puddle on the floor which rose until the scuttlebutt was covered. The water churned in a furrow as Phil opened the valve wider. The room filled until a small space of air was left at the top, and equilibrium of pressure had been reached.

Hugson pressed the outer lock control, and the big door swung inward, sending little churning currents around its edge. Phil went outside.

The water tore at him, whipped him about, and he was thankful for the line that held him fast to the ship. He fumbled over the wall of the casement, found the watertight door, and opened it; he went inside and closed the outer door until the rushing flow of water was only a trickle.

Here Phil pondered a problem that he had not anticipated. Before he could enter the building, he must free himself of the safety-line, so that the outer watertight could be closed. But—if he did that, how could he return to the spaceship afterwards?

Chance—hope and chance.

He cut his line, and let the rushing water pull it out of the door. He closed the door, cutting himself from the outside world.

The pump began to force the water out of the lock, and, after a few moments, Phil went into the building.

He walked easily now. The weights he had left in the airlock, his space helmet he flipped back over his shoulder.

He knew the station well. Here was the safety circuit and here was the control circuit, and above his head, stretching out and away from the slight curve of the cylindrical wall, was the mirror perfection of the matter-transmitting plane. The trouble here was the local safety control. Too much pressure would destroy the plane, and sometimes the Mercury Canal delivered a bit more than expected; Mars always got a mild rain when the safety circuit took the extra load.

This time it was a prolonged rainstorm, because something had gone hell, west, and crooked, and deluged the matter transmitter. The thing was only doing its job—like the gismo that the sorcerer's apprentice started and couldn't shut off.

Phil turned off the safety circuit. He shut the admittance of the transmitter down, too, almost to zero.

The mirror surface above his head bowed down until the center touched the concrete floor. The very center vanished into the stone, and Phil knew that the corresponding surface out on Phobos was bending in the opposite direction, and that there was a bit of a dusty rain falling on Phobos from the underside of the receiver plane as the Mercury transmitter plane pushed its way through the concrete.

And then Phil got out of there quick. The thing might give way, and if it did he had no intention of standing under God-knows-how-many tons of falling water. He had done his best, and the deluge upon Mars would cease. If he lost the station it was too bad, but he had tried. The next thing was to go to the source of this mess and see if he could fix things there in time to save the station.

* * * *

The torrent of water was slowed; its flow was stopped, but the churning would go on until the energy dissipated. Slowed; that was all. And the sucking flow of the rapids was gone.

But outside the watertight the spacecraft was so close—and so far away.

The safety line was whipped off somewhere, of course.

His magnetic shoes were as helpful on the concrete building as a pair of dancing pumps. He could not let go of the stanchion outside of the door; the water drew at him and pulled him back and forth. He grunted and swore, and the sound inside his helmet startled him.

He tried to step over to the spaceship when the water seemed quiet.

He was whipped from his feet and sent skirling tail over eyebrow.

His hands found the air-bottle valve and he blew up his spacesuit until

it was spread-eagling him again. It was buoyant once he shucked the weights from his waistline.

He bobbed to the top and porpoised. The mad roil of the water was stilled; it was churning, of course, but the maelstrom had abated, and the lashing waves were less awesome. They were strong enough to turn Phil over and over, and to toss him under now and again. But he waited, feeling like a half-dozen dice in a shaker, safe in the cushion of the suit, until the spaceship emerged and found him.

“Inlet,” he said to Britton. “Or shall I take it?”

Britton stood out of the pilot’s chair and waved Phil down. “I’m beat,” he said.

“I gather. But look, Tom, before you come completely unglued, hang on while we figure out what happened.”

“Okay. That I can do.”

“Who’s taking the trick at the cutter?”

“Johnny Wilkes and Walter Farrow.”

“There’s trouble there.”

“Right.”

Louise shook her head. “Would you bring me up to date? I feel like an innocent bystander.”

Phil smiled briefly, and said, “Sorry. I’m so used to it that I think everybody knows it.” He waved a hand at the swollen Mercury Canal below them; they were sidling along above it, by now some distance from the terminal lake; the water here was still in a flood-rush. “Obviously, he said, “this water doesn’t originate on Mercury. The boys here take tricks of a month, running Station One. Something must have happened there. Then the whole thing blew up, and among the things that went into the drink was the spacecraft used here to take care of such jaunts. So now we’ve got to go out to Station One and clean up the mess. We’ll just stop at Inlet Station and pick up the rest of the crew and take us out there.”

“This is all very well,” she said a little dazedly. “But you haven’t told me where Station One is.”

“Oh—forgetting again. It’s at—”

“My God!” breathed Tom Britton.

They all looked—at Inlet Station.

* * * *

Inlet Station was another huge matter-transmitter plane, held vertically against the face of a cliff. In normal times, the face of the plane spewed forth a mist of molecularly divided water that collected into drops of ice that fell into the valley below it. Rock and rill were usually covered with a glint of melting ice that built up into fantastic shapes. It was always a rather breathtaking sight... but pale and drab compared to the sight that had awakened Tom Britton.

The face of the transmitter plane was obscured by the froth of vapor that poured forth. This was no gentle flow, but a torrential storm. And cutting the mirror from full view was a half-mile of sheer crystal fairyland. Pillars of crystal rose high, surmounted by monstrous, intricately fabricated six-sided figures. Twenty-foot snowflakes interlocked with one another, some of them whole, most of them partially complete and mingled with the ones beside them, lacery tangled into glittering domes and graceful rainbow-arches. Jagged and shapeless stalagmites of ice thrust upward through the graceful lace to heighten the delicacy by comparison, and through this Chantilly of ice flowed the frothy vapor that was settling on it to add to the structure.

The sunlight glinted from the billion points, melting them just enough for the next layer to stick, melting the base of the crystal palace so that the structure flowed in a constantly changing pattern.

It was the Crystal Palace of Santa Claus, or the Emerald City of the Land of Oz—

They watched, enraptured; perhaps entrapped by the awesome incongruity of such sheer beauty growing out of disaster.

Then Phil shook himself visibly. “Think we can make it to Inlet?”

Britton blinked and tore his eyes away. “How?”

“We might ram the ice until—”

“Until we get frozen in, too?”

“But—”

Britton pointed down. Dimly, through the faceted crystals of a tall ice structure could be seen the sullen glint of metal. The power that would drive a spacecraft across the Solar System nearly at the speed of light was not strong enough to break the grip of this icepack upon the hull. It was more probable that the ice was crushing the hull—

Somewhere down in that maze were the men who ran Inlet Station; and somewhere down in that crystal structure they would remain until the ice melted.

“That’s why ship number two didn’t go out either,” said Britton.

Phil nodded. He set his levers, and the vast ice field began to diminish until it was no more than a tiny glinting diamond on the white-hot face of Mercury. Then the spacecraft rounded Mercury, and the diamond was gone.

* * * *

V

Sol was dwindling below. The spacecraft was silent again, speeding through the inky black towards a mote in the sky ahead.

Phil stretched and said, “This is an odd situation.”

“Odd?” asked Louise.

“Very. Here we are, you and I, isolated in a spacecraft with about six hours of nothing to do. There have been reams of words written and miles of film exposed and kilowatts of juice burned purveying situations like this. Attractive woman and virile man entrapped together with nothing to do but consider each other objectively or subjectively.”

“Or personally.”

“Yah. So what do we have? Here we are in a situation where your virtue shouldn’t be worth a hoot—and the joint is loaded to the scuppers

with dead-weary techs draped untastefully on everything that offers a flat surface. Not that we'd wake them up with any mild activity, but they've left us nothing to be active in."

Tom Britton emitted a slight snore, turned over languorously and burrowed deeper in the divan.

"Damned chaperone," growled Phil.

Louise laughed. "So," she said, "since my virtue is safe from harm, let's discuss something else."

"Might as well. We'll take up the matter of your virtue upon some date when the environment lends itself better to experimental evidence. So where do we go from here?"

"Phil, I'd like to know—where are we going?"

"To the ice-mines of the Solar System," he said. "I thought you knew."

"You were about to tell me."

"That's so. Well, as I was saying, there is no native water on Mercury."

"I've also been given to understand that there was no air on Mercury either. But we were breathing."

"Sure were. But tell me, Louise, what grade of school do you teach?"

"Fourth grade."

"Then it isn't important to you—or them—yet. But you'd better be getting hep to a newer book of the skies."

"Go on."

"For centuries we have been told that Man is an adaptable animal. This isn't so. Man isn't adaptable. He is adapting. When his environment does not agree with his metabolism, he changes his environment. Nobody could really live on Mars. So we change it. We mine ice on Uranus and ship it to Mercury to warm it, and then deliver it to Mars as a hot rain. This changes both the temperature and the water-vapor content of the planet to a human-acceptable norm. Venus had a lousy atmosphere, so we send that to Jupiter, where it won't be noticed, and replace it with oxygen and nitrogen

from Mercury, which we get by delivering the frozen gas from Neptune. The whole thing is simple. Pluto was airless and damned cold. The air Pluto gets now is hot, and someday Pluto will be warm enough to accept colonization. Venus doesn't need hot air, so the stuff that goes there is not warmed much. And so it goes. The rest of the planets and satellites are all treated in the same way, according to their various and sundry needs."

* * * *

Louise looked at him softly. "And you're the gent who was complaining about everything being so calm and unruffled."

"What's exciting about running a central heating plant? I'm just a cosmic plumber."

"So?"

"It's darned dull, except when it blows a fuse."

She laughed. "Do you understand yourself at all?"

"Who can?"

"That I can't answer."

"Then what are you driving at?"

"It's just that the human race is always looking at the other side of the fence."

"Is this bad for the human race?"

"Not at all. People have been looking over the fence for millions of years. So that today you can stand on the intellectual shoulders of your forebears and work with what they left you. It seems unglamorous, but you forget the glorious wonder of it all. You grab in your gadgets and your science, and forget to think about the big question."

"Which is what?"

"Where are we going, and what are we going to do when we get there?"

"I've pondered that question. It has no answer. Ergo, I direct myself at

things that I can answer without getting into a tizzy.”

“So you go on building and inventing and creating gadgets. The man who crossed the lake in his day is no better than the man who crossed space yesterday. You sit in your cave and draw pictures and dream. You have an itch to create.”

“I suppose I do.”

“Of course you do. That’s why you’re here doing what you’re doing.”

“But I’m not creating.”

“You are!” she said vehemently. Tom Britton snorkled, mumbled something unintelligible, and then dropped off into deep slumber again. “We can’t all be Rembrandt or Rodin, creating something world-shakingly beautiful, or Einstein delivering something profound. Some of us have to go on through life just dropping a thin layer of ourselves on top of what’s been left before. You’re creating, even though you do no more than keep another man’s work from falling apart.”

“I’ve never looked at it that way.”

“Of course not. That’s why you also shy at the first tenet of creation.”

“Who—me?”

Louise looked at her wrist watch. “It isn’t too many hours ago that you were saved from the irksome task of answering an embarrassing question.”

“Which?”

“I asked you whether romance and marriage and a family might not be the answer to your unrest.”

“That’s a woman’s question,” he said slowly.

“Maybe it is. But it’s a man-and-woman answer.” Louise smiled and looked at him. “You’re quite a guy, Phil. If you were to make the right motions and the right noises at the right time—you might find an enthusiastic cooperation.”

“In other words, I am being proposed to?”

“You are not. And if you propose to me right now, you’ll get a quick ‘no’.”

“But I thought—”

“Think a little deeper, Phil. You dated me last evening because of the possible thrill of wooing.”

“I’m—”

Louise grinned. “Phil, if you claim that you dated me because you considered me as a possible matrimonial partner, I’ll scoff at you for the liar you are. No woman is that naive. So we’ll just go on.”

“Go on what?” he asked. “Admitting that I dated you for the possible fun and games?”

* * * *

Louise nodded. “Men come a-wooing for the fun and games, and the woman’s game is to make them stay for the duration. Or so the books tell me. So you will continue to lay siege to my virtue and I shall continue to employ every weapon to capture the enemy. And someday one of two things will happen: you’ll get tired of the siege and go elsewhere, or you’ll succumb to my wiles. Who knows?”

“But—”

Louise laughed. “Let’s leave it that way, Phil. It’s true. Maybe my thinking is a bit archaic, but that’s my opinion.”

“Okay,” he said with a smile. “We’ll get this mess cleaned up and then we’ll get you back to Mars quietly so that we can take up where we left off.”

“You’re still not convinced about this family idea, are you?”

“They do sort of tie a man down.”

Louise smiled. “We’ll leave it that way until you are convinced. Okay?”

“Okay.”

She stood up and crossed the control room to stand before him. Her stance was deliberate. She knew that her slender waist and softly rounded

breasts were attractive enough to make a man ignore the fact that her dress was crumpled from too much wearing. She leaned down to take his hands from where they lay at ease on the arms of his chair, and she knew that this motion also gave him a brief view into the neckline of her dress. His eyes widened satisfactorily. She drew him up, standing. She lifted her face.

He reached for her and she melted into his arms, clinging to him. Her lips were soft and mobile under his; her skin was warm and soft under the dress.

Phil raised his head, eyes a little glazed, and looked around the control room. Louise leaned back in his arms, grinning at him.

“You’re a witch,” he told her.

She laughed. “Just think of how nice it would be if we didn’t have a collection of tired gents cluttering up the joint. Maybe even a joint of—all—maybe our own?”

Phil laughed and kissed her again. “Damn you for being a calculating female,” he said.

Louise kissed back before she whirled out of his arms.

He reached for her again, but she held him off with a shake of her head. “Coffee?” she asked.

He looked at his watch. “Somebody’s got to stay alive for the rest of this leg.”

“All the better reason for saving the canoodling until later.”

“I can canoodle and—”

“Drive with one hand? Nope. I’ll have no divided attentions, Phil. But I will build coffee.”

“Might find an egg, too.”

“I’m way ahead of you.”

“Good.”

She chuckled. “Just a bit more of the old bait, old man.”

“Shucks, lady. I can cook too.”

“It’s a lousy substitute.”

“For what?” he asked.

But he asked the back of her head—just as it disappeared down the ladder towards the galley. He eyed his reflection in the nearest port, wiped his brow, and said, “*Gr-r-r-ruff!*”

* * * *

VI

Uranus was dim-lit by a tiny sun that cast an ineffectual light across a flat vista of blue-black ice. Crests of white showed white-diamond glints—not really snow, but a rime-ice. Below— somewhere at the end of the radar beam—was Station One.

Station One, doing something unpredictable, no doubt.

They dropped down, following the radar beacon, until they saw it.

It had to be seen to be believed.

Uranus is mostly ice. Normally its gravity was enough to keep the ice cold-flowed into a reasonably flat surface. It is too cold to snow, too cold to rain, too cold to hail or sleet or hurricane or much of anything. But it is not too cold to grind together, to thrust one planetary block against another, to cause upthrusting mountain ranges of ice, which in the normal course of events will cold-flow into the resemblance of flatness. These upthrustings are rare—

Station One had met one of these.

Strain develops slowly; an ounce at a time, it builds up over a long period until a tremendous pressure develops. The pressure overcomes everything. Then, with two monstrous forces thrusting against one another, the angle of thrust will begin to change. The vector of force will become more amiable to the forces involved, and the whole vista then drives forth along the new direction of resulting motion. In the case of planetary thrust, this direction is upward, causing mountains.

Forty miles high, the mountain of cold-flowed ice had risen. Up and up and up in a rising pillar, a rising pyramid until the top, bowed over by some trick of angular force until it leaned sideways, broke from the mountain top and came tumbling down the side of the slope in a giant avalanche.

There was neither rock nor stone; only ice.

Station One was a huge structure of metal and concrete, driven by an atomic pile contained inside of it. It moved across the face of Uranus on tractor treads which depressed acres with each planting of a monstrous foot. It left behind it a trail that might someday amaze some visitor from somewhere else.

Station One pushed before it a rectangular matter-transmitter plane like the scoop of a platypus, and the speed with which it scooped up the ice of Uranus was dictated by the needs of the Mercury Canal.

But now it had gone berserk.

Because it had been caught in the rise of a mountain ridge, and then walloped from above by a catapulting avalanche.

Shelling with a three-inch rifle, it might have withstood for a time. But not cascade upon cascade of tertiary ice that slithered down in shards like giant shrapnel.

Its normally hump-backed appearance was crushed into a veritable sickle shape. Forward was the girder structure that supported the matter-transmitter plane; behind it on a small flat platform stood a tiny spacecraft. Both were untouched by the downfall. But the center section had taken the brunt.

It had been a tough fight.

Battered and dented, the central of the station was for the most part intact. But it took only one hole to admit the poisonous atmosphere of Uranus—

* * * *

Phil swore, and Hugson crossed himself; Tom Britton reached for a hat he did not own, and Louise went solemn.

Two men had died awfully in that monumental structure. Two men had died—but the insensate mechanism still fought to carry on its function as it had under their hands. Intellect would have known when it was licked. Brains would have turned the vast machine aside to direct its voracious appetite against a less threatening ice-scape. But the undirected machine gouged and tore at the insurmountable rise, and more ice slid down to fill the gap, to fill the insatiable maw of the uncontrolled machine. The process was without interruption: and endless Niagara of ice poured downward into the matter-transmitter plane.

From a cosmic viewpoint, a forty-mile cliff of ice ava-launched across space to the Mercury Canal. And one step farther, Mars was under the hammer of a forty-mile avalanche of rain.

“How d’ye feel, Tom?”

“Fit. I’ve been slumbering.”

“Want to take over?”

“Sure. We can handle this. We’ll back Station One out of the mess. That’ll relieve Mercury Inlet, and eventually the canal will go down to a reasonable level. We’ll stay here to patch up.” Tom Britton called his crew together, and they donned spacesuits.

Phil Watson waited until Station One began to move backwards, away from the downpour of cold-flowing ice. As the transmitter’s cutting action withdrew, the down-flow lessened. Phil sighed, and lifted the ship, and headed it towards Mars.

“I hope,” he said to Louise, “you don’t mind if I collapse.”

She cradled his head in her lap. Phil squirmed into a comfortable position. He slept almost at once.

Louise slipped out from under and went to sit in the pilot’s chair. The maze of instruments meant little to her, but so long as the autodriver registered on the green lamp they were in no danger. She dozed, herself, from time to time, shaking herself awake to cast an anxious glance at the few meters that she could read.

Turnover-time came, and Louise debated if she should awaken Phil. But she remembered that space is a large bit of vacant lot, and so she took the levers and produced one of the most wide-spread turnovers in the

history of space flight.

Eventually a planet came up out of the ambiguous stellar display below, and Louise went over to awaken Phil. A couple of million miles tossed off in a ragged turnover was one thing, but landing a spacecraft was definitely another.

She touched him gently and he came awake. He drew her down and she snuggled beside him for a moment before she said, "Mars is dead below."

He got up quickly. "All I'm getting out of this shindig is hard work and frustration."

"Does it make you think of a white cottage and—"

Phil grunted. "Me? I'm too young to be a father—"

* * * *

He set the ship down near the weather control station. The marks of its previous landing were obliterated by the rain, but of that rain there was no longer much trace.

Above, in the blue sky, the smallish sun shone brightly, and the air was chill and bracing. A cloud or two was billowing in the Martian sky. The rain had soaked in, and the ground was muddish and wetly red, but not mushy. People lined the landing field, waiting for them.

"Expecting a reception?" asked Louise.

"No. But the gang will be waiting for me to give them the lowdown on the cloudburst and how it happened."

"Looks larger than the gang."

"There's always Senator Longacre and his crew of plug-hatted characters."

The air was moist, and it smelled of spring and growing green things. It rolled into the airlock, fresh and pleasant. The ramp went out, and Phil waved Louise first.

Halfway down the ramp a cameraman called, "Hey! Watson! Let her

come second!”

Louise let him pass; Phil went down the ramp and turned to take her hand as she stepped from the ramp onto Mars.

There was a flaring of flashes and a crescendo of music from a portable sound projector parked somewhere. A hubbub of voices rose and grew into a cheer.

Senator Longacre stepped forward and shouldered Phil aside. He handed Louise a large bouquet as the flashers flared again, and from the back there came a battery of dolly-trucked television cameras.

In the midst of the racket, Phil heard the good senator start a bit of carefully prepared oratory:

“—the one billionth space traveler to set foot upon Mars—”

“— she’s got legs,” said one of the photogs, “let’s cheesecake her—”

“— a few words, Mrs. Watson—”

“— wife of the weather control manager—“

“— smile, please, Mrs. Watson—”

“— who cares about him—?”

“— schoolteacher.”

“Schoolteachers didn’t look like that in my day!”

“You were young and—”

Louise turned back. There was a humorous glint in her eye. “Phil,” she whispered, “you’re in the middle. After what you did to Senator Longacre, he’d like nothing better than to get you in a jam.”

Phil nodded. He looked around the field. People were arriving in droves; the field was becoming jammed with revelers. The sound wagon had been hooked up with the MCOC network, and was blaring something about a Marswide holiday for the billionth visitor. He looked at the billionth visitor, and found her attractive. He remembered the billionth visitor’s quick mind, and he found it attractive, also. And then he realized that he knew

something about woman that Louise did not: that the lure was the lip and the breast and the round hip, but the door to the trap was the character and the personality and the rather intriguing question of what kind of intellect might spring from—

“Louise—will you wed with me?”

“I told you—”

Phil stretched himself tall and extended his chest. “I shall flick a finger and bring ammonia to Terra; I shall twist a dial and rain methane on Mars. I shall start this goddam deluge again. Or I can go on a nice drunken spree and let the whole damned solar system scratch for itself.”

“But—”

“It might have my brains and your looks.”

“But if it had my brains and your looks?”

Phil grinned. He knew what to say: “My looks aren’t too bad.”

They rode through the streets of Marstown, arm in arm under a blue sky. It was spring, and there were violets thrusting their heads up through the ruddy soil. And while nobody would ever see Phillip Watson’s name in the Books, or see Louise Hannon Watson carved in marble, their future would someday ride through the streets of Pluto, or Aldebaran IV, or—

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* * * *

In the chronos, the War in Europe was on its last, and the War in the Pacific was being waged relentlessly. The emphasis on Europe was, as the historians can now say, because Hitler's invasion of Norway touched off a line of consciousness, since Norway was perhaps the only major supplier of "heavy" water, deuterium oxide, and because the discovery of the fission of U-238 had been in Germany in 1938 by Hahn and Strassmann.

Oddly, some of us were sort-of in on our program, vaguely. Work on the proximity fuse had been top priority, and through 1942 and 1943 the only thing we got hung up on was that the Navy used a mixture of tallow and graphite as a "luting" compound; that's the stuff put on pipe threads to keep them from leaking. Well, we needed a fifty-gallon drum of the stuff, but the Ration Board said we must have fifty thousand red stamps since tallow, theoretically, was edible. (Not me, Uncle Joseph!)

Then one fine day, we got a notice from the War Production Board that instead of plating the parts with cadmium, we must use zinc. Zinc? Why zinc? Aren't we hot enough to ask and take parts from the battleship-building program?

Well, yes, said one of the senior scientists at Crosley, picking up his copy of Pollard & Davidsons *Applied Nuclear Physics* and pawing through the appendix that listed what was known at the time about isotopes—and pointed out that cadmium had a long list of neutron-absorbing isotopes. *And*, says he, *someone* is playing around with *atomic energy*.

Well, as I said, the struggle was about over, but a lot of it remained, and this was no time to pause.

But we had concluded the crash program to write manuals for sonar, and I was in the awkward position of being without a job. However, one of the top Navy officers with the crash writing program suggested that they *might* be able to use me on a radar program at the Submarine Signal Company, in Boston. I went and was interviewed and was accepted—provided I got clearance. One did not swap jobs without approval from his draft board, nor change addresses, nor anything. And to do anything, one had to fill out forms in triplicate and return them through channels. I won't imply that this was a go-to-or-else, but I received a reply from my draft board with A) a 1-A draft classification, and B) approval to change my residence and accept the position from SubSig. *And* C) a form

which, properly filled out in triplicate, requested that I be deferred from the draft since I was occupied in a position of importance to the war effort.

I left for Boston the following morning, a bit hung over because the night before had started the morning before: it was the cessation of hostilities in Europe.

The guy at the bar said that he hadn't heard the news, and if he did, he'd have to close up, and why didn't we keep our big mouths shut!

Boston has no slums. It has a lot of "historic sites," and I lived in one of them, not far from the Fenway. I was hard at work when the telephone rang. I was told that the radio (Radio? That's a cabinet that gives noise with the pictures out) just said that an atomic bomb had been dropped on (sounded like Iwo Jima, but that wasn't right, was it?). I said, "No, but get off the phone, I've got calling to do!"

"John, did you hear the news?"

"No, what news?"

"Says we dropped the atom bomb on Japan."

"Oh, my God! It's *started*"

World War Two was ended, and after another wild night of relief and celebration, two more things took place.

First, I was out of a job once more, and no draft board to control my comings and goings. They'd given me a draft classification that put me shoving a broom along Massachusetts Avenue *IF* and *AFTER* the enemy walked along the streets of Boston. Second, John W. Campbell went the way of the prophets of doom, and it quickly became boring to hear him lecture that New York City was going to disappear in a ball of "incandescent flame" within five years. (I'm aware that there are "incandescences that aren't flame, but I fail to know of any flame that isn't incandescent!")

With no job, but with remaining expenses, and with industry busy undoing what had been done in 1942 without making new plans yet, one takes up writing whole-time.

Robert A. Heinlein called from Philadelphia; they were folding up their apartment and about to trot back to California with a cortege of a few of their friends they'd found pleasant during the war years, and would I join

them? Well, not yet. Maybe later. L. Sprague de Camp said he'd been saved by the bell; it turned out that for some oddball reason he had been the ranking officer at a time when there was a squadron of destroyers that had to be run from Philadelphia to Norfolk and he, with a Naval Reserve status, would have been in command. Henry Kuttner and C. L. Moore, now that their place on Laguna Beach was open and free once more, took no time to go back home.

John, who had been beating the management of Street & Smith to let him start a real science magazine, got a cold turkey instead. Back in the barnstorming days, there were a number of pulps about flying, real shoot-em-up jobs in aircraft reminiscent of those biplanes that shot King Kong off the Empire State Building in his first appearance, and one of them was a Street & Smith pulp known as *Air Trails*. But the years had passed, and Lindbergh had crossed the Atlantic, and commercial air traffic had been going on, and the shoot-em-up air story lost its flavor, and *Air Trails* meandered into a sort of semi-technical book about glider operations, with substantial sections about flying models, but the public was losing track of that, too.

John was told that if he wanted a real science magazine, why didn't he take on *Air Trails* and slip the editorial policy and slowly slide the title into his project.

And that was going to take some time, and a lot of some doing, because when you change the editorial policy that much, those who bought it for what it was, now drop it because it isn't any more. And those you would like to pick it up won't look at it now because they couldn't know that it was changed. This meant that John was going to spend most of his time on the conversion, and the least of his time on *Astounding*. In other words, he needed help to handle the groundwork.

John had an excellent secretary-assistant, one Katy Tarrant, who kept the Ts all crossed and the Is and Js dotted, and carefully removed, with a blue pencil, anything that looked even slightly blue. But she was not to make editorial decisions. John hired L. Jerome Stanton to be an editorial assistant, to read the slush pile, to select (at regular intervals) the series of possible stories that counted into the whole book-length for *Astounding*, that John was to review and select. Incoming works were divided, as always, into two piles, those from the known writers and those from the unknowns, but now John read only those from the known writers, and L. Jerome read the slush pile and forwarded anything that looked reasonable to John for final approval.

And I, living in one of the points of historical interest in Boston, was slowly running myself into the ground. There were, at the time, only two strings of magazines that were worth working for: Street & Smith's *Astounding*, and Standard Magazines' twin science fiction books *Startling Stories* and *Thrilling Wonder*. One fills the files rather quickly when one writes only as a sole occupation and there are only two markets.

* * * *

What brought everything up short was "Catspaw," which comes out-of-line in the chronology because it was too long to fit well into *Astounding's* format. Fred Pohl, an editor at Bantam Books, clocked it to be 15,000 words, but John paid for 20,000 and yelped (in one of his eight-page letters) that if I'd made it another 5,000, and put in a cliff-hanger, he might have printed it as a two-part serial. He went on to point out that the George O. Smith inventory was too high, and that the S&S auditors were breathing down his throat because he was buying G.O. Smith faster than he could print it. And was I a reincarnation of the fabulous Frederick Faust?

So the publication date of "Catspaw" has no connection to when it was written.

"Catspaw," by the way, is based upon the idea that something that sounds just swell might be deadly. The platitude about looking the gift horse in the teeth is, just that, a platitude; one might very well eyeball the gift horse critically because it might not be the horse you'd want your daughter to ride.

Altruism is a myth. There ain't none. Everything is done with some purpose in mind; it may be personal, or it may be for the benefit of a group, or a sect, or a society. For example, the Eighteenth Amendment was passed to upgrade the morals and ethics of life in the United States by eradicating the Demon Rum from our society. That's the way it was put to us, and that's the way it looked for enough of the people to pass it. But as it stood, organized crime might well have put their own effort to the bill because, in those years, the Eighteenth Amendment did more for organized crime than it did to raise the society toward purity.

The Catspaw

Thomas Barden slept fitfully. The dream was not nightmare, but it was annoying. It was like the important thought that does not quite struggle up through into consciousness but which remains unformed, though the mind is aware of the hidden importance. It was like trying to read small print through a silk screen, or to see fine detail through a sheet of florentine glass.

Furthermore, it was recurring.

Strangely, Tom Barden seemed to know that there was something strange about the dream, that it was more than just the ramblings of the subconscious mind. He knew that there was something to be gained by permitting the dream to run while he watched, so to speak. But the trouble was that the dream could not run so long as he remained cognizant enough in sleep to make mental notes. When he slept deep enough to permit the strange dream, he was deep enough to lose track of the delicate, and so very alien, train of thought.

The fitful sleep itself was a contributing factor to ultimate success. Since he slept not, he became drowsily tired, and found himself lying wide awake time and again with strange semi-daydreams in which conscious thought and dream intermingled in a bizarre fantasy of fact and fiction.

He had been asleep or awake for hours. It was nearing four o'clock in the morning when Tom Barden slipped into a prolonged half-sleep and the dream, as it had before, came again.

He slipped into sleep, and in dream he saw himself luxuriously lounging on a broad couch. Above his head was a draped canopy of silk, its draped folds hanging low in a gorgeous pattern of silken folds. It was gently tinted in delicate colors that blended in a complete lack of regular pattern. It seemed more beautiful for lacking pattern than it could have been with any regularity.

It was non-ending, that canopy. From the draped dome above his couch the silken cyclorama fell in a colorful swirl to the floor where it folded over and over somewhere miles below the couch.

He—was isolated. He was protected. No intrusion could come, even though Thomas Barden wanted the intrusion. Certainly, if he denied entry, nothing could enter.

And yet he knew that beyond the many layers of flowing silk there was something demanding entry. He could not see nor hear the would-be intruder. He could not even see motion of the silk to show that there was such a being. Yet he seemed to sense it.

And when, finally, the intruder breached the outer layers of shrouding silk, Tom Barden knew it and was glad. Course after course of silken screen was opened by the intruder, until finally the silk parted before his eyes and there entered—

Sentience!

* * * *

It was without form and void.

But it was sentience and it was there for a definite purpose. It came, and it hovered over Thomas Barden's broad couch, and its thoughts were apparent. It was in communication with another sentience outside—

"I am in."

"Good," was the mental reply, also clear to Thomas Barden. It was not a direct communication from the other. It came relayed through the sentience above his bed, and since he was in direct mental communication with the other, thought and reply were clear also to Barden. "Good," replied the other. "Be quick and be thorough. We may never return!"

"You, sentience, listen for we have too little time. Those of your system are numbered in the billions, and of them all, you are the only one we have been able to contact, though we have tried constantly for several years.

"As I communicate with you, your subconscious mind is being filled with a specialized knowledge of a science new to you. This science is not foreign to you, for it would normally follow the paths of discovery, yet you are not quite ready to discover it for yourselves. We give it to you, knowing that it will only speed up your advancement, and it will not cause a passed-over space in the normal trend of advancing technology."

"Why are you giving this to us?" demanded Barden.

"A natural caution. You fear the complete altruist. I'll explain. This science will enable you to develop your spacecraft drive into a means of

interstellar travel. This science is known to us. We are using it now. However, there is a political difficulty on our world. We have two factions. One faction wants conquest and subjugation of all systems that are less fortunate in their sociological and technological development. The other faction believes that any kind of subjugation of another people will lead to war upon war, in pyramiding terror. I and my friends are members of this second belief. Since the first group has control, they are preparing to sweep out from our system with their ideal in force. The only way that subjugation of your race, complete with the attending strife, may be stopped, is for you to have the same technological developments. Once you meet us as an equal, thoughts of enslaving you cannot exist.”

“Logical,” admitted Barden.

“This science is entering your subconscious mind. It will not be clear to you for many days. I’d suggest rest and contemplation, but not heavy concentration. Learning is a matter of accepting facts and filing them logically in the subconscious mind. Unlike a course of study where fact follows fact, this knowledge is being poured in at high speed. Your subconscious mind is very much like a librarian who has just received a complete file of facts on a new world. Unfortunately, these facts must be evaluated in terms of your own world and your own thought. After evaluation, they must be filed in the proper order. The subconscious never sleeps, but it will take time before the logical order is complete. At that time you will be able to speak with authority on the subject.”

“I hope,” replied Barden.

“You must! For we have had enough of war and talk of war. War is never fought between peoples who respect one another’s ability. Take this knowledge and use it. And some day, when you get the honest chance, pass it along to another race, so that all men can be equal throughout the galaxy!”

The outsider made swift thought, “Quickly, for the veil thickens!”

“I must go. It would be dangerous for us both if I am trapped here when the veil closes. Just remember the billions of your men and the constant attempt to penetrate the mind of any one of them. Even this was sheer chance, and it is failing—”

The sentience withdrew after a warning cry from the one on the outside. The silken screen closed, joined, and flowed to the floor without scar.

Barden was once more alone, protected, isolated.

Three weeks. It took Barden three long weeks. He awoke after the initial contact with the alien, and following the alien's advice, considered the matter coolly. It might be true and it might be a dream, but the fitfulness of his nature was gone. Barden then turned over and entered the sleep of the just for nine hours. After this awakening, he contemplated the dream and found it true.

Amazement at the accomplished fact was high, but the flood of knowledge occupied Barden's attention. Things kept coming up out of the dark in his mind that made little sense; other things were clear and sharp, and Barden wondered whether these had ever been tried on Terra. They seemed so logical. Then, as the days passed, these disconnected facts began to match together. The matrix of knowledge became less broken as the days went by, and—

At the end of three weeks, the sentience was proven correct. Thomas Barden knew, and he knew that he knew the last detail of a new science.

His only problem was getting this science into operation before the alien world could come—

He was all alone in this. No one on earth would believe his wild tale. They'd lay it to a nightmare and offer him medical advice. If he persisted, Thomas Barden would be writing his equations on the walls of a padded cell with a blunt crayon when the alien horde came.

And to walk into the Solar Space Laboratory and tell them he had a means of interstellar travel, complete with facts and figures, would get him the same reception as the Brothers Wright, Fulton, and a horde of others. He would be politely shown the door and asked to go away and not bother them with wildness.

If he had time, he could declare the discovery of a phenomenon and offer it to the scientific world. Then, step by step, he could lead them all in the final disclosures, or even after a few discoveries had been turned over, he could act the part of a genius and force their hands by making great strides. He had too little time.

If he were wealthy, he could set up his own laboratory and gain recognition by proof. To go to work for another laboratory would mean that he would be forced to do work that he felt unimportant for a sufficient

period to gain the confidence of his superiors. To be his own boss in his own laboratory would mean that he would not be required to follow other lines of research; he could do things that would seem downright idiotic to those uninformed of the new science. That, plus the fact that not one of the large laboratories would care to spend a small fortune on the cold predictions of a young unknown.

Thomas Barden wondered just how many men had found themselves hating the everlasting Time and Money factors before. A fine future!

Barden pondered the problem for almost a week. That made a total of four weeks since the incident.

Then came a partial solution. He was an associate member of the Terran Physical Society. He could prepare a paper, purely theoretical in nature, disclosing the basis for the new science. It would be treated with skepticism by most of the group, and such a wild-eyed idea might even get him scorn.

Yet this was no time to think of Thomas Barden and what happened to him. This was time to do something bold. For all the men of science who would hear of his theory, a few of them might try. If they tried one experiment, they would be convinced. Once convinced, he would be given credit.

The paper could not be very long. A long paper would be thrown out for divers reasons. A very short, terse paper might get by, because it would show the logical development of thought. The reviewing members might think it sheer sophistry, but might allow it if for no other reason than to show how sophistic reasoning could build up a complete technology.

Barden began to make notes. A five-minute paper, packed with explosive details. He selected this fact and that experiment, chosen for their simplicity and their importance, and began to set them down.

His paper was ten pages long, filled with complex equations and terse statements of the results of suggested experiments. He sent it in to the reviewing board and then returned to his studies. For he would have to wait again.

* * * *

Barden faced the reviewing board exactly eight weeks after the dream. By this time he was getting resigned to waiting. Also, the hysteria that made

him want immediate action was beginning to die in the face of logic. Obviously, the alien culture was not on the verge of heading Sol ward, or the alien mind would have told him that fact. He did mention that there was little time, but the alien would not have bothered if imminent disaster threatened.

Barden believed that the alien was cognizant of the difficulties of introducing a new science to a skeptical world—especially when done by an unknown. Perhaps if the famed Dr. Edith Ward had received the science, a word from her would have sent the men of all Terra, Venus, and Mars scurrying to make their own experiments. Of course, Dr. Ward was head of the Solar Space Laboratory, and could write high-priority orders for anything short of complete utilization of Luna. She would not require disclosure to have her theories recognized.

Tom Barden wished that she were a member of the reviewing board, for then she might be directly interested. But he noted with some satisfaction that the laboratory was represented. He faced the chairman confidently, though within him he was praying for a break.

“Mr. Barden,” said the chairman, “you are not familiar with us. Introductions are in order. From left to right are Doctors Murdoch, Harrison, and Jones. I am Edward Hansen, the chairman of this reviewing board. Gentlemen, this is Thomas Barden. You have read his brochure?”

There was a nod of assent.

“We have called you to ask a few questions,” said the chairman.

“Gladly,” said Barden. At least they were considering it. And so long as it was receiving consideration, it was far better than a complete rejection.

“This is, I take it, an experiment in sheer semantic reasoning?”

“It is more than that,” said Barden slowly. “Not only is the reasoning logical when based upon the initial presumption, but I am firm in the belief that the initial presumption is correct.”

Dr. Murdoch laughed. “I hope you’ll pardon me, Mr. Barden. I’m rude, but it strikes me that you are somewhat similar to the prophet who sneers at the short-range predictions, and prefers to tell of things that lie a hundred years in the future. By which I mean that testing out any one of your theories here would require the expenditure of a small fortune. The amount to be spent would be far in excess of any practical laboratory’s budget unless

some return is expected.”

“If the premise proves true, though,” said Barden, “the returns would be so great as to warrant any expenditure.”

“Agreed,” said Murdoch. “Agreed. Just show me proof.”

“It is all there.”

“Mathematical proof? The only proof of valid mathematics is in the experimental data that agrees. And may I add that when experiment and math do not agree, it is the math that gets changed. As witness Galileo’s results with the freely falling bodies.”

Barden nodded slowly. “You mean that mathematics alone is no proof.”

“Precisely. Figures do not lie but liars can often figure. No offense, Barden. I wouldn’t accuse any man of willful lying. But the math is a lie if it is based on a false premise.”

“You have no experimental data at all?” asked Harrison.

Murdoch looked at Harrison and smiled tolerantly.

“Since Mr. Barden is not independently wealthy he could hardly have made any experiments,” said Murdoch.

Dr. Hansen looked at Barden, and said, “I believe that you have stumbled upon this line of reasoning by sheer accident, and so firm is your belief in it that you are making an attempt to have it tried?”

Barden smiled. “That is exactly right,” he said earnestly.

“I do admire the semantic reasoning,” said Hansen. “I am admittedly skeptical of the premise. Dr. Jones, you represent the Space Laboratory. This seems to be right in your department. What is your opinion?”

“If his theory is correct, great returns are obvious. However, I am inclined to view the idea as a matter of sophistic reasoning.”

* * * *

Barden hastened to get Dr. Jones’ attention. “Look, sir. The same

relegation of a theory to sophistic reasoning has happened before. Admittedly, this is a new science. So have been several others. Someone must discover them in one way or another. The entire science of electronics was discovered in this way—Maxwell formulated the electromagnetic equations. Hertz made the initial experiments many years later. Marconi reduced them to practice, and then a horde of others came forth with their own contributions. Yet the vast technical holdings throughout the electronic field were initially based upon the mathematical predictions made by Maxwell.”

“You seem well trained in logic and reasoning,” smiled Hansen. “That was a rather sharp parallel. Yet you must understand our feelings in the matter. First, Maxwell was an accredited scientist before he formulated the famous equations. Now if— and remember that big if—*if* this is a truly parallel case, we’d all like nothing better than to give you the acclaim you deserve. On the other hand, you expect us to foster you in your attempt to have millions spent on the experimentation you outline so logically. You must remember, Mr. Barden, that despite the fact that we, none of us, will have a prime function in the disbursement of any funds, we are nonetheless a primely responsible body. The fact that we permit you to speak will carry much weight. It will be a recommendation by us to the rest of the members. As such, we must be cautious.”

“Is there no way for an unknown man to make a contribution to science?” asked Barden.

“Of course. Produce one shred of evidence by experimentation.”

“The cost!” exploded Barden. “You admit that every piece of equipment will require special construction. There is nothing in the Solar System at the present time that will be useful.”

“All of which makes us skeptical.”

Murdoch spoke up. “We’re not accusing you of trying to perpetrate a hoax. You must admit, however, that it is quite possible for any man to be completely carried away by his own theories. To believe in them thoroughly, even to the point of despising any man who does not subscribe to the same belief.”

“That I do admit. However, gentlemen, I implore you to try. What can you lose?”

Hansen smiled wistfully. “About three million dollars.”

“But think of the results.”

Hansen’s wistful expression increased. “We’re all thinking of the result of dropping about three million dollars at the theory of a young, unknown man. It’s a wild gamble, Mr. Barden. We’re betting our reputations on ten pages of mathematics and very excellent logic. Can you think of what our reputations would be if your predictions were false?”

“But they are not.”

Murdoch interrupted. “How do you know?” he said flatly.

“I have—”

“Wait,” interrupted Murdoch again. “Please do not define X in terms of X. It isn’t done except in very cheap dictionaries. You see, Mr. Barden, you are very earnest in your belief—for which we commend you. However, self-determination is not enough to produce a science. Give us a shred of proof.”

“Have you reviewed my mathematics?” demanded Barden.

“Naturally. And we find your mathematics unimpeachable. But an equation is not a flat statement of fact in spite of what they tell you. It is not even an instrument until you deduce from the equation certain postulates.”

“But—”

“I’ll give an example. The simplest form of electronic equation is Ohm’s Law. Resistance equals Voltage divided by Current. Or, simpler: E equals IR . That has been proven time and again by experiment. Your equations are logical. Yet some of your terms are as though we were working with Ohm’s Law without ever having heard of resistance as a physical fact in the conduction of electricity. Your whole network of equations is sensible, but unless you define the terms in the present-day terminology, we can only state that your manipulation of your mathematics is simple symbolic logic. You state that if P implies not Q , such is so—and then neglect to state what not Q is, and go on to state what you can do with P . Unless we know your terms, we can’t even state whether you are dividing by real or unreal factors.”

“I see that you are unimpressed.”

“Not at all. We hoped that you might have had some experimental evidence. Lacking anything material to support your theory—” Hansen spread out his hands in a gesture of frustration.

“Then I’ve been wasting my time—and yours?”

“Not entirely. Will you speak on your paper as an experiment in sheer semantics?”

Barden considered. Perhaps if this could be presented as such it would be better than no presentation at all. Let them think him a crackpot. He’d win in the end. He would give his talk on the basis mentioned, and then, if there were any discussion afterwards, he might be able to speak convincingly enough to start a train of thought.

“I’ll do it,” he said.

“Good,” said Hansen. “The ability to think in semantic symbols is valuable, and every man could use a better grasp of abstract thought. Your paper will be presented next week, here. We’ll put you on the schedule for one o’clock.”

* * * *

Confidently, Tom Barden faced the sectional group of the Terran Physical Society and made his talk. He noted the interest present on every one of the eighty-nine faces. He prayed for a good reception, for he might be asked to present this paper at the international meeting, later. He felt that he was getting an excellent reception, for he had their interest.

He finished his speech and sat down. A buzz filled the room during the recess before discussion, and Barden saw with considerable interest that heads were nodding eagerly. Then the chairman rapped with his gavel.

“There will now be an open discussion,” he said.

The buzz stopped.

“Any questions?” asked Chairman Hansen.

A hand went up near the back, and was recognized.

“I am Martin Worthington. I wish to state that the logic is excellent, and the delivery was superb. May I ask if the pursuit of such impeccable logic is

a matter of training, logical instinct, or by sheer imaginative power, did Mr. Barden momentarily convince himself of the truth of his premise and build up on that basis?"

Barden smiled. "The latter is true. Also, Mr. Worthington, I am still convinced of the truth of the basic premise."

The hall rang with laughter.

When it died, Barden continued. "Not only am I convinced of the validity of this theory, but I am willing to give all I have or ever hope to have for a chance to prove its worth."

"Then," said Worthington, "we are not so much to be impressed by the excellence of semantic reasoning as we have been. True sophistry is brilliant when the murderer admits that his basic premise is false. Sophistry is just self-deception when the entire pattern is a firm conviction of the reasoner."

The crowd changed from amusement to a slight anger. The speaker, Barden, had not presented a bit of sheer reasoning. He had been talking on a theme which he firmly believed in!

Another hand went up and was recognized. "I am William Hendricks. May I ask if the speaker has any proof of the existence of such phenomena?"

"Only the mathematical proof presented here—and a more complete study at home. These were culled from the larger mass as being more to the point. It is my belief that the force fields indicated in equation one may be set up, and that they will lead to the results shown in equation three."

"But you have no way of telling?"

"Only by mathematical prediction."

A third hand went up, a slender hand that was instantly recognized as that of Dr. Edith Ward.

"I wish to clarify a point," she said. "Mr. Barden's logic is impeccable, but it *is* based upon one false premise."

Barden looked at the woman carefully. No one could call her beautiful, but there was a womanly charm about her that was in sharp contrast to the

cold facts she held in her brain. She looked about thirty years old, which included the mental adjustment necessary to compare her with a younger woman. That she was the head of the Solar Space Laboratory was in itself a statement of her ability as a physicist.

And the fact that she condemned his beliefs was as final as closing the lid and driving in the nails.

Period!

"I believe that my own belief is as firm as Miss Ward's," retorted Barden.

"You will find that your premise may be valid, but the end result is not profitable," she said flatly.

"You've experimented?" scoffed Barden.

"I don't have to," she said. "I know!"

"Perhaps by feminine intuition?" snapped Tom scathingly.

Edith Ward flushed, and sat down abruptly, rebuffed and angry. Chairman Hansen arose and tried to speak, but the wellings and mutterings grew from a low murmur to a loud roar that changed slowly from random sounds of anger to a chant of "Throw him out! Throw him out! Throw him out!" as more and more voices took it up. Hansen banged sharply with his gavel and finally the angry cries died again into the dull muttering.

"We are not a rabble," said Hansen sharply. "I shall ask Mr. Barden to leave quietly. We will then continue with our regular business, and forget this unhappy incident."

Barden left amid a sullen silence.

* * * *

That was that. That door was closed to him, finally and completely. Barden went home in a blue funk, and fretted for several hours. Then determination arose to show them all, and he consulted his notes again.

Time—and money!

Doubtless it had been the same cry a thousand years ago, and there

was no doubt that it would be the same stumbling block a million years from now. Perhaps on a different planet of a distant sun if Terra were no longer a running concern, but it would always be the cry.

Well, he thought, considering both, he did not know how much time he had. He knew he had little money. Also, he knew that no matter what he did he would never know about the time factor, nor would he be able to change it much. Perhaps there might be some way to get money. If he was to be forced into the slow methods, and he failed, he would know that he had tried.

He took his mind from the ever-present problem of putting the science across, and started to inspect the new art from a dispassionate standpoint. It was his first try at looking at the technology from the standpoint of a scientific observer. Since the day of the dream, Tom Barden's one thought had been to initiate this development. Now, for the time being, Tom Barden went through his adequate storehouse of alien knowledge to see what other developments he might get out of it.

He grunted aloud. "If they won't let me build a better spacecraft, I'll build a better mousetrap!"

Then he laughed, for the new art was so complex and so well developed, and so far beyond the present science, that there were a horde of little items that could be put to work. The generation of spiral magnetic fluxes, for instance, would far outdo the machinist's magnetic chuck. No plain magnetic attraction this, but a twin-screw of magnetic flux lines throughout the chuck-plate and the metal work, fastening them together. There were means of developing a type of superspeed radio communication along a tight beam that could not be tapped. A simple method of multi-circuit thyatron operation that had both an ionization and a deionization time of a fraction of microsecond or even less. A means of amplifying true square waves without distortion—permitting the paradox of the voltage assuming all values between zero and maximum instantaneously during the rise of the wave from zero to peak. A card-file sorting system capable of maintaining better than three million items and producing any given item with a distribution of near-items on either side—all contained in a desk-cabinet and operating silently within a three-second interval. A magneto-physical means of exhausting vacuum tubes and removing occluded gases from the tube electrodes simultaneously. The latter could be kept in operation constantly during the life of the tube, if need arose.

He fastened on the latter. If it would generate the almost-perfect

vacuum in a vacuum tube, it would also de-air electron microscopes and all other kinds of equipment.

It was simple, too. It was not one of the direct results of the alien science, but it was an item used to develop the science from present technology. Doing it would not introduce anyone to Barden's technology any more than a thorough knowledge of small intricate mechanisms would introduce a mechanician to the field of electronics. But one cannot delve into basic electronic theory without hitting some of the principles of moving machinery.

Thomas Barden made his plans. When the plans were made, he bought tools and parts, and went to work. Knowing every factor helped, and not many days passed before he had a working model of his magnetic vacuum pump.

He knew where to take it, luckily. He had worked for Terran Manufacturing, Incorporated, and because of his connection there he was not unknown to the chief engineer of Solar Electric. Terran was a small outfit, and though Barden felt that he owed it some loyalty, he felt that the mighty Solar Electric could better afford the price he was prepared to ask. Terran would dig it up—but Solar was prepared at any time for that amount.

And the alien race might not wait—

* * * *

He was ushered into the office of Hal Weston after an hour of painful waiting. The chief engineer of Solar Electric recognized him with a slight frown.

"You're the fellow who took off on Miss Ward, aren't you?"

"No," smiled Barden. "She happens to be the one who took off on me. I'm still right, and I intend to prove it!"

"Not here, I hope. Your card stated differently."

"I'm entering nowhere on false pretenses, Mr. Weston. My card states my offer completely."

"You have a means of developing an almost perfect vacuum and simultaneously removing absorbed gas from any object in the inclosure?"

“Right!”

“Interesting, if true. Let’s see it.”

“I have not the equipment with me. However, I have here a ten-inch glass sphere made from a laboratory flask. In it are several coins, bits of graphite, spongy palladium, and some anhydrous copper sulphate. This tube was evacuated by my equipment, and there was no other treatment for removal of extraneous material.”

“May we check that?”

“That is why I brought it along—for your own satisfaction.”

Weston spoke into the communicator on his desk, and in a minute the door opened to admit an elderly man in a white coat. Weston gave him the flask, and said, “Dr. Grasse, this flask is supposed to be totally evacuated and all absorbed gases removed, as well as water vapor. I want a precision quantitative analysis of everything inside of this flask. And,” he grinned, “get the results to me by day before yesterday.”

“Now,” said Weston to Barden, “granting that this is the real goods, how large can it be made?”

“It takes about four kilowatts per liter,” said Barden. “Since the process takes only about ten seconds, the demand is quite high over a short period. But bearing in mind the four KW per liter, you may make the thing evacuate any volume up to the practical limit.”

“Nothing for a home appliance,” laughed Weston. “But if it will drive the spitting devil out of an electron microscope in ten seconds, it’s worth it. What are you asking for rights and royalties if it performs as you state?”

“Mr. Weston, I’m interested in one thing only, and that is to prove the value of my theory—the one that Edith Ward scorned.”

“We’re not interested in your theory, save as a theory,” said Weston.

“I don’t want a position. I want enough immediate money to set up my own laboratory.”

“You’ll make a lot more if you take a small option now and accept a royalty, you know.”

“I’ll sell it outright for five million.”

“I’m afraid that we can’t settle that amount in one afternoon.”

“That’s all right,” said Barden. “Get me twenty-five thousand as an option. Then take ten days to build one or to investigate all you want to. If it does not perform, I’ll return your money. If it does perform, five million goes.”

“Contingent upon Dr. Grasse’s findings,” said Weston. “And providing that you give me your original equipment in order to save some time in making the initial investigations. I’ll have the option agreement and a certified check in this office tomorrow morning.”

Barden smiled. “I *know* what the evacuator will do. I’ll be back tomorrow with the original machine!”

Barden’s original was an un-neat bit of coils and conducting rods, and it looked out of place in Weston’s office. But the chief engineer did not mind. He was gloating over the analysis, and checking the report made by one of the mathematical physicists on the theory of the operation of the evacuator. Both were more than satisfactory.

“You’re in, Barden,” chuckled Weston as he countersigned the option agreement. “Now what do we do?”

“Me?” said Barden. “I’m going to rent me a large empty plant somewhere, and start ordering equipment. I may even be back with a couple of other little gadgets later.”

“If they’re as good as this looks right now, they’ll be welcome.”

“I’ll remember that,” said Barden.

Barden’s tracks were swift from there on. His first stop was to deposit the check in the bank, to the amazement of his teller, who felt forced to check the validity of the voucher, despite the fact that it was certified. To have Thomas Barden, whose average salary had run about a hundred-fifty per week, suddenly drop twenty-five thousand in the bank was—to the banker’s point of view—slightly irregular.

Barden was not able to get out of the bank without having Mr. Coogan, the president of the bank, catch him and ply him with seventeen suggestions as to how the money could be invested. Tom almost had to

get insulting before he could leave.

The next month was a harrowing, mad maze of events. He rented an unused factory, complete with machine tools. He hired seven men to help him, and then ran into difficulties because he had to make the equipment to make the machines. He found that starting from complete behind-scratch was a back-breaking job. Daily, the railroad spur dropped a freight car to be unloaded with stuff from one of the leading manufacturers of scientific equipment. The electric company took a sizable bite when they came along the poles with some wrist-thick cables and terminated them at his plant. He ended up hiring three more men and putting them to making samples of some of the other by-products, knowing that his money would not last forever. The board of review had mentioned three million, but Barden was beginning to understand that despite all new types of equipment, they were still considering the basic physical laboratory as useful. They were right. It was a lot different starting from an empty factory and taking off from a well-maintained laboratory.

The days sped by and became weeks. The weeks passed and became months. And as the months worked themselves slowly past, chaos disappeared and order came from madness.

The by-products of the alien science came swiftly, and they sold well. Money flowed in fast enough to attract attention, and it was gratifying to Tom Barden to read an account of his "meteoric rise" that started from the day he "disagreed violently with the famed Dr. Ward."

If he had wanted money or fame, here it was. But Barden knew the story behind the story, and he also knew that whoever the alien might be, from whatever system, and adhering to whatever culture, the alien would find no fault in his operations. He had taken the long, hard road, compared to the road taken by an accredited scientist producing such a theory. He cursed the delay, and knew that it might have cut his time down to a dangerous minimum.

But Tom Barden had become the genius of the age. His factory had grown to a good staff, all but a few of whom worked on the basic science he needed to develop. It was developing slowly but certainly, and each experiment showed him that the alien mind had been absolutely correct.

Daily he taught school for an hour. He knew every step, but he wanted his men to know the art when they were finished; the final experiment made. They would emerge from this trial-without-error period as technicians qualified to work on any phase of the new science. It gave him no small

pleasure to know that his outfit would eventually be far ahead of the famous Solar Space Laboratory in techniques pertaining to the art of space travel. He hoped to make Dr. Edith Ward sit quietly down and eat her own words—backwards!

His plans were not published, and the outpourings of by-products seemed high enough to any observer to be the sensible output of the many men working there. None but those who worked there knew that Tom Barden knew every detail of every gadget that hit the various markets, and that the work of making the initial models was not the result of many man-hours of experiment, but a few man-hours of building to plans that had been proven and in use.

He was not bothered until the day it was announced that Thomas Barden Laboratories were buying a spacecraft from the government.

The spacecraft was being delivered through the vast back doors of the factory at the same time that Dr. Edith Ward was entering the office doors in front.

* * * *

Barden met her in his office. “How do you do, Miss Ward.”

“How do you do,” she returned with extreme politeness.

“May I ask your business?”

“I am here as a representative of the Solar Space Laboratory.”

“Indeed? And what has the government to say?”

Edith Ward slammed her purse down on his desk. “You fool!” she snapped. “Stop it!”

“Don’t be upset,” he said in an overly soothing tone that was intended to infuriate. It succeeded.

“You blind fool. You’re to stop experimenting in that superspeed drive!”

“Am I?”

“Yes,” she blazed. “And I have official orders to stop it.”

“Miss Ward, you tried to block me before. You did not succeed. Why do you demand that I stop it?”

“Because it will not work!”

“You’ve experimented?”

“I have not because it is dangerous!”

“Then any knowledge you may have about this science is either guesswork or—feminine intuition?”

“You accused me of that before, remember?”

“I didn’t get away with it then,” said Barden. “But I can now. I was unknown then, remember? Well, remember again that I’ve advanced from unknown a year ago to my present stature now. And I might add that my present stature is not too far below your own, Miss Doctor Ward.”

“I have authority to stop you.”

Barden looked down at her with a cryptic smile. “Yeah?” he drawled. “Go ahead and try!”

“And do you think I can’t?”

“Nope,” he said.

“How are you going to stop me?” she blazed.

“I won’t have to,” he said. “Public opinion will. Don’t forget, Miss Ward, that people are still running this system. People are and always have been entirely in favor of the man who came up from nowhere and did things on a big plan. Haratio Alger died a long time ago, Miss Ward, but he’s still a popular idea. When you stop me, I shall appeal to the people.”

“In what way?”

“You wouldn’t be using your feminine jealousy to stall me while the Solar Lab develops the interstellar drive, would you?”

“You—!”

“Nah,” he warned her blithely. “Mustn’t swear!”

“Oh, damn!”

“Now look, Miss Ward,” said Barden quietly, “we’ve had our snarling session twice. Once when you laughed me out of the Terran Physical Society’s big meeting, and now when I tell you that I am big enough so that you’ll not stop me by merely expressing a personal opinion. Since I’m now big enough to command a little respect in my own right, supposing you give me some of yours, and I’ll see if I can find any in me to show you. Take the previous as a partial apology if you must. But I’m wanting to know by what basis you state that pursuing this job is dangerous—or, say, more dangerous than working on high-tension lines, or space travel as it now exists.”

“The theory you present has one danger factor. According to my own interpretation of your theory, the fields you require in your spacecraft to achieve superspeed are powerful enough to cause a magnetostriction in nonmagnetic materials. This magnetostriction is an atomic magnetostriction which causes the alignment of the planetary planes of the electron orbits. The result is a minor chain fission reaction that becomes major after the first nineteen microseconds.”

“My theory is that nothing of that nature will take place,” said Barden.

“Remember,” she said, “despite your dislike of me personally, that I am trained in physics. Therefore, my interpretation of physical phenomena and my predictions of such are more—”

“I agree,” interrupted Barden. “But again do not forget that this is a field that is new to all scientists.”

“Agreed again,” she said with a slight smile. “But I’ve had several trained men working on your theory. They agree with me.”

“Don’t believe that anyone can formulate an opinion on the material that you have available.”

“Oh, but we can.”

“Then you have experimented—”

“No, we have not.”

"Then exactly where did you get this extra information?" demanded Barden.

Dr. Edith Ward looked at Tom Barden carefully. "From the same place where you got yours!" she said, slowly and deliberately.

Barden wondered, *did she know?*

He grinned. "I dreamed mine," he said. "Everything that I've produced emanated from a dream." Then Barden embellished it thoroughly, knowing that the fragrance of his embroidery would sound like a lie to anyone who was really unaware of the truth. "I was invaded in a dream by a gentleman who used a mechanical educator on me and taught me everything that I've produced, everything that I've invented, and every advanced theory that I've had. I have become a scientist of an alien culture that I have full intention of making into a solar science."

"Then it is true," she breathed.

"What is true?" he demanded.

"Tom Barden, listen. Not only do I accept your apology of a few moments ago, but I offer mine. I—was afraid. Just as you were afraid to let the truth be known. I blustered and took my attitude because I could not let it be known that I, head of the Solar Labs, could be influenced by what the learned men would term either dream or hallucination."

"You've had one, too?" he asked quietly.

She nodded.

Tom grunted. "Let's compare notes," he said. "Seems as how we got different stories out of our friends."

Edith nodded again and said, "It was a strange dream that came to me one night about a year and a half ago. I was the soul and master of a mighty castle, an impregnable fortress with five roadways entering. Interpretation of that is simple, of course, the five roadways were the five senses. A... messenger came, but instead of using any of the roadways, he came through the very walls, and warned me."

"Just what was his story?" asked Barden.

"That Sol was a menace to a certain race. This race—never defined

nor located save that it was a stellar race—was incapable of conquering Sol, except by stealth. However, it could be done by giving one smart man a partial truth, and that it was more than probable that this would be done. The partial truth was the technique of a new science that would, if not used properly, cause complete destruction of the system. In the final usage, there would be a fission reaction of whatever planet it was used near. The reaction would create a planetary nova, and the almost-instantaneous explosion of the planet would wipe out all life in the system, and the counter-bombardment of the sun by the exploding planet would cause the sun itself to go nova, thus completing the process.”

“I presume your informant was quite concerned over the possible destruction of a friendly race?”

“Certainly,” she said. “That is why he contacted me.”

“If I were a member of the conquer-all faction of my story, Miss Ward, I would be trying to contact someone here, to warn them of a terrible danger if the science were exploited. That would delay our work long enough for them to arrive, wouldn’t it?”

“There is nothing so dangerous as a half-truth,” said Edith Ward flatly.

“Nor as dangerous as a little knowledge,” agreed Barden. “However, Miss Ward, my story is just as valid as yours. And since neither story may be checked for veracity, how do you propose to proceed?”

“I think you’d better stop!”

* * * *

Barden sat down on the edge of the desk and looked down at her. She was sitting relaxed in the chair alongside, though it was only her body that was relaxed. Her face was tense, and her eyes were half-narrowed, as in deep concentration. Barden looked at her for a moment, and then smacked a fist into the palm of his hand.

“Look,” he said, “that’s apparently what your informant wants. Now, as to veracity, for every statement you make about the impossibility of interpreting theoretical logic into a complete prediction of physical phenomena without experimental evidence, I can state in your own words that you can’t tell anybody what the outcome will be. You want me to stop. If my story is true, then Terra will have interstellar travel and will meet this incoming race on its own terms. Either proposition is O.K.”

Edith Ward muttered something and Barden asked what she said.

“I said that I wondered how many men were too successful in mixing nitroglycerine before they had one smart enough to mail the formula to a friend—before he went up. I also wonder how many men tried Ben Franklin’s experiment with the kite and—really got electricity out of the clouds and right through their bodies and were found slightly electrocuted after the storm had blown over. Number three—novas often occur in places where there seems to be no reason. Could they be caused by races who have just discovered some new source of power? And double-novas? A second race analyzing the burst and trying their own idea out a few years later?”

“My dear young woman,” said Barden, “your attitude belies your position. You seem to be telling me not to advance in science. Yet you yourself are head of the Solar Space Laboratory, an institution of considerable renown that is dedicated to the idea of advancement in science. Do you think that your outfit has a corner on brains—that no one should experiment in any line that you do not approve?”

“You are accusing me of egomania,” she retorted.

“That’s what it sounds like.”

“All right,” she snapped. “You’ve given your views. I’ll give mine. You’ve shown reasons why both your informant and mine would tell their stories in support of your own view. Now admit that I can do the same thing!”

“O.K.,” laughed Barden uproariously. “I admit it. So what?”

“So what!” she cried furiously. “You’ll play with the future of an entire stellar race by rushing in where angels fear to tread!”

“Careful, Miss Ward. Metaphorically, you’ve just termed me a fool and yourself an angel.”

“You are a fool!”

“OK, lady, but you’re no angel!”

“Mr. Barden,” she said icily, “tossing insults will get us nowhere. I’ve tried to give you my viewpoint. You’ve given me yours. Now—”

“We’re at the same impasse we were a half hour ago. My viewpoint is as valid as yours, because there’s nobody within a number of light-years that can tell the truth of the matter. You are asking me to suppress a new science. Leonardo da Vinci was asked to suppress the submarine for the good of the race. He did it so well that we know about the whole affair.”

“Meaning?”

“That true suppression would have covered the incident, too. But the submarine was suppressed only until men developed techniques and sciences that made undersea travel practical. If I suppress this science, how long do you think it will be before it is started again by someone else? How did either of our informants get the information?”

“Why... ah—”

“By trying it themselves!” said Barden, banging a fist on the desk for emphasis. “Suppression is strictly ostrich tactics, Miss Ward. You can’t avoid anything by hoping that if you don’t admit it’s there it may go away. It never does. The way to live honorably and safely is to meet every obstacle and every danger as it comes, and, by facing them, learn how to control them. Shakespeare said that—‘The slings and arrows of outrageous fortune... or nobler in the heart to take arms against a sea of troubles... and by facing them, to conquer them!’ That may be bum misquote, Miss Ward, but it is true.”

“Then you intend to try it out?”

“I most certainly do!”

Edith Ward stood up. “I’ve nothing more to say. You force me to take action.”

“I’m sorry, Miss Ward. If it is battle you want, you’ll get it. You’ll find it harder to quell Tom Barden The Successful than you found it a year ago when you shut off Tom Barden The Theorist with a word of scorn. I’m sorry—I really am.”

“Sorry?” she repeated with disbelief.

“Sure,” he said. “Barden Laboratories and Solar Labs could really go places if we weren’t fighting. Only one more thing, Miss Ward.”

“What?” she replied impatiently.

“Divide and conquer is not uniquely Terran!”

* * * *

After she left, Barden wondered whether his final shot had hit anything. He returned to work and forgot about it, sensibly admitting that if it did he would not be bothered and if it did not he wouldn't stop anyway, and so he might as well get to work. He rather hoped to avoid the possible delay that would follow official action.

Dr. Edith Ward answered him within twenty-four hours. Her word was accepted as valid in many places: it had been the final authority on such matters for some time. Up to now there had never been any defense. Plus the fact that his side of the argument had never been voiced.

Barden didn't scourge the court for their decision. With only one accredited side of the evidence in, they could not take action. So Barden shrugged, grinned to himself, and spent several days in intense study, laying out the program that was to continue in his absence. Then he took the flier for the Terran capital.

It was not a court hearing. It was more of a high-powered debate before a group of qualified judges and investigators. Barden looked into the background of his judges, and was glad that the old system of appointment to investigating committees had been stopped. Though these men were not qualified physicists, they were not the old-line politicians, who took an arbitrary stand because they thought that waving a banner with a certain device would sound good to their constituents. There would be little personal opinion or personal ambition in this hearing, and not one of the judges would sacrifice either contestant on the altar of publicity.

By unspoken agreement, neither he nor Edith Ward mentioned the source of their information. This, Barden admitted, was hard on the female physicist's argument, for she could claim only mathematical analysis, and he could claim experimental evidence.

They heard her side, and then asked for his. He gave his arguments simply, and answered every point she brought up. There was rebuttal and rejoinder, and finally open discussion.

“I claim that this man is not a qualified physicist,” she stated firmly. “As such, he has not the experience necessary to judge the validity of my

argument.”

“I admit that I hold no degrees,” said Barden. “Neither did Thomas Edison. Is Miss Ward convinced that no man without a string of college degrees is qualified to do anything but dig ditches?”

That hurt, for the investigators were not blessed with doctor’s degrees in philosophy; the scattering of LLDs were about half honorary degrees, and their owners, though gratified for the honor, knew how they were earned.

“Of course not,” snapped Miss Ward. “I merely state—”

“If Miss Ward is so firm in her belief, why doesn’t she bring forth some experimental evidence. She has the entire holdings of the Solar Space Laboratory at her disposal. If this is as important as she claims, then the financial argument may be dispensed with. For no amount of money is capable of paying for total destruction of the solar system.”

“I need no experiments,” she snapped.

“Or is Miss Ward trying to tell us that any line of research that she does not sponsor is not worth bothering with? Or is she trying to stop me so that she can take it up? Or has she started— late—and wants me stopped before I get to the answer. That would make the famous Solar Space Laboratory a weapon.”

“Maybe there is none.”

“Then,” said Barden, “why knock out a solar system that is so far away that nothing it does can have any effect upon you?”

“A very valid point,” said Edith Ward. Her eyes opened wide and her jaw fell slack. “Goodness,” she breathed.

“Are we?” he asked hollowly. His expression was one of wonder and amazement.

“Well, if we win, and it works, they’ve hazarded nothing and still have their science. If we lose, they will not miss us in the first place and also they’ll quickly abandon that point.”

“Guinea pigs,” snorted Edith. She stood up and put one slim hand in his. She gave it a hearty shake and a firm grasp. “I’m in—from right now to

the point where the whole cosmos goes up in a cloud of nuclear particles! I'll be at your place in the morning, with my case packed for a six months' trip. Now I'm getting a whole case of feminine curiosity!"

"Yes?" he said cheerfully. "What this time?"

"Well, if your informant was tossing us an experiment, hoping to get an answer, then why did mine warn me? They'll never see a spaceship burst at a distance of a half dozen light-years. They might never really know."

"We'll find out," he said firmly. "There is something about both sides that I do not like!"

* * * *

True to her word, Edith Ward turned up at the first glimmer of daylight with her case of personal belongings. "Where'll I have it put?" she asked.

"Ship Two, Stateroom Three," he said. "I have two crates fixed up, so that if you're right we can still get home without taking to the lifecraft."

One hour later, the two ships lifted on their ordinary space drives, and sped with constant acceleration directly away from the sun. At three times gravity they went, and as the seconds and the minutes and the hours passed, their velocity mounted upward. In both ships, the men worked quietly on their instruments, loafed noisily, and generally killed time. Everything had been triply checked by the time that turnover came, six days after the start. Then, for six more days, the ships decelerated at three gravities while the sun dwindled in size. Between Tom Barden and Edith Ward there was much talk, but no solution to the problem. They covered nearly all aspects of the possibilities and came up with the same result: insufficient evidence to support any postulate.

About the only thing that came to complete agreement was the statement that there was more to this than was clear, and it was suspicious.

The feud that had existed faded away. It may have been the common interest, or if you will, the common menace. For though no true menace had shown, it was a common bond between Barden and Ward against a question that annoyed them simultaneously. It may have been simply the fact that man and woman find it hard to continue a dislike when they have something in common. Nature seems to have made it so. It may have been the thrill of adventure, prosaic as it was to be racing through unchangeable

space for hour upon hour and day upon day with nothing but the sheerest of boredom outside of the ship. Perhaps it might have been that the sight out of any window was exactly the same today as it was yesterday and would be tomorrow or a hundred years from now—or even a thousand, for though the stars do move in their separate paths, the constellations are not materially different. The utter constancy of the sky without may have turned them inward to seek the changing play of personality.

Regardless of the reason, by the time they reached that unmarked spot outside the orbit of Pluto where the ships became close to motionless with respect to Sol—there was no way of telling true zero-relative motion, and true zero was not important anyway—they were friends.

The ships were rather closer together than they'd anticipated, and it took only a couple of hours of juggling to bring them together. Then the skeleton crew of the one was transferred to the other ship. It drew away—and away and away.

"We've got more radio equipment aboard these crates than the Interplanetary Network owns," grinned Barden. "Everything on the darned crate is controlled, and every meter, instrument, and dingbat aboard her will ship the answer back here. There must be a million radio-controlled synchros aboard these ships, and cameras on both to read every factor."

"That's fine," answered Edith with a smile. "What happens if it works like a charm and takes off at superspeed? How do your radio-controlled gadgets work then?"

"We'd lose the ship, of course, if we didn't have a time clock on the drive. If all goes well, the first drive will run for exactly ten seconds. Then we'll have about a ten-day flight to find it again, because it will be a long way from here—straight out!" He smiled. "Of course, if we want to take a small chance, we could turn it on its own primary drive and superspeed it back if all goes well. But the radio controls will be as sluggish as the devil, because there should be about a three- or four-hour transmission delay."

* * * *

The other ship was a minute speck in the distance. Then a ship alarm rang, and the entire crew came to the alert. Barden said, "This is it!" in a strained voice, and he pulled the big switch.

Along the wall was the bank upon bank of synchrometers, reading every possible factor in the controlled ship. Before the panel were trained

technicians, each with a desk full of controls. Behind them were the directors, with the master controls, and behind them stood Barden and Edith Ward. From holes above peeked the lenses of cameras, recording the motions of every technician, and, behind the entire group, more cameras pointed at the vast master panel. The recorders took down every sound, and the entire proceeding was synchronized by crystal-controlled clocks running from a primary standard of frequency.

At the starting impulse, the warm-up time pilot lit, and the relays clicked as one, like a single, sharp chord of music. When the warm-up period ended, the pilot changed from red to green and another bank of relays crashed home with a flowing roar, each tiny click adding to the thunder of thousands of others like it.

“That’s the end of the rattle,” observed Barden. “From here on in we’re running on multicircuit thyratrons.”

The meter panel flashed along its entire length as the myriad of ready lights went on. The automatic starter began its cycle, and the synchroscopes on the vast panel began to indicate. Up climbed the power, storing itself in the vast reservoir bit by bit, like the slow, inexorable winding of a mighty clock spring. Up it went, and the meters moved just above the limit of perception, mounting and passing toward the red mark that indicated the critical point.

As slow as their climb was, each meter hit the red mark at the same instant.

There was a murmur of low voices as each technician gave his notes to the recorders. No scribbling here; the voice itself, with its inflection, its ejaculation, and its personal opinion under stress, would be set down.

Then the master switch went home with a tiny flare of ionized gases—

And, silently, every panel went dead.

* * * *

“Oh!” said Edith Ward in a solemn tone.

“Not yet,” Barden objected. “This may be success.”

“But—?”

“How do you hope to control a radio-controlled drone that is traveling faster than the velocity of propagation.”

“But how will you ever know?”

“When we—”

He was interrupted by the chatter of the radiation counter. Light splashed in through the tiny ports in a brilliant flare.

“Well, we won’t,” said Barden helplessly.

“Won’t what?”

“Ever catch up with it! Not where it’s gone!”

“So—?”

“So we’ve solved that problem,” he said bitterly. “Your informant was right. From what the counter says, that was a vicious number. Well, I guess I am licked, finally. I admit it.”

“Somehow,” said Edith solemnly, “I know I should feel elated. But I am not. Fact of the matter is, I am ashamed that there is a portion of my brain that tells me that I am proven correct. I... fervently wish it were not so.”

“Thanks,” he said. “I wish but one thing.”

“What?”

“I’d have preferred to have been aboard that crate!”

“Tom!” she said plaintively. “Not—oblivion.”

“No,” he said with a wistful smile. “At superspeed, my recording instruments could record nothing. Perhaps if I’d been aboard I could have found out what really happened. There is no way.”

“But what can we do?”

“Build another one, and spend my time trying to find out how to get a recording from a body that isn’t really existent in this space at all.”

“That sounds impossible.”

“Then there is but one answer,” he said, “and that is to go out with it, and hope that by some machination I can control the reaction before it gets beyond stopping.”

“Tom,” she said quietly, “you are still convinced that such a thing is possible?”

“I am,” he said. And then he stopped as his face filled with wonder.

“What?” she asked, seeing the change.

“Look,” he said, his voice rising in excitement. “We caught radiation. Right?”

“Right.”

“That means that the ship was not exceeding the velocity of light when it went up!”

“Yes, but—?”

“Then on the instantaneous recorders there must be a complete record of what every instrument *should have been reading* but did not due to the mechanical inertia of these meters! Right?”

“But suppose—”

“Look, Edith. The theory of the drive is based upon the development of a monopolar magnetic field that encloses space in upon itself like a blister, twisted off from the skin of a toy balloon. Now that field would collapse if the fission started, because the fission is initiated, as you claim, by magnetostrictive alignment of the planetary orbits of the field electrons in the atoms. Obviously, the magnetostrictive effect is more pronounced near the center of the monopolar generator. Ergo, that would go first, dropping the speed of the ship to below the velocity of light by a considerable amount. Then, as the fission continued, spreading outward, the various instruments would go blooey— but not until they’d had... did you say thirteen microseconds after initiation the major fission took place?”

“Yes.”

“Give it twelve microseconds to drop the ship below the speed of light, and I have still one full microsecond for recordings!”

* * * *

Edith Ward looked up in admiration. "And you'll bet your life on what your instruments can see in one millionth of a second?"

"Shucks," he grinned. "Way, way back they used microsecond pulses to range aircraft, and they got to the point where a microsecond of time could be accurately split into several million parts of its own. Besides, I made those instruments!"

"Q.E.D.," said Edith Ward quietly. "But how are you going to develop a monopolar magnetic field without the magnetostrictive effect? The prime consideration is not the field, but the fact that aligning the planetary orbits means that two things tend to occupy the same place at the same time. That isn't—they tell me—possible."

"Too bad the reverse isn't true," he said.

"You mean the chance of something occupying two places at the same time?"

"Uh-huh."

"What then?"

"Then we could develop two monopolar fields of opposing polarities to inclose the twin-ship proposition. Then the atomic orbits would not be affected, since they would receive the bipolar urge."

"Couldn't you change from one to the other very swiftly?"

"Not without passing through zero on the way. Every time we passed through zero we'd end up at sub-speed. The ship would really jackrabbit."

"Oh."

"But," he said thoughtfully, "what happens if the monopolar field is generated upon a true square wave?"

"A true square wave is impractical."

"You mean because at the moment of transition, the wave front must assume, simultaneously, all values between zero and maximum?"

“Yes,” she said, “and it is impossible to have any item operating under two values.”

“That is an existent item,” said Barden with a smile. “Bringing back H. G. Wells’ famous point of whether an instantaneous cube could exist.”

“This I do not follow.”

“Look, Edith,” said Tom patiently. “Any true square wave must have a wave front in which the rise is instantaneous, and assuming all values between zero and maximum for the duration of an instant. An instant is the true zero-time, with a time-quantum of nothing—the indivisible line that divides two adjoining events. Just as a true line has no thickness.

“Now,” he went on, “generating the monopolar field on a true square wave would flop us from one field to the other in true no-time. At that instant, we would be existing in all values from maximum negative to maximum positive, at the same time as zero—*but not truly assigned a real value*. Therefore we should not stop.

“However,” he went on, “that is an impossibility because the true instant of no duration is impossible to achieve with any mechanism, electrical or otherwise. However, the fields set up to make possible this square wave do permit the full realization of the problem. For a practical duration, however small, the value of the wave does actually assume all values from maximum negative to maximum positive!”

She looked at him with puzzlement. “I thought they taught you only this one science,” she said.

“That would have been useless,” he grinned. “As useless as trying to teach a Hottentot the full science of electronics without giving him the rest of physics as a basis. No, little lady, I got the full curriculum, including a full training in how to think logically! How else?”

“You win,” she said solemnly. “Fudge up your true square wave, and I’ll buy a ticket back home in your crate!”

“Thanks, Edith,” he said. “That’s a high compliment. But there’s more of us than we-all. I’ll have to take a vote.”

There was a roar at Barden’s explanation. And his head technician stood up, waving for silence. “There’s enough lifecraft aboard,” he shouted

over the noise. “Anybody who wants to get out can take ‘em. They can make Terra from here in a couple of months in a lifecraft if they want to.”

That got a roar of approval.

“Lucky I had two ships all fitted out,” said Tom. “Also, with all this spare junk for radio-controlling the other crate we’ve got a shipload of spare parts. Probably take about a week flat to tinker it together, but it is far better to do it out here than to go all the way home to Terra—that’d take about four weeks.”

“I wonder why they didn’t think of that square-wave idea,” said Edith.

“Lord only knows.”

“That’s what bothers me,” she said.

“Why?”

“Because we are playing with the other man’s cards, remember. We’re not leading authorities in this art. You got both the square-wave generator and the monopolar field out of them. Now why hadn’t they tried it before?”

“On the theory that no beginner ever has a valid idea? No soap. Maybe they’ve been too close to the woods to see anything but them trees. Of course, there’s another little angle we’ve not considered.”

“Go on. First it was a political difference between factions for and against subjugation. Then I came in and threw in my two cents, which sort of hardened the argument a bit. We didn’t know whether my stuff was shoved in to stop production or to save Sol. We know now that your informant was telling the truth, but not the whole truth. We know that mine was honest, but not why he was. Then we came to the possibility that someone somewhere tossed us a fish because they were afraid to try it. Why the stopper on that?”

“Possibly they want us really to try it out, and not total destruction.”

“But—??”

“Look, Edith. Supposing you wanted to have something developed for you by a consulting laboratory. You’ve done that yourself at Solar Labs. Wouldn’t you give them whatever information you had available?”

She nodded. "Nice explanation," she said solemnly. "Excepting that if I were doing it, I'd not call one man and start him experimenting on one pretext, and then call another member of the laboratory and tell him that the information would lead to disaster."

"In other words, the big problem is motive."

"Precisely. And that's what we're up against. Try to figure out the hidden motives of extra-solar cultures."

"You believe there are two?"

Tom Barden nodded. "Uh-huh," he said. "And all the talking we can do from now until we find out won't help, because we cannot interpret the thoughts of an alien culture in our own terms and hope to come out right!"

* * * *

And that, of course, was that. It was definitely true. Reviewing all the evidence during the next ten days, they came up with a startlingly minute amount of fact. Barden had been given a scientific field because of a political argument; Edith Ward had been warned that the information was incomplete and would lead to disaster.

Build upon those slender bricks, and they tumble all too quickly. Barden's story could be construed as an attempt to get consulting service on a dangerous project without danger to the alien race. Ward's informant might have been an attempt to give Sol a good chance to solve it in safety, but in solution there would be no proof—or even in failure. For there was no way of telling proof from failure at many light-years of distance unless the failure bloomed the entire system into a nova.

And regardless of any theoretical argument, it was still a technical impossibility to construct any spaceship capable of traversing light-years without some means of super speed. Not without a suitable crew to do a job when it arrived.

Then, to reverse the argument, supposing that Barden's tale was correct. The opposing faction might hope to forestall any work by issuing the warning.

But if Barden's tale were correct, why did the so-called altruists offer him a science that was dangerous to pursue?

Unless, perhaps, the political argument was conquest versus dominance. Both factions wanted conquest and dominance. One demanded the elimination of all races that might offer trouble. The other faction might argue that a completely dead enemy offers no real reward for conquest—for of what use is it to become king when the throne is safe only when all subjects are dead?

Yes, there's paranoia. The paranoid will either become king of all or king of none—or none will remain to be king, including himself. That theory is quite hard on rational people.

So went the arguments, and when the ten days were completed, they were no closer to the truth than they had been before.

Not entirely true. For they hoped to drive—somewhere—at a velocity higher than the speed of light.

* * * *

With a firm hand, Tom Barden pressed the start button. The relays clicked and the pilot lights flared red, and then, after the warm-up period they turned green.

“This is it,” he said, grasping the small lever that would start the automatic sequence.

Silence—almost silence came. From one corner came a small muttering and the click of beads. A throat was cleared unnecessarily, for it, like all others, was both dry and clear. A foot shuffled nervously—

“No!” shouted a voice.

Barden looked at Edith Ward. “Still—?” he said.

She nodded and put her hand over his on the lever. “Want me to prove it?” she said, pushing it home.

There was a tinnily musical note that crept up the scale from somewhere in the sub-audible, up through the audible scale, and into the shrilling tones that hurt the ear. It was hard to really tell when it passed above the audible, for the imagination followed it for seconds after the ear ceased to function.

There was a creak that rang throughout the ship. A tiny cricket-voice that came once and changed nothing but to increase the feel of tenseness.

Then—nothing pertinent.

Except—

“Great Scott! Look at Sol!”

The already-tiny sun was dwindling visibly; it took less than three or four seconds for Sol’s disk to diminish from visible to complete ambiguity against the curtain of the stars.

“We’re in!” exploded Barden.

“Hey!” screamed a watcher at the side port. A flare whisked by, illuminating the scene like a photoflash bulb. A second sun passed at planetary distance. It joined the starry background behind.

Barden shut off the drive and the tense feeling stopped.

“Well, we’re in!” he said in elation. “We’re in!”

The scanning room went wild. They gave voice to their feelings in a yell of sheer exuberance, and then started pounding one another on the back. Barden chinned himself on a cross-brace and then grabbed Edith Ward about the waist and danced her in a whirling step across the floor. The crew caught up with them, separating them. They piled into Barden, ruffling his hair and rough-housing him until he went off his feet, after which someone produced a blanket and tossed him until the blanket ripped across. Then they carried him to the desk and set him unceremoniously across it, face down, and left him there to catch his breath.

“Like New Year’s Eve,” he grunted.

The crowd opened to let Edith through. She came toward the desk as Tom unraveled himself and sat on the top. “A fine bunch of wolves,” she chuckled gleefully. “Tom, have you ever been kissed by twenty-two men?”

“Wouldn’t care for it,” he said. “They’re not my type. And besides, it’s twenty-three.” He made the correction himself.

Then things calmed down. They were—as one man put it—“a long way from home!”

“But what I want to know is why we can see the sun when we’re going away from it at several times the velocity of light?” demanded Tom.

“Well, your own problem answers your own question,” said Edith, patting her hair back into place. “Remember the square wave problem? Well, in the transition period, you are simultaneously obtaining all degrees from maximum negative to maximum positive, including zero. Zero is where the ship, being out of space-warp, must drop below the speed of light. The sun receding is due to the persistence of vision that lasts between transition periods. Lord only knows how far we travel between each transition.”

“We can find out,” said Tom. “I’d hoped to develop a velocimeter by using the doppler effect, but that’s not possible, I guess. I’d suggest that we find out where we are, and then head back for Sol. Might as well get for home and start the real thing cooking.”

“What was that sun we passed?”

“I’ll not tell you now,” said Tom. “One of the nearby stars, but I don’t know which. We might stop, though, and take a closer look at an alien star from close up.”

* * * *

The ship was turned and the drive was applied until the star expanded into a true sun. At about a billion miles, they stopped to inspect it sketchily. They were not equipped to make any careful observations of stellar data.

They watched it, like sightseers viewing Niagara Falls, for an hour. There was really nothing to see that could not be taken in at a glance, but the idea of being near to one of the extrasolar systems was gratifying in itself.

Then, as the realization that they could watch that silently blazing star for years without producing anything of interest or value, Barden called a halt to the self-hypnosis, and they resumed their stations. The drive was applied again, and they passed the star, picking up speed as they went.

Somewhere ahead was Sol, lost in the starry curtain of the sky. But they were not lost, for they were headed in roughly the right direction, and eventually Sol would emerge and stand out before them in plenty of time to correct their course.

The entire group, their period of strain over, stood idly looking out the ports. There was nothing to see save that star, passing into the background. But their work was finished, and they were loafing. It looked like an excellent time to just stand and do nothing. Barden was inspecting the superdrive unit with a paternal smile, noting with some gratification that it was even smaller than the normal driving gear of the ship. Dr. Edith Ward had gone to her room to repair the damage done during the celebration. Jerry Brandt, the manual pilot, was sitting idly, playing a senseless game with the myriad of switches on his disconnected board as the autopilot controlled the ship.

Two of the crew were matching pennies in front of the meter panel, and three more were watching a chess game between two of the others, who were using various-shaped radio tubes as men. All was set for a quiet journey home.

Their first alien sun dwindled and was soon lost. Before them, the stars were immobile until one at near center swelled visibly. Jerry Brandt idly kicked his switches into neutral and switched over to manual drive long enough to correct the course; the swelling star and the rest of the sky swiveled about the ship until Sol was on the crosshairs.

This time there were no days of flight from Terra to beyond-Pluto. Their ship plunged sunward at a dangerous pace, dropping below the speed of light at the tick of an instant at about the orbit of Jupiter. At under the speed of light, but far above the normal speeds of spacecraft, the ship headed Terraward, and slowed as it went. The superdrive was turned off a few thousand miles above Terra, and the rest of the voyage to the surface of the planet took actually longer than the quick run across interstellar space.

They landed in the huge construction yard at the Barden Laboratories.

A success—

“Yeah,” said Tom Barden dryly. “A success. But who did what to whom and why?”

Edith Ward nodded in puzzlement. “You don’t suppose it was just some nearby star wanting to observe a nova at close proximity?”

“Seems to me that wouldn’t tell ‘em anything,” said Barden. “That would be a completely artificial nova, and lacking of true data. Of course,

I'm no astronomer and don't know beans about the subject at all. I admit it. I'd be lost trying to find my way home from out there if I couldn't retrace my steps. I wouldn't recognize Sol from Sirius if I were on Arcturus, and I'd not know how to go about it."

"Spectral lines, and stellar data—" said Edith.

"I have a hunch that whoever—in fact I'm certain—gave me this information was uncertain as to whether I was in the next stellar system or halfway across the universe."

"That would depend upon the range of whatever gadget they used to implant the information—and whether it was beamed. Also, Tom, there's another interesting item. You say there was a mental conversation in your case. That means that the velocity of propagation of that medium is instantaneous! Either that, or he was right here on Terra."

"Got me. But if he were right here, why didn't he meet me in person, or make a future date?"

"I pass," said Edith. "I have a fair working knowledge of astrogation. I wonder if it is complete enough for my fellow to have positioned us. On the other hand, mine came strictly as information, without chitchat. Like someone handing me a telegram full of data."

Barden considered the problem a moment as the girl went on.

"But my knowledge of astrogation is merely the angular constants of the marker stars and how to recognize them from their constellation positions. He might be able to set up a model of this hunk of sky and reach the right answer—only if he sought the information, however. I did not give it, and he seemed uninterested—as I say, it was like getting a phonograph record or a radiogram."

They entered Barden's office and as they did, Tim Evans came running in. Barden nodded and said: "Miss Ward, this is Tim Evans, my head mathematical physicist. Tim, this is Dr. Ward."

They acknowledged the introduction, but Tim was excited. "Look, Tom, did it work?"

"We had trouble on Ship One, but we fudged Two up and made it sing like an angel." Barden explained sketchily.

“Oh,” said Evans, his face falling slightly.

“Why?”

“Because I’ve been thinking along another line and I’ve come up with another kind of superdrive. If yours didn’t work, this one is certain.”

“Yes? Go on.”

“No need to,” said Evans. “Yours is far more efficient and less bulky. Mine would get you there, but it would take up a lot of extra space. Besides, it doesn’t offer the chance to see where you’re going directly, but only through a new type of celestial globe. Furthermore, it wouldn’t move as fast. So forget it.”

“New type of celestial globe?” asked Barden. “We could use it, maybe. We can see out all right, but that’s due to the intermittence. The present celestial globe system is an adaptation of the pulse-ranging transmission-time presentation, you know. When you’re running above light the globe is useless.”

“But look, Tom,” objected Edith. “You won’t need one at supers peed. You’ll not be maneuvering, and if you hit something a few million miles ahead in the globe, you’re past it before anything could work anyway.”

“Admitted,” he said. “But I’d like to have one, anyway. Look, Evans, how does this thing work?”

“On a magneto-gravitic principle. Gravity, I am beginning to understand, is not a matter of wave propagation at all. It is a factor of matter—and it is either there or it isn’t.”

“I wouldn’t know.”

“Well, that’s the theory. So we utilize an artificial manifestation of gravity, beamed. It also seems that gravitational effects are mutual. In other words, the attraction between Terra and Sol is the combination of mutual attractions. So our beam, increasing the attraction between the object and the beam, also causes the increase of the attraction between the beam and the object. For beam read transmitter; I always think of the radiating element as being the beam instead of what I should. Anyway, when the attraction is increased, it affects a detector in the radiating elements. That gives you your indication.”

“How about ranging?”

“Still a matter of the inverse-square of the distance. We know accurately the attraction-factor of our beam. Whatever reflects will have distance-diminishment which we can measure and use.”

“But it is also proportional to the mass, isn't it?” asked Barden.

“It'll take a nice bunch of circuits,” grinned Evans, “but we can check the mass with another beam's attraction to it and differentiate. An integrating system will solve for range on the basis of mass and distance. The celestial search and presentation systems will be the same.”

“O.K.—how about communications?”

“Sure,” said Evans.

“You rig 'em up,” said Barden. “And Tim, tell Eddie to refurbish the ship. We're going out again. And I want three or four of the original space drives put aboard as working spares.”

“Working spares?” asked Evans.

“Yeah, mount 'em on girder frameworks complete with atomic units. I'm going to prove the next point.”

“What next point?” asked Dr. Edith Ward.

“I want to find out if your informant was telling the truth,” said Tom Barden. “Interested?”

* * * *

Edith shuddered a little. “That's a big responsibility,” she said. “You intend to destroy a whole stellar system?”

“I don't know. I'm going to see whether that stuff would actually start an overall sustaining fission reaction in a planet after the minor fission got underway. If it does, then it is no worse for me to blow up a dead system than it would be for my little informant getting us to blow up ours.”

“You sound rather positive about it.”

“One or the other,” said Barden. “I'm bothered. No matter how you

look at it, we... or I, was like a small child given matches to play with in a nitrocellulose storehouse. Unless you'd come up with yours, I'd have most certainly blown us sky high."

"Right. I think we owe my friends a debt of gratitude."

"I'll agree to that. But for this test, we'll ramble until we find a relatively unimportant star with only one or two planets, devoid of life. Then we'll try it."

"But even with dead system, you're taking a lot upon yourself."

"How?"

"There will, from that time on, be a monument to the memory of Thomas Barden. You'll be the object of argument and of both admiration and hatred. Flag-wavers will either point with pride or view with alarm, depending upon their politics. Why not wait until the thing is discussed?"

"Forever? No, Edith. None of us can afford it. We must know. If this works, Sol has a rather dangerous weapon against any possible conquering races in the galaxy. Regardless of what has gone before, Sol is in a position to go out and make her mark upon the galaxy. It is best to go prepared, and if we fear nothing, we neither need fear subjugation."

"But destroying a stellar system—"

"Who'll miss it?" he asked.

She looked blank. "I don't know," she said. "It just seems so big. It doesn't seem right that one man should be able to go out and destroy a stellar system. One that has been stable for millions upon millions of years. Superstition, perhaps," she said thoughtfully. "I'm not a religious woman, Tom. I am not sacrilegious, either. Somehow, somewhere, there must be a God—"

"Who made the universe. With a density of ten to the minus twenty-eighth power and an average temperature of matter about twenty million degrees? For the benefit of Terrans. Well if so, Edith, He is willing to see one of His experiments used to further mankind in his struggle. *Ad astra per aspera*, my dear!"

Edith agreed solemnly, but was obviously unconvinced.

“Look,” he hastened to add, “if all this was put here for the benefit of Terrans, we’re expected to use it. If we are incidental in some grand plan encompassing a billion suns in a thousand galaxies, loss of one sun won’t matter.”

“I suppose that’s logic,” she said. “I’d prefer not to talk about it too much. I know it should be done, but it still seems all wrong, somehow.”

“We’ve got to know. Remember, there’s a lot of truth in the whole thing,” he said thoughtfully. “And also a lot of untruth. They did tell me the way to interstellar travel—in a slightly staunchwise fashion. They told you about the disintegration-process. Now, darn it, Edith, did they scare us away from planetary tries because they knew it would damage the system, or for another reason? How do we know the thing would ruin a planet and ultimately the system? Answer, we do not.”

She nodded glumly. “I suppose that it is a step toward the final solution.”

“Right, and as soon as we can get a nice system, we’ll try it!”

* * * *

“This is Procyon,” said Tom Barden. “Or so they tell me. I wouldn’t know.”

The star was a small disk almost dead ahead; its light shone down through the fore dome of the ship augmenting the lights in the observation room.

“Sentiment again,” she said. “I’d prefer a system more distant.”

“If this has the right kind of planets, Procyon it is,” said Barden flatly. “If it has planets unsuited for life, what possible good can it do Terra? Plus the fact that the instability that follows the nova for a few years will act as a nice signpost toward Terra from all parts of the galaxy. Remember, men will really be spreading out with the new drive.”

“Again you’re right. But have you no sentiment?”

He looked at her. “Not when it interferes with practicality—”

They were coasting along at half the speed of light, under the superdrive. On all sides were running cameras. One coast across the system with the moving picture cameras covering the sky would bring any

planets into ken; the parallax of planetary bodies would show against the fairly constant sky. There was also visual observation for interest's sake.

At the far side, the ship came to a stop with respect to Procyon, and while the films were developing, Jerry Brandt swapped ends and ran the ship nearer the center of the system. Procyon, from one side port, looked about as large as Sol from Terra, and it seemed about as bright and warm.

It was here that they met the alien ship. It came from nowhere, and passed them slantwise at a terrific velocity. As it passed, a stabbing beam darted once, and the beam-end burst into a coruscation of sheer energy.

"That," blubbered Barden, "was close!"

Jerry Brandt swore thoroughly, and whipped the ship around slightly, cramming on the superdrive but keeping the drivers below the speed of light. He set his switches carefully, and seconds later the alien ship appeared for one brief instant and then was gone. While it was there, eye-visible in the sky, one of the ship's own cutting planes sheared out and sliced the driving tubes from the bottom of the ship.

Then it was gone, and Brandt fought the switches, stopping the ship.

"What—was that?"

"We've got a nice way of retaliating," said Barden harshly. "We use the intermittent generator of the superdrive but we stay below the velocity of light. Jerry has calibrated the intermittence and the rep-rate to a nice precision. We appear in true space, slash out, and disappear again to reappear God knows how many miles farther on. Now we'll go back and see whether that bird wants more." He spoke to Jerry. "Take care!"

"Easy she goes," replied Brandt. "Did you see that joker? He tried to ruin us!"

* * * *

They came up as the inert alien came into view. It stabbed again with that beam, but missed. Jerry Brandt swore again and cut the ship from end to end with his cutting plane. This time there was no response save a swirl of smoke from the cleft sides of the ship.

"We've used these to cut asteroids into stove lengths," he told Barden sharply. "I wonder how many of them have been used likewise on

some hapless enemy.”

“I don’t have any way of knowing,” said Barden. “And I don’t care whether it is a proper weapon to use or not. It worked.”

“What are you going to do?” asked Dr. Ward.

He smiled at her. “He didn’t like us—apparently for no other reason than we were alien. If he’d come in peaceable, we’d have made talky-talk. As it is, he fired first, but not too well. Now we’ll just grab his ship and see what he’s got, who he is, where he’s from—and possibly why.”

It was a small ship outside, in space. But getting it into the vast cargo hold of Barden’s ship required some more trimming. The alien ship finally lay in eight sections, stacked. The cargo hold was now jammed with alien ship, and much of the spare equipment and supplies were jettisoned.

Then they went in warily to examine the alien. They found the alien crew—four of them. They were spacesuited, but unconscious.

“Hope they breathe air at twenty percent oxygen,” growled Barden. They opened the suits, and laid the unconscious aliens on tables in one of the operations rooms.

They were squat and wide, almost humanoid save for large eyeballs under the closed double lids. Their noses were almost nonexistent, and each hand splayed wide with seven stubby fingers. These hands were symmetrical, but despite a thumb on either side, the Terrans doubted that they were more dextrous than Terrans, because of their shorter fingers.

Their shoulders were very wide, but also quite thin, indicating a long, unfavorable leverage with less muscle.

“Ugly-looking—” started Jerry Brandt, who shut himself off as he remembered Edith Ward.

She looked up at him and flushed. “They are,” she said with a slight smile. Brandt blushed with embarrassment and spluttered incoherently for a moment. The pilot might have spluttered for some time had not the foremost alien stirred, causing a diversion.

They crowded him as he awoke and looked about him. His expression was undecipherable, though there was quite a change in facial composure as he saw the kind of white-faced animals that surrounded him.

He looked, and then he clutched rapidly at a device on his belt. Barden swung a fist and caught the creature on the forearm, causing him to drop the half-drawn weapon. Brandt stooped over and picked it up, and the rest of the crew proceeded to disarm the other three.

Edith found a length of wire and made a loop of it. She held it in front of the alien.

He relaxed, splaying his hands and holding them wide from his body. Her action had been understood, and the creature did not want his hands tied.

“Jerry,” said Barden. “Set the controls for superspeed towards anywhere in the universe, and get us away from here.”

“Solward?”

“No. He should get as little information as possible.”

Jerry left, and the ship soon turned slightly and started off. Barden waved the creature to the port and pointed out Procyon, which was diminishing swiftly. The alien grew excited, and made wondering motions.

“That... thing... knows what the score is, partly,” observed Edith.

“That... thing... had better behave,” said Barden flatly. “And while we’re wondering about him, I hate to think of him being called a Procyonian.”

“Call ‘em *Pokeys*,” said Tim Evans.

“O.K. Now let’s show him his ship.”

The alien’s excitement changed to dismay as he viewed the wreckage. He looked at it, and then as if wiping it off as finished, he turned away.

There was but one cargo lock in Barden’s ship. And, though the alien craft had been trimmed, and considerable of it trimmed away and left, it was still packed in with most of the remaining spares. These included the four superdrive motors, mounted on their girders with the atomic units. The alien saw these, and went over to inspect them, and Barden let him go.

What possibly could have been familiar they did not know. The

chances of an alien gasoline engine being instantly recognizable as such by a Terran is problematical. A simple electric motor might be—especially if connected to a storage battery, or even by a wire cable to a wall outlet. Doubtless, the electron tube would be recognized by a spider-man from the other end of the galaxy, for the handling of electrons must be similar no matter where they are used. There will be cathodes and grids and anodes and connecting prongs, wires, or terminals.

The unprotected superdrive motor was not encased. It had been a job intended for test-stand operation and, therefore, it could be inspected fairly well. Something about it was familiar, and one spot of familiarity was sufficient for the alien to reconstruct the rest.

He nearly exploded with frantic gestures. He ran to Barden— his run was a swift waddle, due to the wide leg-base—and clutched Tom's arm. He pointed to the cut-apart spaceship and indicated that he wanted to go up into that pile to find something. Barden shrugged and nodded, and then followed the alien.

* * * *

It was difficult for Barden, for the alien was sure-footed in his climb up the jagged edges to one section near the middle of the pile. He disappeared inside and found a piece of equipment, which he brought out. He set this upon the floor and returned with other equipment, which he added to the original piece. Then taking the whole bunch in his arms, he led them up to the operations room.

Here he put it on a table. Then he opened the main piece and drew out a two-pronged plug which he waved in Barden's face, made plugging gestures into the blank wall, and then made searching motions.

Barden pointed to the nearest convenience outlet, and the creature waddled to it with the rest of his equipment.

He probed into the openings with test-leads and read the results on meters of his own. He showed Barden exactly what the meters should read.

Barden nodded and they set to work matching their line-current to the alien's specifications. It turned out to be one hundred ninety-three volts at seventy cycles. Meanwhile, one of Barden's men replaced the alien's plug with a Terran type, and they inserted it gingerly. The alien put a temple-set over his head, and handed one to Barden.

“This,” came the thought, “is an instrument used to extract information from enemies. It will serve as a means of communication.”

“Why did you fire on us?” thought Barden.

“You are alien. We are at war, in fact, have been at war with the devils from that star—” and here came a mixed-impression of a distorted constellation that was not familiar to Barden, who was not too familiar with astronomy, anyway, and so he passed it over. He stopped the alien momentarily, to send one of the men to tell Jerry Brandt to return to within a light-year or so of Procyon.

“But,” continued the alien, “you are not using—that?”

“Not exactly,” said Barden.

“No, for that means death.”

“We were going to try it out,” was Barden’s calm thought.

“On— NO!” came the terrified reply.

“Well,” returned Barden, “we’re never pleased with red-hots who shoot at us!”

“But an entire system?” came the pleading exclamation.

“Filled with people of the same ilk,” returned Barden unimpressed.

“But even warfare must not be annihilation,” objected the alien. “For of what value is a dead enemy?”

“They are no longer any bother,” Barden grunted. “We dislike being bothered, and our will happens to be that we want to go wherever we choose at any time we please. A favorable attitude upon the part of any other culture is one that permits us our will. A dead culture will never obstruct us, for one thing. It will never revert to its original attitude of belligerency, for the second thing. And for the third thing, alien, with the interstellar drive we have, we can find those cultures in the galaxy which see exactly as we do; therefore it is to our advantage to eliminate any malcontents right now.”

“But what do you intend to do?” demanded the creature.

“My system has been the tool of some other culture. The purpose is not clear, though the outcome might have been quite disastrous. I intend to find both that culture and their reasons and extract full payment!”

“But how—?”

Barden smiled in a hard manner. “I intend to plant one of these unprotected space motors on one of your planets,” he said. “That is for my own protection. Then we’ll collect one of the enemy, and do likewise with his system. Then you and he will have your little talk—and you’ll first call off this war, or you’ll both be enjoying novas in your own backyards. It’s about time that people learned how to get along with one another!”

“But I have little authority.”

“I have,” smiled Barden in a completely self-satisfied manner. “I have all the authority necessary to demand that your superiors and your scientists meet their contemporaries of your enemy—and peacefully.”

“What are you going to do with me?”

“Do you know both languages?”

“No,” answered the alien. “That’s why we use the mentaphone.”

“What do you know of the space motor?”

“Very little. It is, as you know, dangerous. We are forbidden to experiment on it.”

“You know it is dangerous?” asked Barden.

“We have excellent reason to believe so. Our studies have been purely theoretical. But tell me, how do you hope to accomplish this mission of yours?”

“One of you four will be permitted to land and carry our message. One of the enemy race will do likewise.”

The alien disagreed. “You can never land,” he said. “You cannot even approach.”

“No?” said Barden harshly. “Well, we’ll plant our motors first. And you’ll use whatever you have to communicate with them and you’ll tell ‘em

all. Then, my squat friend, there had better be a ten-thousand-piece brass band playing the Solar Anthem as we land! *Or else!*”

* * * *

Tom Barden sat in an easy chair, relaxing. He was watching the others, who were glaring at one another and trying to conceal their thoughts. Lanthar—he of Procyon—and Grenis of Sirius both knew that the Terran who sat there so easily was not fooling.

“Now,” said Barden, “what’s the story? I’ve told you what happened, and why I’m angry. This warfare must stop, and Sol, too, must be protected. Only by complete agreement can all three of us occupy the sky in safety. Otherwise, there may be but two of us—and perhaps only one. You—Lanthar—what do you know of the space motor?”

“I’ll tell,” said the one from Procyon. “I’ve been in disagreement with the plan, but outvoted. We discovered it and its danger. We’d have worked upon it, but we could not permit it to be used in space because of attack. We could not try it on a planet, because of the danger. Remember, we were at war, and could afford to take no chances. There was a large faction which outvoted me—and then they permitted its theft from a false laboratory. It is amusing, Terran, to go into the full details of how this laboratory was set up, run, and finally thefted. We actually treated it as though it held one of our high secrets, but we were lax only in the total number of guards we used. They—succeeded.

“The purpose of this was to permit them to try it out. That would mean their destruction. I’ve insisted that a dead enemy is of no value—”

“We follow your reasoning, all of us,” said Barden. “And go further. We state that an enemy is a total loss *per se*, and we avoid the expense. Now, Grenis, you stole the plans?”

“We did,” said the Sirian. “But there was something wrong. Not only did we steal the plans, but we inspected their plant. While they were setting up their laboratory they forgot to include some means of accepting and dissipating enough transmitted power to make the work look real. There was a quite large discrepancy between the power used and the power we calculated would be needed to carry on such a program. So we became suspicious—which started when we were able to penetrate the place in the first place.

“What we found was interesting,” said the Sirian. “But we were

suspicious. We studied it carefully, and it seemed perfect. But, Terran, came again the suspicion. For if this were so perfect, why weren't they using it?

"Because it might be a trap," he went on. "And like he and his, we dared not establish a space laboratory because of the fear of attack. So we were completely stopped."

Lanthar grunted. "So he and his bunch went to work on a method of contacting other people at a great distance," he said. "It took them a long time, and they were without success at all until they succeeded in contacting you."

"That is correct," said Grenis, making an apology. "We have detectors capable of working on the gravitic effects. A nova would disrupt both the magnetic and the gravitic levels sufficiently to warn us immediately. And we knew that any race which was not suspicious of an enemy would try it—"

"I see," said Barden angrily. "Then we have you to thank? And you," he said to Lanthar, "knowing that this was done, tried to protect us?"

"Not basically," apologized the man from Procyon. "You see, we did not know you—nor even where you were in the galaxy. You meant nothing to us at all then, except as a consulting service for our enemy—completely hidden and quite safe. We did not want you to go into nova because that would have warned them. We knew that after a period of time, with no sign of failure, they'd try it!"

"A fine pair of stinkers," sneered Barden. "Well," he said with a laugh, "Now you'll co-operate with us all, or else! But Lanthar, how can you be certain that nova will occur?"

Lanthar of Procyon stood up and smiled tolerantly. "Me—?" he said. "I know only what I've been told about it. Strangely enough, it came to me in a dream, too!"

* * * *

Somewhere in the galaxy, two scientists consulted their time predictions. They agreed silently that sufficient time had been permitted, and that their detectors had shown no warping of the magneto-gravitic continuum. Despite the questionable value of negative evidence, they felt safe.

“I doubt all new arts,” said one of them, thrusting the switch home,
“especially when I know not the source.”

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* * * *

I was saved from over-running my writing by a note from a friend in the spring-summer of 1946.

Let's backflash a moment. Before the war I'd been with the Automobile Radio Laboratory of Philco, in Detroit. Many of the older members remained with Philco and went to the home plant in Philadelphia, and were still there. Now, my first story had been written before I left Philco, although it was printed later, so several members knew of the Venus Equilateral tales, and—in this spring-summer of 1946, I received a letter forwarded from *Astounding* from one of the department heads from the group in Detroit. He suggested, completely unofficially, of course, that Philco was heading for their return to entertainment radio, and they were looking for those of us who had experience in designing radios for high mass production at minimum cost. If I were to turn up by person or letter, the chance was quite high that I would be interviewed, not as an applicant, but to find out which section I could be most useful in.

Well, that took care of Boston. Next stop: Philly!

Unfortunately, in Philadelphia, there were no sites of historic interest to be rented, and even if they'd wanted to rent one, I think Independence Hall is a bit too grand (to say nothing of being too expensive) for George O. So the worst thing about living in Philadelphia is living in Philadelphia in the Germantown YMCA, which is one of the best, but still YMCA, a sort of minimum-security prison. So, when not at work, I spent as much time out of it as possible.

Here I must profess a bit of pardonable ignorance. Let's backtrack to 1945 in Boston. I'd been writing science fiction since 1942 and did not so much as discover that there was an organized fan movement. But, as things settled down after the war, rumors and notices, and plans, began to increase that Los Angeles was going to hold the first fan convention after the war. I would have given my eye teeth to make it, but as it happened, that particular autumn I was so busy running from the YMCA in Germantown to the site of historic interest in Boston, and working on a new job at Philco, that I couldn't have made it even if I'd had the cash.

But now I was in Philadelphia, and, as time went on, with things less flurried, L. Sprague de Camp suggested that I might like to visit the Philadelphia Science Fiction Society, which held clubhouse meetings once

each month. And there I discovered that the next convention was to be held in Philadelphia, and (cliche!) the air was abuzzing with plans.

John W. Campbell was going to talk on atomic energy, Willy Ley was going to talk on rockets. I was asked to talk on anything.

Doc Smith was to be there, and there was lots of talk about what was going to happen when EE met George O, since a lot of the fans had the notion that I'd been in competition with Doc Smith, having been handed the baton by Campbell. For those of you who are not members of "First Fandom" and couldn't remember, John and Doc had some fun out-doing one another. Where Doc invented *inoson*, the alloy that "had the ultimate theoretical physical strength," Campbell went on to use something with ten times the theoretical, and they upped their power until one had the power of one sun, which came out in the jargon as "One Sol," as the unit, whereupon the other had his electric meter running in ones, tens, and so on Sols.

But John was no longer writing, and E. E. Smith had had little competition in sidewising science into fiction. But here I was, crassly warping facts into fiction, sidewising them nicely to the point that John R. Pierce, Ph.D. (wrote under the name of J. J. Coupling), pointed out that *IF* a matter transmitter were to be built it would work as George O described in "Special Delivery," *BUT* it had better have a transmission bandwidth that ran from zilch up through the gamma-ray frequencies.

So the local fans looked forward to the confrontation.

It happened on Saturday afternoon, when John was lecturing as Guest of Honor. I was sitting in the back of the hall, several rows behind the last row of filled seats. No, I wasn't aloof. But I was present for protocol and social reasons, and since I'd heard John discuss atomic and nuclear power before, I didn't find it necessary to sit in the front row to hang on his words.

Here I must point out that the first of the big cons was yet to come. The attendance at the first "Philcon" was in the shooting gallery of about a hundred and fifty, plus or minus a lot of stragglers. So into the back of the filled rows, a gentleman enters and talks, in very low whispers, to someone beside him. The someone-beside-him nods, turns, and points to me.

Thereafter, if one can *walk sotto voce*, the gentleman practically crawls out of sight toward me, comes up beside, grasps my hand, and says, "So you're George O. Smith. Glad to meet you. I've wanted to tell you how much I've enjoyed your stories."

End of dust-up. Beginning of a long session of mutual admiration discussions that went on past the end of John's lecture (when he joined us) in through dinner, and into a party in my room (not at the YMCA!) with most of the professionals there and half of the fans trying to get in.

My part in this convention proper was small. I had a talk prepared which showed the difference between science fiction and science science, generally based upon the truth that Morse and Bell and Marconi and Einstein, and you-name-him did not eat a meal of melted cheese on toast, have nightmares, and come up with their inventions and discoveries in the morning.

They scheduled me before Willy Ley, and being ahead of the main speaker is worse than following the dog act in vaudeville. The trained dog act is put on last, to chase the audience out so that they can fill it with new customers, and if you follow the dog act, you're acting to an empty house. To be put on *before* the main speaker is acting to a bored house who are there because they came to hear the main speaker. What they wanted to hear, and "they" included me, was Willy talk about rockets. So I flubbed through a rapid cut-off (I was later told that it sounded as if I was giving an outline, of something) and got the devil out of the way as soon as I could. Whereupon Willy, eyeballing me with Teutonic Disgust, says, "Some people take the easy way out, don't they *Mister* Smith!"

Willy, forgive me, but I did *walk* off the stage. I wasn't dragged off, nor given the hook, nor the bell, nor tarred and feathered for keeping the customers bored while they waited.

So that was my first convention, and after that it was back to Philco for the day and to the YMCA at night, and looking for an apartment, and writing now and then, and weekendng elsewhere.

I have a personal opinion that the state of New Jersey was invented by Benjamin Franklin as a buffer zone to prevent the city of Philadelphia from becoming the sixth borough of New York. In this buffer state, Campbell lived in Westfield, and L. Ron Hubbard (having been discharged without ever serving as military governor, and gone off on one of his adventures, and returned) living in Elizabeth.

My chasing from Philly to New York took on side trips. John had discovered "high fidelity," and was trying to see what he could get from the old 78-rpm shellac records without ripping off the roof with needle hiss, and wanting to know more about high cut-off filters. And Ron was interesting to

talk to, provided one had the good sense not to go into one of his schemes.

John had another habit that he used on all of us. In writing, one often tosses in a throw-away for background. But if the throw-away was interesting to John, some time later he would mention it in one of his eight-page letters as an idea. In the last tale of *Venus Equilateral*, an epilog, mostly (“Identity”), I’d mentioned a period of warfare where both armies had used duplicators to expand their troops, but dropped the idea right there after mentioning that there had been trouble after the end of the war when thousands of identical troops tried to go home to their wife or sweetheart. So I had my own idea shoved back at me, and what could I do for two cents a word?

So this is the story of the man who built a better mousetrap.

No, the world did not beat a path to his door, nor shower him with riches and fame. Instead, it—well, the best way to tell a story that lies within a story is to tell it the way it happened.

Act One. The scene, the cafeteria at Philco during a coffee break.

There are two main characters to this act. One is a senior scientist by the name of Cliff Hoagland, who was a long-time reader of *Astounding*. The other is the inventor of the mousetrap, who was to have a brief moment of dubious fame:

“Congratulations, George O.”

“Thanks, Cliff. But what have I done now?”

“You are the first writer to get a cold-blooded dirty story into *Astounding!*”

So here it is:

Rat Race

“You’re nuts,” came the reply, but the voice on the telephone was jovially reproving, rather than sarcastic. “I can’t do anything about this order.”

Peter Manton blinked. “But it has a Four-A-One priority.”

Brannon nodded—invisibly, of course—and said, “Sure, you have a top priority. Anything your lab wants has top. But darn it, Peter, the best priority in the world isn’t going to buy you a dozen mousetraps that are nonexistent.”

“But—”

“Besides which, that building you’re in is about as rat-proof as a sealed gasoline can. There isn’t an item of comestible in the place.”

“I know that. And the mice can go hungry, for all I care. But the mice don’t seem to understand that bringing food into the place is not only forbidden by law, but dangerous.”

“But there ain’t a mousetrap in the country. Ding bust it, Peter, mousetraps take spring wire, and labor. The people who used to make mousetraps are now making bombsights and tanks. Besides, Peter, over at that laboratory of yours there should be enough brains and gear to really build the Better Mousetrap. If you can spot a plane at fifty miles, split atoms, and fire radio equipment out of a cannon, you ought to be able to dispose of a mouse or two.”

Peter grinned. “You mean spot ‘em with radar, and then shoot ‘em down in flames with proximity fuses loaded with plutonium warheads? That might be a little strenuous, don’t you think? Like cutting the throat to stop the spread of impetigo.”

“Well, if you have mice over there, you think of something. But top priority or not, we can’t get you your mousetraps!”

Peter hung up unhappily. He turned from his desk to see an impertinent mouse sitting on the floor, watching him out of beady black eyes. Peter hurled a book at it and swore, a rare thing for him.

The mouse disappeared behind a bank of filing cabinets.

“That’s right,” he grunted. “Go on—disappear!”

The word struck home. Peter blinked. And remembered...

* * * *

It was dark, though not too dark for the mouse to see his surroundings. It was hungry, and it was beginning to understand that, of the many places occupied by man, this was one place where man left nothing that could be eaten. This evening, however, the situation was changed. There was a faint smell of food in the place, relatively great compared to the sterile atmosphere of previous days.

The mouse located the odor. A small wire tunnel, closed at the far end. A nice, rancid bit of bacon hung there.

The mouse was no fool. He inspected the wire tunnel carefully. Three of his brothers had been taken away by various metal contrivances, and he was not going to follow them if he could help it. The mouse sniffed the wires, climbed the top of the little cage, and raced around it, poking it and bumping it. Often a trap could be sprung by poking it with a foot—just jarring it. That left the bait safe to eat.

But this seemed innocuous. No springs, no wires, no trap door, no mirrors. Just a little tunnel of wire cloth about six inches long and two inches in diameter.

The mouse entered the tunnel, headed for the bit of bacon.

Nothing happened, and the mouse gathered speed. It paid no attention to the silvery metal ring that encircled the inside of the tunnel, and would not have known what it was anyway. There were other things there, too. Bits of Alnico V, a couple of cubes of cerise wax, some minute inductances, and a very small capacitor made of a tiny square of mica with some silver sputtered on both sides. Down in the center was a clear crystal with electrodes clamped on it. The whole assembly was about a half-inch cubed, and from it on either side emerged the ends of the silvery wire loop.

Had the mouse seen all this, it would not have understood. That was not strange, for even the man who built it was not too certain what it did, or what it was, or how it worked.

He knew it worked, and it served its purpose. He was like the man who daily uses electricity enough to kill him, but is not quite sure of what goes on in the instant between his snap of the switch and the arrival of the illumination.

The mouse cared not. All he was after was food.

He paused uncertainly, and checked to see if there were any moving parts. There were, but they were intangible fields and stresses of space.

Then the mouse raced forward and passed through the silvery circle.

But did not come out on the far side.

A second mouse, watching, took a sigh of relief. The bait was still there. There had neither been cry of pain nor was there a captive warning the rest away in mouse-ese.

He, too, came to the trap, and entered, the odor from the rancid bacon drawing him with a magnetic force.

He, too, came to the silvery circle, passed through—into nothingness!

Came then another, and another, each pleased in turn that the bait was his alone for the taking. And as each one entered and disappeared, a tiny silent counter moved one digit higher.

Came morning...

And—

“Great unholy madness,” exploded Peter. “If this is a rat-proof building, I am a Chinese policeman!”

Jack Brandt looked over Peter’s shoulder. “How many?” he asked.

“Twenty-three!”

“Golly,” grinned Brandt. “We’re outnumbered.”

“We won’t be long, if this thing works like this every night. This is better than the original ball-bearing mousetrap.”

“Which?”

Peter grinned. “The tomcat,” he said.

* * * *

That was how it started. It went on for a week, passed through a huge peak of catch, and then tapered off abruptly. A month later, the trap had passed no mouse into—nothingness—for three days. The Better Mousetrap was placed back in the cabinet and forgotten.

For this was during the days of war, when he who was not fighting was working to provide the fighting man with what he needed. And Peter Manton's laboratory had too much to do in too short a time to permit even an hour's wonder or work on anything not directly concerned with the problem at hand.

The months passed. Peter Manton nodded knowingly when Hiroshima heralded the atomic age. He made penciled notes on the margin of the paper, correcting some of the reporter's errata in describing radar. He wrote a hot letter to OSRD complaining that the news release on the proximity fuse had been mishandled, that he knew the real facts. He followed sonar and loran with interest.

More months passed, and the peace which was raging all over the world continued, but Peter Manton's laboratory was disbanded. Much of the stuff was sold as scrap, and among it was the Better Mousetrap. It no longer worked. Its magnets were mere bits of metal alloy; its permanent wax-electrets were discharged. The crystal no longer vibrated molecularly, and besides, the wire loop was crushed beneath a pile of scrap metal.

The next time Peter Manton remembered his Better Mousetrap was when a friend of his mentioned that he wanted to move.

"Move?" asked Peter. "Where to?"

"That's the point," grumbled Tony Andrews. "There's no place. But I'm not going to stay where I am!"

"It looks like a nice enough place. What's wrong?"

"Mice. The place is lousy with 'em."

"Oh? Thought that was a fairly respectable place."

"It was," replied Andrews. "But lately—the mouse population has increased. Probably due to the lack of traps created by the war."

Peter nodded. "We had a mousetrap at the lab," he said with a fond smile of reminiscence. Then he told Tony about it, and the other man

blinked hungrily. "That good?" he exclaimed.

Peter nodded.

"Can you build another?"

"Sure."

Andrews smiled. "Look," he said. "You are the man who built the Better Mousetrap. But the old platitude isn't good enough. The world will not beat a path to your door unless you make yourself known. This should make you famous."

Peter frowned a bit. "Is it that good?" he asked.

"It has one feature that will outdo all other traps," said Andrews. "In any trap, there is the corpse to dispose of. In this one, there is the disposal system built in. Look, you build one for me, and we'll form a company to build them."

"If you think so."

"I think so. How long will it take?"

"To build another? About an hour, once I get the parts. Luckily there's a section of the Central Scientific Company handy. They have most of the stuff."

It took several days to collect the material, after which Peter called Andrews. By the time the other man arrived, Peter was finishing off the main part of the trap. He handed the thing to Andrews, who looked at it, squinted through the circlet of wire, and then poked a pencil into it. Where it came level with the plane of the circlet, it ceased to exist in a slick plane of cleavage.

Andrews withdrew the pencil and it was complete again.

"Great Harry," he shouted. "Where did you get that?"

"That," smiled Peter, "is something out of Campbell by Edward E. Smith."

"Who?"

“Writers of science fiction who turned out millions of words dealing with strange minerals, space warps, and the like. They used to spend their leisure hours thinking up something that would outdo each other. Actually,” he said, becoming serious again, “the thing was discovered in our lab during the war. We were working on a closed means of radio communication—a method of wireless connection that would not only prevent the enemy from decoding or unscrambling, but which would be impossible to detect unless you were set up properly. Too many things happened under radio silence that a means of communication might have prevented. Anyway, in our search for a new level of communications, we got this effect.”

“Seems to me that it should be good for something.”

“The trouble is that it can’t be made any bigger. Once that loop size is changed, the effect is no longer there. We worked on it for about a month, and gave it up because there it is and that’s all that could be done with it.”

“How about using it to pump water out of a sinking ship?”

“Can’t fasten anything to the ring,” said Peter.

“But the thing that bothers me is where does it go?” asked Andrews, poking his finger through the ring and withdrawing it hastily as he saw the clean-cut cross section.

“Haven’t the vaguest idea.”

“You haven’t worked on it much, then?”

Peter shook his head. “There were a lot of things that had priority,” he said. “We had that scheduled for about three years from now, even. Anyway—what are you doing?”

“I’d like to know where the stuff goes,” said Andrews.

“How are you going to find out?”

* * * *

Tony Andrews handed Peter a key ring tag. It was an advertisement for an automobile salesroom, and it stated that any possible finders should merely drop the key ring and chain into the nearest mailbox; that the addressee would pay the postage. It then gave Tony Andrews’s name and address

and telephone number.

“Think... if it’s found anywhere... it’ll be returned?”

“That’s how they sent them out,” he said. “Darned good advertisement, too.”

“But—”

“Look, Peter, if this... and it must go somewhere... lands close by, it’ll be returned. Perhaps we’ll get a letter, too, telling us where. If it lands in some distant country, we’ll probably get it back with a letter telling us that I sure did get around.”

“You feel certain that it will land somewhere on earth.”

Tony Andrews nodded. “There is no pressure gradient worthy of the name across the face of this,” he said. “Though there is a very slight motion of air through the ring. That means that the air pressure on either side of this ding busted ring is about the same. Funny, though, it sort of blows both ways.”

Peter nodded. From either side he poked forefingers in. At the plane of cleavage, both fingers passed forward into—through— one another, giving an appearance very much like poking the forefinger into a pool of mercury.

Andrews shuddered. Then he took the little circlet, held the ring sidewise, and dropped the tag from the key ring through it. Through the ring they heard it clang onto the floor.

Peter took the ring from Andrews and put it horizontal, close to the floor. He put a finger through it and probed.

He said, “Ah!” and put thumb and forefinger through the ring and came up with the tag.

“What’s down there?” asked Andrews.

“Feels like wood.” Peter poked a ruler through, and measured the distance. About two inches differed between the concrete of Peter’s basement floor and the wood surface of the other.

“We’ll lick that,” said Peter. “I’ve got a tiny miniature camera upstairs.”

We poke it through and take a picture or two.”

That was a flat failure, they found. The film came out utterly black. Whether the film was exposed in passing, or whether the “other side” was highly illuminated, could not be determined. They could control the light in the cellar so that the partially “gone” camera would not cause exposure of the film. But if the other side were brightly illuminated, there would be an instant where the film was open to the light. They tried for hours, but failed.

Eventually, Andrews took his mousetrap home with him and set it up in the kitchen.

Again, its take was enormous.

* * * *

Senator Treed entered the hardware store along Connecticut Avenue and asked the clerk for a mousetrap. The clerk looked surprised, and said, “But you’re living in the Wardman Park Hotel, Senator.”

“I know. Reputed to be one of the finest hotels in Washington, too. But, there’re mice there.”

“Hard to believe. Does the management know?”

“Not yet,” said the senator quietly. “And say nothing, please. You see, Mrs. Treed and I just returned from a vacation in Wisconsin, and we had a large number of packing cases delivered to our suite. It is more than possible that we included a few field mice. I’d hate to be held responsible for bringing mice into the Wardman Park.”

The clerk grinned. “Mice in the Wardman Park. That’s a national calamity, isn’t it?”

Senator Treed scowled. “Young man, this rat plague is a national calamity. You do not realize how bad it really is. An outbreak caused by the war.”

“Come now, Senator. Don’t blame everything on the war.”

Senator Treed shook his head. “I try to be level-headed and as honest as I can,” he said. “But how many mousetraps have you had in the place since Pearl Harbor?”

“Not many,” admitted the clerk.

“Freedom from rodent pests is a warfare that must be constantly and ruthlessly waged,” replied the senator. “Otherwise, they overwhelm us. We stopped fighting rats to fight another kind. We licked the other kind, but there’s this kind still. Now, what’s new in mousetraps?”

“Here’s a new number. It’s called the Better Mousetrap. A new company started about a week ago, and we accepted one on consignment.”

“How much is it?” asked the senator.

“It’s not for sale.”

The senator spluttered in confusion.

“It’s on a rental basis,” said the clerk. “There’s a register below. It counts the catch. You pay two cents per catch.”

“Really a guaranteed job, hey?” smiled the senator. “How does it work?”

The clerk held up the trap. “This is where you put the bait,” he said. “You impale it on this spike, and then swivel it through the slit in the wire so the mice must enter the tunnel to get to it.”

“Yeah, but there’s nothing there to stop the mice from having a free lunch,” objected the senator.

The clerk took a small bolt, set it on the floor of the tunnel, tilted the cage, and let the bolt run down the floor slowly. It passed through the circlet and disappeared.

“Hey!”

The clerk grinned. “Convenient, isn’t it? No muss, no fuss, no strain, no pain. And no corpse to clean away.”

“A very definite advantage,” said the senator. “But where do they go?”

“No one knows. They go—and we ask no questions.”

“Make a fine garbage disposal unit,” suggested the senator.

“Could be. I imagine so. Also a swell way to get rid of old razor blades. But every item that goes through this trap is registered—and that bolt will cost the firm two cents. It can’t tell the difference between a bolt and a mouse.”

“Hm-m-m. Good thing that tunnel is long and small. People would be poking all manner of things into them. But where do they go?”

“They’re trying to find out. So far they don’t know. It’s said that one of the founders of the Better Mousetrap Company dropped a tag through with name and address and the offer of a reward. It hasn’t been returned. Maybe the mail is irregular from Mars, huh?”

“Mars?”

The clerk shrugged. “I wouldn’t know where,” he said doubtfully.

The senator nodded. “Despite the population of the country— of the world—there are places where men seldom go,” he said. “That tag may be lying in the rough at Bonnie Dundee Golf Course for all we know.”

* * * *

Miss Agatha Merrit placed her pince-nez firmly on her nose. “Good morning, class,” she said primly and with perfect diction.

“Good morning, teacher,” responded forty third-grade voices.

Miss Agatha Merrit went to her desk and sat down. “Today,” she said, “we will learn about being afraid. It is known that ninety percent of all things that people fear will not harm them. I know of big strong men afraid of insects and many women are dreadfully frightened of mice.”

Peter Manton, Junior, raised his hand and said, “My father built a Better Mousetrap,” he announced irrelevantly.

Miss Agatha Merrit was annoyed at the sidetracking, but young Manton’s father was becoming a financial force in the community and she felt it unwise to ignore the comment. “I understand that the world is starting to beat a path to your door,” she said, completing the old platitude. “But we’re speaking of fear, not mice.”

“You’re not afraid of mice?” insisted young Peter.

“I can’t say that I like them,” said Miss Agatha Merrit. “Though I feel that the mouse is more frightened of me than I could possibly be of it. After all, I am quite a bit larger and more capable than a mouse—”

Miss Agatha Merrit opened the drawer of her desk but was prevented from looking in.

The next several minutes are not describable. Not in any sort of chronological order, because everything happened at once. Miss Agatha Merrit headed for the chandelier, and got as far as the top of her chair, which somehow arrived on the top of the table. Mice boiled out of the desk drawer and spread in a wave across the desk and across the floor. In a ragged wave front, the third-grade girls found the tops of their desks, and the third-grade boys yelped in amusement and started to corral the mice. By the time the room was cleaned up an hour later, the boys had thirty-four mice in a wastebasket covered by a small drawing board, four mice had escaped down holes in the woodwork, seven had gone out under the door, and three were trying to find their way out of nine-year-old pockets.

Miss Agatha Merrit never did learn the name of the ringleader of that prank. She strongly suspected Peter, Junior, who was at best an imaginative child with a clever mind and few inhibitions. What bothered her most was that the trick was repeated.

There were three drawers in her desk. Young Peter Manton brought, on the following morning, one of his father’s Better Mousetraps. She placed it in the drawer that had been “salted” with mice the day before, but the pranksters used the second drawer that night. Carefully she concealed the trap in the third drawer on the following night, and the mice turned up in the top drawer again.

It became a race, whether the problem would be solved before Miss Agatha Merrit became a quivering nervous wreck.

A total of one hundred and seventy-three mice registered on the Better Mousetrap in a week, and then Miss Agatha Merrit polished off the job by procuring enough traps for all of the desk drawers. Since no place remained to place them without the mice being collected and destroyed, the mice-filled drawers ceased to be a favorite prank of the school. The children, all of them sweet innocents, took to other forms of childish torture.

She confessed to Peter Manton, Senior, that had it not been for his excellent product, she would be a nervous wreck. “And,” she said, “I never

did find out where they came from.”

He grinned. “We’ve never found out where they went,” he told her.

“I shudder,” said Miss Agatha Merrit, “to think. Do you suppose, Mr. Manton, that your device transmits them to some other corner of the world?”

“We have tried to find out. Mice, unfortunately do not take well to being tagged. But we’ve tagged a number of them in the hope that we will discover where they go.”

“I’ve noticed in the papers,” replied Miss Agatha Merrit, “that there is a veritable plague of rats. The Chicago *World* had an editorial about you... did you see it?”

“No,” he admitted. “But I’m rather pleased. What did they say?”

“It seems that the Chicago *World* was plagued with rats until they got about two dozen of your Better Mousetraps. That fixed them. Now they claim that your invention came along at the proper time. The world is about to beat its path to your door, Mr. Manton.”

Peter shrugged. “Most inventions are made to fill a definite need,” he said. “Discoveries are made because of man’s curiosity. An invention is an aggregation of discoveries collected because their principles add up to the proper effect to take care of the necessity. I’m glad that I was able to make this invention of mine. It seems timely.”

* * * *

Senator Treed rapped for attention and the committee came to order. “This morning,” said Treed, “we will have open discussion of the problem.”

General Hayes nodded and said, “This much is known: the mice are delivered somewhere out of Manton’s Better Mousetrap. I wonder if some foreign power might not have discovered even more of its powers and be using it to plague America?”

“That seems far-fetched.”

“Not at all. It might be likened to a bacterial warfare. Pests will vitiate a country as well as war—weakening a strong country to prepare it for easy conquest.”

Tag Harris of the FBI laboratory shook his head. "There's more than meets the eye," he said. "I've definite proof that some human agency is working at it."

"You have?" demanded Senator Treed. "Tell us."

"We tagged rats and sent 'em through one of Manton's traps. Later we used one of the old wire cage affairs. Someone had gone to the trouble of counterfeiting some of our tags. Out of fifty-seven rats caught with tags, we found a duplicate number. Someone obviously caught a tagged one from wherever it was sent, and, in an effort to confuse us, made duplicate tags, and sent 'em back."

"Deliberate!"

Admiral Grayson of Intelligence nodded. "Tomlinson of Psychological Warfare says that's what he would recommend to spread confusion. You see, this power would not stop; they would also know that we are trying to find out all about it. Therefore they would prefer to add confusion to our search. Hence the duplication of tags."

"Could you tell the real one?"

Harris nodded. "Easily. The original one was well worn, because the rat had more time to go roaming. The duplicate was almost new."

"They never did turn up with that key tag of Andrews, did they?"

"Nope."

"No one but a suspicious power would conceal such a thing now that the search for it is out. The answer is obvious."

Treed nodded in agreement. "I shall recommend that Congress offer an award of twenty thousand dollars to whomever gives information to bring the truth to light." He shuddered. "This rat business is terrible. My wife is nearly out of her mind. Last night she swore that she saw a rat *appear* on the floor beneath the dresser. I hushed it, of course, but that is why I'm bringing this committee to order on the subject."

"Perhaps Manton's device just hurls them back and forth across the country."

Treed shook his head. "Manton's Better Mousetrap doesn't work that way," he said with conviction. "Thanks to Manton's little registers we know that Manton's catch—overall—has been rising, but definitely following the increase in rat population over the entire country. You see, gentlemen, Manton's traps have been made to fill a demand in every case. It started with friends who needed them. You're sort of insisting that Manton's traps come assembled with their own mice."

That got a big laugh.

"And," said Senator Treed, "God help the one who is responsible for this!"

* * * *

Tony Andrews entered the salesroom and smiled at the clerk. "Look," he said, "I've been a good customer."

"You have," agreed the salesman. "I know you. I'm Tom Locke."

"Well, Mr. Locke, I'd like another one of those key tags."

The salesman nodded. "Those things are popular," he said. "But what happened?"

"I dropped mine through one of those Better Mousetraps."

"Oh," laughed the salesman, "they've been returned from every portion of the globe. But I guess the mail service isn't too good from wherever That is."

"I'd hoped it would come back," said Andrews. "But I'm wrong. And I'd like another one."

"Sure. Be glad to. Since you're the man who originated the idea with us."

"I'm sorry to have to ask—What? Originated what?"

"Why yes. The tale goes that you came in to buy a car quite some time ago, and the salesman saw the tag on your key ring. He mentioned it to Mr. Cagley, who is our advertising manager. He had the tags made up and we gave them out to our best customers."

“Then you’ve got me mixed up with someone else. For I received mine as they did. Mine came in the mail and cost me three cents—which was as good an advertising stunt as the tags themse—”

“Mail? Mail? We gave them in person.”

“But mine came through the mail.”

“Sorry. We’ve never sent any of them through the mail.”

“Oh,” said Andrews with rising suspicion. He took the new tag with thanks and returned to Peter Manton’s home.

“Peter, is Junior handy?”

Manton nodded and called. Junior came. Then Andrews said, “Junior, have you ever seen anything like this before?”

Junior nodded. “Last winter. Found it down in the cellar on my sled.”

“Sled!”

“Uh-huh. Then because it said to drop it in the mail box if found, I did. You got it, huh?”

Andrews nodded. “Yup,” he said. “I got it! Peter Manton, you haven’t seen the end of this, yet.”

Manton frowned slightly. “Why?” he asked.

“You’ve really built the Better Mousetrap, and you haven’t seen the people who are going to beat their path to your door. They haven’t really arrived yet. But they will!”

* * * *

The first to arrive was the FBI. Then Peter Manton’s domicile was changed from a town in Illinois to a cold stone place in Washington.

Tag Harris faced the Court. “Here is the originator of the Plague of Rats,” he said. “And the saviour of the country at the same time. He is in the position of a physician who poisons people so that he can save them. A sort of stinking benefactor.”

“Will you please explain to the Court?” demanded the Court.

“The field set up by the Better Mousetrap at the plane of cleavage hurls anything that passes through it *backwards in time*. The time rate is indefinite and uncontrollable. However, this is why Manton’s trap was so effective. On Monday a plague of mice appears in an apartment. The master of the place goes out and rents one of the Better Mousetraps. He places it in his apartment, and during the time it is there it hurls mice backward in time to create the plague! Naturally, the trap will be removed as soon as the mice stop—and, because the trap itself stops the flow of mice.”

“But how far back—?”

“There’s little correlation. It just hurls. It is aimless and uncontrollable. In one case, a key tag went back several months.”

“But how come nothing was known of this?” demanded the Court.

Tag Harris smiled. “When I have something that will utterly destroy something, I do not place anything valuable near it,” he said. “In Manton’s own laboratory the boys dropped spare parts through it. In hardware stores all over the country the clerks were dropping screws and nuts and the like. Most of this stuff fell to the floor and was swept up a few days to a week before.”

Tag Harris held up a scrap of newspaper. The date was four days in the future.

“Proof,” he said. “I’ll be sending that to myself later.”

“And the tagged mice—the duplications?”

“Animals that had gone through the time-trap twice and were living their lives in parallel. You see, your honor, not only did Manton’s Better Mousetrap hurl mice back in time, but it could hurl the same mouse back to the same era several times— and the Plague of Rats was a Man-Made Plague.”

* * * *

Epilogue—

‘Tis said that he who laughs last laughs best. The world who beat a path

to Peter Manton's door in anger, because he built the Better Mousetrap, returned to thank him anyway. You see, with mice being hurled backwards in time, they lived and they died in the mad rat-race in time. And America, for its trouble with more rodents than it could stand for a short period, now reaps its reward. For America is free of rats.

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* * * *

Act Two. The scene, Campbell's editorial *Assessment*.

John W. Campbell's long time assistant-secretary was Miss Katy Tarrant, a middle-aged maiden lady of Scottish descent and a devout Roman Catholic. Katy had come with the office, and John kept her happily, because Katy had two excellent job qualifications. First, she knew the magazine business, at least the pedestrian part of editing and meeting the deadlines with manuscripts that fit the book. And second, Katy was merciless with the big blue pencil to eliminate anything that might offend the Legion of Decency, bring down the wrath of the Watch and Ward Society, or even something innocent that might possibly be mispronounced that way.

As a result, most of us of John's writing tribe used to slip something into a story that would positively shock Katy into tight lips and harsh mutterings about us writers who put *such things* into a story. One of us—it wasn't me—once asked John what Katy would do if he sent her a black, filmy, see-through lacy nightgown for Christmas. John replied that she would wear it because, being Scottish, she would think it wasteful if she did not, and wearing it is a sin. But, said John with a chuckle, she'd blush all night for wearing such a provocative filmy *toed*; And a *Present from a (Married!) Man!*

John chuckled over the joke, wrote "O.K!" on the manuscript, and sent it along for processing.

L. Jerome Stanton chuckled over the joke, and passed it along to Katy to read and file, and to sanitize it for the benefit of those guardians of our virtue.

But our maiden lady, Katy Tarrant, didn't understand the punch line.

John's attitude? Officially and professionally outraged, but secretly amused.

* * * *

In my meandering away from my minimum security prison, L. Ron began to talk about a theory that he'd evolved while recovering from one of the scraps in the Aleutians. The process was a collection of snippets and bits of this and that. Scraps of what is taught in the simplest of elementary psychology. Scraps of hypnosis, although he denied that with him was a "healing" process, generally based upon the fair-to-middling concept that the teachings of Christian Science were and are sound, so long as one has the sense to c

splints and a crutch instead of Mary Baker Eddy if one's leg is broken.

As Ron reasoned, this gimmick mustn't so much as pretend to make noises like medicine, because both the law and the AMA would be hot on the trail. It mustn't interfere with religion because religion is too well organized to put up with outside competition. It shouldn't be a cult, because cults attract professional cultists. But it should offer relief to those who were ailing with something that neither the clergy nor medicine could clearly define.

L. Ron, slowly perfecting his theory, got in touch with a few of the impressionable souls in the New York area, and L. Ron studied them, slowly getting to the final outcome: *Dianetics*.

During this period, L. Ron held his sessions in the evenings during the week, leaving the weekends mostly open. This was fine with me. I enjoyed visiting Ron from time to time, but as I told him, "If I have problems, and they must be removed, I'll prefer a professional head shrinker instead of a soldier of fortune, adventurer, and science fiction writer."

On one of those weekends, the telephone rang about noon on Sunday. L. Ron said when he returned, that Doña Campbell was about to come over. Then he eyed me sharply. "George, for God's sake don't mention dianetics to Doña. If you do, she'll tell John, and I don't want John to dive into this as his next hobby until I'm ready to leak it to him myself at the proper moment."

Doña had come over to get some peace. John, she said, had discovered "high fidelity," had built a 50-watt amplifier, and was spending his spare time trying to see how high his fidelity could get out of the old, 78-rpm shellac records of the day. The house, she reported, was reverberating on every floor with John's 50-watt run at full tilt.

Here I must explain a technical detail that made the uproar worse. The power output tubes of that day struggled and strained to deliver every watt; as a consequence, the loudspeakers of that time were designed to deliver as much sound per watt as they could. At the time, a comfortable level of music for just background sound was about a quarter watt, and, for real listening to classical music, between one and one and a half watts. Six months before the war, I'd helped to install an amplifying system for a roller-skating rink, and we found that one 60-watt amplifier at either end of the rink gave enough sound to cut through the noise on a busy night.

By contrast, everything changed in the late 1950s. Power amplifiers could deliver high wattage with ease, and as a consequence, the loudspeakers today are damped and loaded to spread out the audible sound spectrum they could deliver. The ordinary amplifier of John's high fidelity days could hardly drive today's speaker, and today's amplifiers would blow the speakers of yesterday.

I put this in because we have amplifiers that deliver 50 to 100 watts today, and I understood that 50 watts in 1947 must not be compared to 50 watts today insofar as amount of sound level produced.

So, since Elizabeth and Westfield are fairly close, Doña escaped the racket from time to time by visiting the Hubbard place, and the four of us would play bridge and have a quiet drink far from John's cellar and his 50 watts.

The time is in the late 1940s, and I'd run Venus Equilateral into the ground and was looking for new worlds to conquer. In one of our meetings, Doña chuckled over the idea used in "Rat Race" in using a time machine for a mouse trap. And I replied that mostly traveling stories are founded on the idea of "Let's kill gran'pa!" and what gimmicks they could cook up to cover the paradox.

So it occurred to me that maybe I might play the game backward; that is, instead of *killing* gran'pa, let's go back and make sure that gran'pa is ~~propitiated~~ from one of his intended follies. The following is the answer.

Meddler's Moon

Peter Hedgerly heard the door open and close, and he smiled at his reflection in the mirror. He turned partly, and called out through the semi-closed bedroom door.

"Sit down, honey. I'll be right out."

Joan Willson was early, he thought, but it made no matter. It merely gave them more time together—

"I'll sit down," came a deep, pleasant masculine rumble, "but I'm not your honey."

Peter hit the door, and skidded into the living room, his loose shirttail flying out behind him. "Who're you?" he demanded sharply.

"Please do not be disturbed. Finish dressing," said the stranger. Peter measured him. A few pounds heavier than Peter's one hundred and sixty; an inch taller than Peter's five feet eleven. About the same sandy blond complexion. The face was wreathed in a beatific smile which in no way matched Peter's exasperation.

"I'm expecting a guest," snapped Peter. "The door was open for... the guest. No stray strangers seeking company or whatever."

"I know. My presence will make no difference."

"No difference?" exploded Peter angrily. "Look, sport, three's a crowd. Technically you're trespassing. Shall I prove it by calling the police?"

"You may if you wish," replied the stranger. "But I happen to know for certain that will not."

"No?" snapped Peter. He headed toward the telephone with all the determination of the world. The stranger watched him tolerantly. Peter reached the table beside the door, reached for the phone. As his hand touched it the door opened, and Joan Willson came in. She gulped at Peter and said, "Oh!"

Peter became aware of the fact that his nether raiment consisted of shoes, socks, paisley-print shorts and a curtailed-shirttailed WPB model shirt.

He echoed Joan's "Oh!"

His ejaculation died like the diminishing wail of a retreating fire siren. That was because the duration of the monosyllabic diphthong exceeded the time necessary for Peter to gain the security of the bedroom, where he donned his trousers and wished there was something he could do to cover the blush of embarrassment on his face. His ears, especially.

* * * *

Through the door he heard the stranger say, "Please come in, Miss Willson. Peter's condition is but temporary."

"But why... what... and who are you?"

"That's a long story," replied the stranger. He turned and called out to Peter. "I told you you'd not call the police!"

"Police!" exclaimed Joan. "Peter, is... is—?"

"Not at all," said the stranger, interrupting her, and intercepting the words which had been intended for Peter. "I've had too little time to make explanation. I'm Joseph Heddy."

"Relative of his?" asked Joan.

“Quite. And quite close.”

Peter called, “Never heard of you.”

“You will,” replied Hedgerly. “You see, Peter, I’m here to help you.”

“And if I need no help?”

“You do.”

“Let me be judge, huh?” snapped Peter.

“You’re in poor position to judge. That’s why this help is thrust upon you, so to speak. After a bit you’ll understand.”

“Thanks,” said Peter. Slowly, he came into the living room again, and faced Joan. Joan flushed.

“Honest, Joan,” he started, but the girl shrugged. “Don’t apologize for a sheer accident,” she said.

“It was no accident,” said Hedgerly.

Peter whirled. “Look, chaperone, who invited you in? As for any relation of mine to you?”

Hedgerly arose carefully. “I am Joseph Hedgerly, your grandson.”

Joan looked at Peter and laughed heartily. “Peter Faust Hedgerly. Having a thirty-odd-year-old grandson is quite a record for such as you,” she told him. “You will be thirty-two next birthday.”

Peter turned to the other angrily. “Can it,” he snapped. “Grandson my ankle!”

“I am your grandson.”

“Yeah ... sure. Shall I call the cops now?”

“You could, but you will not.”

“Oh spinach!” Peter headed for the phone again but the stranger said, quietly, “Now listen to me, Peter.”

Peter stopped, turned, and said, "Explain—and explain fast!"

"You are a physicist with the Abstract Laboratory at Chicago. You also tinker in your study here. Your son—my father—will take up home tinkering also, and your son's son—myself—will eventually discover the secret of time travel. I've done this. I am not here to see that things evolve with a minimum of effort."

Peter shrugged. "You could have saved your time," he said. "If you'd not interfered, I would have asked Miss Willson to marry me."

"That's the point," smiled Hedgerly. "You see, Peter, my grandmother's name was not Miss Willson, nor Joan. Peter Hedgerly—according to the family history—married a girl by the name of Marie Baker."

"Never heard of her," grunted Peter.

"You will," smiled Hedgerly. He turned to Joan. "I'm sorry," he told her. "I have no objection against you: in fact, you appear to be of the finest. You will, naturally, understand there is nothing personal in any of this. It is merely a matter of historic fact that Peter will marry Marie Baker."

"Mr. Hedgerly," she said, "I dislike you thoroughly. Furthermore, I'm not too certain that history is as solid as you think. Until further notice, then, I hereby accept Peter's proposal of a moment ago."

"Joan!" cried Peter, running forward, and folding the girl in his arms.

"Very fetching," observed Hedgerly, with the air of a man observing the antics of a couple of goldfish in the proverbial bowl. "Considerable boundless and mutual enthusiasm, but both terribly and unhappily misdirected. In other words, a sheer waste of time and energy."

Joan and Peter unclimbed and faced Hedgerly. "We like it," they said in chorus.

Hedgerly nodded understandingly. "But Marie Baker wouldn't."

"Let's go out, Peter," pleaded the girl earnestly. "This unwelcome bird makes me feel like a female homewrecker!" Hedgerly beamed. "Do go," he said. "And enjoy yourself until I can locate Peter's future wife—my grandmother."

* * * *

The big machine should have been quiet, according to theory. It had no moving mechanical parts to hum or gears to clash, or levers to chatter. It had for its moving member a man.

field that varied on a pure sine wave of intensity from a terrific flux-density in one direction through zero, and thence to an equally terrific flux-density in the opposite polarity. At one newspaper interview as the machine was being built some reporter had erroneously noted that the magnetic field strength at maximum was strong enough to affect the iron in your blood. This was intended for sheer hyperbole, but the fact remained that the magnetic field between the big pole pieces was strong enough to warp the path of light. Well, the shift *could* be measured with the most delicate of optical instruments.

Theoretically, a varying magnetic field should not make a sound.

Actually, it did. The field at maximum was strong enough to cause deep magnetostriction of the magnetic metals of the machine. They vibrated in sympathy with the varying field, their dimensions changing enough to set up sound waves in the air of the room.

So the theoretically silent machine actually made a clear humming roar that shattered the eardrums and seemed to press offensively on the skulls of those working within the chamber.

Even Peter Hedgerly found it oppressive after an hour or two, and he, of all men, should have been used to it.

He removed his eye from the observing telescope, and blinked to relieve the strain. He looked up at Joan, nodded affably, and his right hand snapped the main switch.

The terrible humming roar died. "Hello," he said brightly. "What brings you here?"

Joan Willson laughed sourly. She handed Peter a newspaper. Peter bent his head and read:

Personal! Marie Baker, Age 27, weight 114, brunette, brown eyes, minute scar on left thigh, Social Security Number 340-01-6077 please contact—

"I don't want her!" stormed Peter.

"The advertisement says you do," cooed Joan.

"Now look, Joan—"

She laughed and laid a cool hand on his cheek affectionately. "I know you don't. You did want to point out that your— grandson—is wasting no time."

Another voice interrupted. "Naturally not," interjected Hedgerly. "After all, I'm here to see that things do go according to history."

“History be damned,” snapped Peter. “I—”

“Really have very little to say about it,” smiled Hedgerly. “You’ll do exactly as... and did!”

“Then,” blazed Peter, “why not let nature take its course? If I’m to meet and consummate matrimony with this Baker dame. I’ll do it!”

For the first time, Hedgerly looked less than the complete master of everything he surveyed. “It is also historic fact,” he said in a sepulchral tone, “that I add my efforts to history satisfy itself. You see,” he said, brightening, “how it all comes out!” He dug into his inside pocket and came up with a wallet. From it he extracted a newspaper clipping, yellowed and brittle with age. “Here is the original. I just copied it for the advertisement.”

Peter took the aged clipping and read it. His hands shook and the clipping fell apart.

“No matter,” smiled Hedgerly. “Its job is done.”

“Is done?” demanded Peter.

“Of course. Marie Baker will be at your apartment this evening.”

“I’ll scratch her bald-headed,” threatened Joan.

Hedgerly shook his head. “No, you won’t,” he said positively. Then he looked down at Peter, and his eyes ran over the experimental setup. “It won’t work,” he said to Peter. “You’re on the wrong track. It is impossible to accelerate and focus and direct the neutron. The neutron, possessing no charge, is therefore unaffected by either magnetic or electrostatic fields.”

Peter looked up quietly. “I’ve evidence to the contrary,” he said. “We believe that the neutron does possess a charge; that it is theoretically impossible for anything to exist without some charge, though the charge may be exceedingly minute. We believe the neutron to be possessed of a charge of plus or minus— depending upon the moment of intrinsic angular momentum— ten to the minus fifteenth electrostatic units less than that of the electron. Therefore—”

“You will find that the experimental evidence you get is impure,” said Hedgerly. “I’ll save time if you abandon this project.”

“Indeed? And what should I take up?”

“You’ll do history a better turn if you take to investigating the magnetic properties

mass.”

“Is that a matter of history, too?”

Hedgerly shrugged. “If I told you all I know about it,” he said in a superior tone w made Peter want to commit homicide, “then you’d have too much time to sit around and frustrated because fate is a written book.”

“Spinach,” snorted Peter. His hand hit the main switch again and the humming ro leaped out at them from all sides. Peter grinned as he noted the wrist watch on Hedge arm. Unless the character had a one thousand percent nonmagnetic movement, the ir by now would be keeping the devil’s own time.

* * * *

It was nine o’clock. For the eleventh time since dinner, Peter leaned out of his study a called, “Now?”

Hedgerly shook his head. “Not yet,” he said.

“Well,” said Peter this time. “Come in here. I’m on the trail of something.

“I know,” replied Hedgerly. “You’ve discovered the Hedgerly Effect.”

“The what?” stumbled Peter.

“Named after its discoverer. You’re quite famous in the future, you know,” replied Hedgerly.

“What is this Hedgerly Effect?”

“The one you’ve just discovered,” replied Hedgerly.

Joan Willson, present because of sheer curiosity pertaining to this Marie Baker creature whom she was prepared to dislike on sight, looked up from her book, and dra “Oh, brilliant repartee. You sound like that Cyril Smith routine that goes ‘Who’s he? WH who? Him, the man in the picture. What picture?’ And so forth for about an hour.”

Peter smiled. “I suppose,” he said. “But it’s his fault, not mine. This effect is a so artificial generation of gravitic force.”

Hedgerly nodded. “The first historic discovery that proves the relationship between magnetic phenomena and gravitic force. Now we’re on the right trail,” he concluded. Hedgerly walked over to the small barrette and mixed himself a drink. He lounged back

against the bar and lifted his glass. "To my grandfather," he said. "The discoverer of the Hedgerly Effect!"

Peter looked at Joan weakly. "It's fratricide to kill a brother, patricide to kill a father, homicide to kill just anybody, infanticide to kill your son, but what is it to kill a grandson?"

Joan looked Hedgerly up and down and her lip curled in derision. "Insecticide," she snapped. "Ignore him. Maybe he'll go away. But Peter, what does this gravitic effect mean?"

"I'm not too certain," replied Peter wrinkling his brow. "Of course, since gravitic fields do act upon mass without charge, we can now filter out, accelerate, and focus the neutrinos or we will be able to, as soon as we get this effect refined. And if we can generate gravitic fields at will, we can nullify the gravitic mass or gravitic attraction of masses. That means a complete revision of all the mass-ratio tables pertaining to space rockets. In fact, it may do away with rockets entirely. And the following is conjecture, but may be possible:

"The reason that the limiting velocity is the speed of light is due to the fact that the mass approaches infinity as the speed of light is reached. That means that no possible energetic principle can be used to attain the speed of light, since this increase of mass is a statement of the mass-energy put into the article accelerated. In other words, Joan, to increase the velocity of anything to the speed of light requires that you pack into it the equivalent energy required to raise its mass to infinity. Meaning, of course, infinite energy."

"However, if this local generation of a gravitic field can be used to nullify mass, we can make a spaceship that need not increase in mass as its velocity increases."

"Providing that my reasoning is any good. This is just conjecture and guess. I don't know yet how much this gravitic generator will cover."

"You've done a fair job so far," said Hedgerly, mixing another drink. "Of course, you let it drop there."

"Let it drop?" yelled Peter. "With a thing like this at my doorstep? With the twinkling slide rule I can become the originator of interstellar travel, and you expect me to let it drop?"

Hedgerly smiled tolerantly. "The discoverer of the Hedgerly Effect does not become involved with space travel," he pointed out with a knowing air. "He does become the last of the cornerstones for time travel, which we believe is as important."

Peter looked glumly at Joan. "Methinks of suicide," he groaned. "I invent time travel and for the next million years my invention becomes the curse of mankind. Pandora's box never let out any trouble-scorpion as bad as people like my temporally gadding grandfather."

"Now, grandpop, don't be bitter," laughed Hedgerly.

“Grandpop?” yelled Peter. “I’ll—”

The doorbell rang, interrupting a string of threats. Hedgerly stepped springily to the door, opened it, and said, “Please come in, Miss Baker. We’re expecting you.”

Peter whistled.

Joan hissed.

The room became three degrees warmer.

Miss Marie Baker was curvaceous. Miss Marie Baker was dressed to prove it. Miss Marie Baker knew it. The Petty-Girl calendar on Peter’s living room wall took on a drab, lumpy appearance, and on the table beside the divan, a magazine cover became blank as the model headed for the powder room.

Marie Baker spoke, and Arthur Sullivan moved in his grave because the sound of her voice was that reminiscent of that great Lost Chord of music. “I’m quite mystified,” she said.

Hedgerly took her slender hand. “Please come in,” he said. “And we’ll try to explain. You’ve come, Marie, to be introduced to your future husband!”

The door behind Marie filled again—and filled is the proper term. He stood six feet four, the floor creaked under his two hundred and twelve pounds of sheer muscle, and the litheness of his step carried him with pantherine grace. “May I point out,” he said in a voice that reeked of Harvard, Cambridge, and a complete disregard of the letter “R,” “that Miss Marie Baker may be already acquainted with her future husband?”

Hedgerly faced the giant. “Please,” he said in a pained voice. “I’m having enough trouble now without your unwelcome aid. Any relationship between you and Marie Baker must shortly become, at best, platonic.”

A small brass figurine of Rodin’s Discobolus took a sidelong look and made the brazen observation that being platonic with such as Miss Baker was an idea never suggested by his friend Plato. Plato had too much sense.

“Just how do you figure in this?” demanded the giant.

“Have we met?” asked Hedgerly.

“I’m Anthony Graydon. And my query goes still.”

“Pleased to know you, Mr. Graydon. I trust your intentions toward Miss Baker are

simple?”

“Miss Baker happens to be wearing my engagement ring,” returned Graydon. Hedgerly looked, and saw a bit of glitter about the size of a small pigeon’s egg on her hand.

Hedgerly shook his head sadly. “May I introduce Miss Willson?” he suggested. “Willson, will you meet Mr. Graydon? Perhaps, Mr. Graydon, the no-longer-needed engagement ring will fit Miss Willson.”

Anthony Graydon looked down on the time-traveling man with grand contempt. “I have all the sheer, cockeyed assurance of an egomaniac,” he said. “Is Marie supposed to marry you?”

“Oh no,” explained Hedgerly. “She’ll marry him. Miss Baker, may I present Mr. Hedgerly. Marie, this is Peter.”

He took Anthony by one arm, and Joan Willson by the other, and steered them towards the door. “Let us leave them alone,” he said. “They must become acquainted

“Look,” snapped Anthony, “this has gone far enough—”

“Please,” interrupted Hedgerly, “this is serious. Miss Willson will tell you that what I say is true, however unwilling she is to face the bitter truth. It is only a matter of time before Miss Baker becomes Mrs. Peter Hedgerly.”

* * * *

The door closed softly behind the three of them before Tony Graydon turned to Hedgerly and said, “What kind of high-octane are you using in your crystal ball these days, Swami?”

“Swami? But please, this is not the work of a charlatan. This is historic fact.”

“Sure. So is my girl marrying that bird, huh?”

“They will marry,” replied Hedgerly.

“Yeah? That’s not very complimentary to me,” snapped Graydon. “I’ve been nursing one man with Marie for quite some time now. I hardly think—”

“Give them time,” replied Hedgerly succinctly. “In a short period, the propinquity which they are thrust—”

Graydon whirled Hedgerly around by grabbing both lapels of the coat in one large

well manicured hand. “Propinquity!” exploded Graydon in full volume, which was enough to cause endless echoes up and down the corridor. Then even the echoes had echoes for a minute.

Joan Willson backed out of the way. The hand that enclosed both lapels of Hedgerly’s coat looked well manicured and in excellent care, but she had a firm hunch that *well-tended* included the matter of keeping it firm, hard, and dangerous. Graydon was a cream puff, and of a size where even a cream puff is respected.

But Graydon did not dust his knuckles off against Hedgerly’s nose. Breeding came before the fore, and Graydon let the other man relax. “Propinquity,” he said in a level voice that sounded very firm, “presupposes that you and I, and possibly Miss Willson, are going to spend some time in hurling my fiancée and that character together.”

“Of course we are,” replied Hedgerly, with all of the assurance in the world.

“We—are—not!”

“Oh, but we are,” said Hedgerly. “And I’ll tell you why.”

Graydon smiled bitterly. “This,” he said to Joan, “is going to be good.” He looked at Hedgerly. “It had better be!”

* * * *

Marie Baker shrugged her shapely shoulders and looked very puzzled. “I don’t understand,” she said.

“Miss Baker, please let me explain,” pleaded Peter. She nodded, and Peter plunged into the explanation as completely as he could. Then—

“Peter,” she said quietly and very sincerely, “I’d hate to hurt your feelings, but I’m afraid that.. .that—” her magnificent voice trailed off weakly as she fumbled with the pint-sized diamond on her left hand.

Peter patted her shoulder. “I am glad you are a sensible woman,” he told her. “I’m rather taken up with Joan, you know.”

“Then what can we do?” cried Marie.

“I don’t know,” grumbled Peter. “This is the way I see it; he’s .. . uh... our grandsons and—” he looked at her curiously. “Uh.. .what’s the matter?” he asked suspiciously.

Her laughter came bubbling up from below the surface and it tinkled across the

apartment like the sound and fragrance of a bubbling fountain. It was a genuine laugh and hearty and just long enough to be enjoyed. Then she explained: "I'm sorry—not re sorry about laughing, I mean, but look, Peter, have you ever considered that you and I been formally introduced by our grandson?"

"It sounds slightly indecent to me," grumbled Peter.

Marie shook her head. "If anything," she said quietly and sincerely, "is *fait-accomplie* it is the very definite person of—our grandson."

"I'd been psychopathically avoiding that," he said. "Trying to ignore it."

"It looks," she began in a trapped voice, "as though we're stuck. If that bird is rea our grandson, we might as well give in. Come here, Peter, and hold my hand."

He took her hand gingerly.

"You may kiss me, Peter."

"Thanks," he said dryly. "I'll keep your offer open until a more propitious date. Meanwhile, Miss Baker, I'll continue to feel slightly angry at being told what to do, where it, and with whom. Even though the Book of Acts is complete down to the final decima

Marie laughed cheerfully again.

He looked at her curiously. She stopped laughing. She leaned forward gracefully offered him her right hand again. "Shake," she said.

He shook.

"Now," she said seriously, "let's at least be friends. I'm not inclined to take to be hurled at any man's head. I might add 'either.' But if this Book of Acts is the complete t seems to be, we'll find it out soon enough. But," she said leaning back against the diva won't marry any man I do not love. And I happen to love Tony."

Peter nodded. "I happen to love Joan Willson," he said. "Until I change, we'll let continue that way."

"OK," chuckled Marie Baker. "Gin Rummy!"

"Right," said Peter, reaching for a deck of cards.

* * * *

Graydon looked at Hedgerly across the top of his glass. "If you're from the future," he "you could do some real chipper things."

Hedgerly nodded. "I know what you're thinking," he said. "You believe that I have advance dope on the stock market and other items for speculation."

"Well?"

"I have. Of course, my time happens to be some sixty years after now, understand."

"Perhaps, what are you driving at?"

"I'm trying to tell you," said Hedgerly, "that if I help you amass a fortune on speculation, this will be known fact by my time."

"So?"

"So," said Hedgerly, "the only thing I've done—the only thing that is historic fact—that which I'm going to do for proof. Just one thing."

"Go on."

"I'm going to write something on this envelope. Then I'm— Wait. We'll do it. I can prepared."

He wrote a sentence on the flap of the envelope and handed it to Joan. "Keep it carefully," he told her.

"Now," he said to Graydon, "There will be a big nine-event day at Bay Meadows tomorrow. I have here a listing of nine horses. You will put a sum of money on these nine and you will become famous as the first man ever to win a complete nine-horse parlay."

"Interesting, if true," said Graydon, looking over the list. "We'll know tomorrow."

"We'll go out to the track tomorrow," said Hedgerly.

"What about Marie and Peter?" asked Joan.

Hedgerly smiled. "True love," he said, "never runs smooth. Peter and Marie are playing Gin Rummy now, and both of them agreeing that they'll have none of this. But propinquity—"

The low growl in Graydon's throat stopped him cold. Perhaps his history told him to stop.

* * * *

The roaring hum of the generator made speech difficult but not impossible. Marie, with pencil in hand, was interestedly recording the data that Peter was calling to her. His lip brushed her ear occasionally, because it was necessary to get the figures across through the din. The brush of lip against ear was not unnoticed; under the circumstances it was to ignore anything, even the least minute of personalities. Finally he snapped the switch and the roar died.

“That’s it!” he said exultantly.

“It’s beyond me,” said Marie, looking dazedly at the solid bank of figures she’d written down.

“That’s because you’ve never been exposed to the stuff before. Come on—I’ll show you.”

He snapped the safety switch and watched the last dying flicker of the radiation counter above the control panel. Then he pressed a button and a huge door creaked open. He led Marie along a zigzag hallway, explaining, “Radiation products, like all Chinese Devils, travel only in straight lines.”

Then, inside the shielding, she saw the generator.

“This made that terrible racket?” she asked.

He nodded.

“I’d hate to be inside here when it’s running,” she said nervously.

“Me, too,” he grinned. “But I daresay the radiation would kill you long before the door did.”

“Oh!” she gasped, getting the implication of the dangers of nuclear physics in one gulp.

“This,” he said, “is brand new. In the center is a small, thin-walled brass container filled with radon gas, and suspending a cloud of finely divided beryllium. This produces neutrons. Very slow neutrons, not worthy of mention compared to most nuclear reactions. However this is but a source, instead of a complete deal.

“The neutrons emerge from the container in all directions, but are urged into motion by a swift, increasing pulse of gravitic force. It used to be magnetic, but it is now gravitic.”

We've changed it over, according to my findings of recent work. Then, with the neutron moving in a cloud, we alternate the gravitic field, varying it from attraction to repulsion. Like a cyclotron uses radio-frequency energy in the Dee Plates, we use gravitic energy to accelerate neutrons.

"Probably doesn't mean too much to you," he said with a smile. "But for the first time in history we can hurl a beam of neutrons of any desired range of energies at a target of any desired cross-section."

"It must be important," smiled Marie. "It is so complicated."

"Sophistry," he grinned. "Remember those 'nonsense engines' that were full of spools, levers, gears and stuff; all working furiously, but producing nothing?"

" 'A tale told by an idiot,
Full of sound and fury,
Signifying nothing,' " quoted Marie.

"Sort of like our friend Hedgerly," grinned Peter.

* * * *

"Speaking of the devil," came a voice. Hedgerly came in through the winding passage followed by Graydon and Joan Willson, who came last. Joan passed through the group and she could take Peter's arm. "Peter," she said. "I'm wealthy."

"So?" he said.

"Hedgerly produced a nine-horse parlay at Bay Meadows. Mr. Graydon... Tony, that is... put down a ten-dollar bill on it in my name. I'm now possessed of about sixty-three thousand dollars."

Ignoring the statement, Peter squinted at Joan and asked, "It's 'Tony, that is', not 'Tony, that is'."

Graydon scowled faintly. "Let's all be stuffy," he said.

"Sorry, Graydon," said Peter. Graydon nodded. He thought he understood. He tried to, anyway. As irking as the situation was to him—having this character Hedgerly blithely hurling his fiancée at Peter's head, and callously telling everybody else that they might as well give up trying to change Fate—he believed that Peter and Marie both were more than irked at being hurled together. Peter was not a boor, nor even stuffy.

Joan filled the silence. "That isn't all," she said. "Last night Hedgerly wrote this in an envelope before he gave Tony the horses to pick. It says: 'Graydon will place ten dollars

the parlay in Joan Willson's name, and she will win sixty-three thousand, four hundred dollars and sixty cents.' That's what happened, Peter."

"Um," said Peter.

"Trapped," said Marie.

"Gypped," growled Graydon.

"Bought," muttered Joan.

"I've told you again and again," said Hedgerly, "that no matter what you do, you're doing just what history said—note the past tense—you did! Even to producing a means of controlling neutrons, Peter. Now, of course, you'll continue here, though this being the Theoretical Physics Laboratory, you'll let this information disperse. The other boys will pick it up and develop it while you continue to delve into the relationship between magnetism and gravities."

"And suppose I do not?"

"Oh, but you did."

"Not," growled Peter, his voice reaching a crescendo, "if I go nuts first!"

Hedgerly spoke quietly to Marie. "You take care of him," he told her. "There's no one else like it for cementing a fond relationship."

"Must I give up my life work?" exploded Peter angrily. "I'd rather work on this gadget than eat! I've got me a lead that may end up by making me as famous as Faraday or Einstein, and if I follow it, I'll end up so far behind the eight-ball that it'll look like a split second."

Marie leaned back against the frame of the generator and smiled at him. "This," she said in a voice dripping with phony tones, "is a shock to me. Men usually brave fire and brimstone to touch the hem of my skirt. But you'd rather give up being historically famous than—"

"Shaddup," snapped Peter. "And let me think!"

"Think?" muttered the girl helplessly. "I think we're licked."

Peter nodded. "Licked, drawn, and quartered. Y'know, Marie, I've tried to resent it, but I can't. Probably because I know you're in the same boat as I am."

She nodded. "Whatever he does, whatever we do, he's got the answer and he's got it one hundred per cent. No man in his right mind would ever have stood up to Tony and

him to reduce his feeling toward me to platonic friendship. Not unless he knew before that Tony wouldn't half-kill him. But I am beginning to understand. Even though what he is odious, I must admit that it does come to pass."

Peter looked unhappy. "This is a fine mess," he said. "It wouldn't be half bad if Hedgerly and his confounded history were capable of changing our feelings as well as our lives. But he blithely ignores the fact that you and I are expected to marry—with both of us feeling that we'd rather marry someone else, and know who. Then, to top that, not only is the marriage going to be emotionally difficult in the first place, but think of the emotional wrench we'll have when Tony and Joan—" Peter stopped, swallowed hard, and then added, "I'm not speaking too selfishly, Marie. I've not mentioned how they will feel. The whole thing is a trumped-up mess."

Marie put her hand on Peter's arm. "I don't exactly love you," she said with a shy smile, "but you are a very nice guy, Peter."

"Huh?"

"You're sensitive and gentle and thoughtful of other people's feelings. I have a hunch that you could also be very hard and rough if the need arose." "

Peter smiled a little crooked smile and said, "All of which gets us nowhere, does it?"

"No," admitted Marie. "But if I'm going to have myself hurled into an 'arranged' marriage, I'd rather it be with someone I respect."

* * * *

Hedgerly leaned over the back of the divan in Peter's living room and looked from Joan to Tony, one on each side of him. "What's so wrong with it?" he asked. "People have been happy in prearranged marriages for centuries. Sometimes the participants never meet until they are introduced by the minister."

Tony looked up sourly. "Hedgerly," he said, "you may have traveled back into time. But mister, you didn't come THAT far back!"

Hedgerly shook his head impatiently. "I fail to see why people rant against their feelings. It is written that Peter and Marie get married. It is also written that they celebrate their golden wedding anniversary—shucks, I was there as a kid, and I know. They were very happy together."

"So?" demanded Joan.

"So you might as well give up," said Hedgerly. "As I told Peter when I arrived a few

days ago, I've come to help him. The chances are that things would have gone off all right if I'd not come. Peter and Marie would have met, regardless. As for you and Tony, Joan might tell you that you were very happy together, too. So you might as well give up completely and accept the dictates of fate."

"I hate to go through the motions of a play for nothing," grunted Tony.

Hedgerly winked at Joan. "You'll find some of the motions are fun," he said.

The door opened and the other couple came in. Hedgerly looked at them and smiled genially. "Have fun?" he asked. His tone was that of an indulgent father.

Peter looked vague. "We've been sitting and talking."

"No better way of becoming acquainted," smiled Hedgerly. He leaned back over the divan. "Let's go out and leave them alone," he said in a low, quiet voice.

Tony shook his head. "I live in strict bachelor quarters," he said. "And Joan could not have a visitor at this time of night. And I'll not go out and sit on a park bench so that some bird can make time in a comfortable living room with my fiancée."

Hedgerly shrugged. "This, then, is one time when four's company but five's a crowd. He said good night all around, and then left, knowing that the two couples would talk for hours, and each word would bring better understanding.

For this was it.

Hedgerly went to his hotel and called a private airport. "I want two planes ready to be hired for a quick trip to Yuma," he said. There was answer. "No, I'm not hiring both. I'm hiring one. I'm telling you that there will be another party inquiring. You'll see that they're satisfied. Let me know when they do. I'm going in the second plane."

Then, because he knew he'd be up most of the night and early morning. Hedgerly went to bed.

* * * *

Back in Peter's living room, there was not a quiet discussion. It was an armed rally.

"I'll speak plainly if I can," said Peter, striding up and down. "And when I miss a point, someone can call me on it."

"I don't know what you're after," said Tony, who was holding Marie's hand in a manner that should have disturbed Hedgerly's sleep. "But I'm for it."

Peter smiled. "Hedgerly is supposed to be my grandson," he said. "I'm to marry Marie. We are to celebrate a golden wedding. Fine and dandy. Now look: the one weak point in Hedgerly's wild story is the question of why he came back."

"Because it is so written," suggested Joan.

"Fine," grinned Peter. "Now leaving all personalities out of this for the moment, Marie, if you were introduced to me at a party, would you be interested in me?"

"Perhaps," she said. "On the other hand, Peter, you're not a spectacular chap. One must really know you before one can see what makes you tick. Then they're not certain they wouldn't know, really."

"But how do you feel now?"

"Resentful! As much as I know and admit that you are a fine man, Peter, I feel as though I were being forced into a duty that offered little compensation."

Tony nodded and then said, "Look. I can sum this all up, I think. Peter, you are welcome to enter my home at any time. You can even be known and recognized as my wife's best friend."

"Just so," interjected Joan, "he doesn't get too friendly."

Peter grinned. "We're a long way off of the track," he said. "This is as much a time-cliche as the fiction about the man who stabbed his father. The joker is, what do you think about it?"

"What can we do?" asked Joan helplessly.

"All we have to do is to foul him up just once," said Peter. "If he doesn't come back to annoy us, then Marie and I may never meet."

"In other words," said Tony, "the pattern is complete only when Hedgerly comes back and interferes."

Peter nodded. "Either we live by accident and die by accident, or we live by plan and die by plan. If our lives are written in the Book of Acts, then no effort is worth the candle. There will be those who will eternally strive to be good and yet shall fail. There will be those who care not nor strive not and yet will thrive. Why? Only because it is so written. And by whom? By the omnipotent God. Who, my friends, has then written into our lives both the good and the evil that we do ourselves! He moves us as pawns, directs us to strive against the odds, yet knows that we must fail, because he planned it that way. For those, then, that

there is everlasting hell.

“So,” said Peter harshly, “I plan that this goldfish shall try to live in air.” He plunged his hand into the aquarium and dropped a flipping fish onto the table. “I direct that this goldfish shall try to live. See, it strives hard to live in an unfriendly medium. It fails—of course, because the goldfish is incapable of following my dictate.”

Peter’s face took on an angry expression. “It has failed to obey me,” he thundered. “Ergo it must be punished!”

He lifted a heavy letter opener and chopped down, cutting off the head of the still-gasping fish.

“And that,” he said bitterly, “is predestiny!”

“All of which proves—?” asked Marie.

“Hedgerly exists,” said Peter. “But suppose Hedgerly exists only as a probability, a probability that he himself has made high. You see, there is always the probability that a man will meet any woman. Suppose the outcome of this probability was strong enough to insure the outcome—Hedgerly—to invent time travel, and then come back here to insure the probability?”

“I think I see,” said Joan with a twinge of doubt.

“Well, all we have to do is to be darned sure that his own particular probability does not occur. Then he won’t occur, and all of this will not occur, and we—”

“Look,” said Tony excitedly, “it may be grasping at straws, but it seems to me that there is nothing that is as certain as your friend. . . your, ah, grandson... Hedgerly claims should require a lot of outside aid.”

Marie brightened, and then looked glum. “There’s one thing that we all forget,” she said unhappily. “We’re speaking of predestiny as though we were a bunch of people going through the lines of a play. That may or may not be so. Let’s face it, predestiny means we may or may not know what our next move may be. We do not know, and there seems to be no way of finding out. Therefore whether or not our acts are all written need not take any of the fun out of life.”

Tony faced her in surprise. “Just what are you advocating?” he demanded.

She reached up and took his hand. “Tony, never doubt that I love you. Yet Peter is a nice fellow, and had I met him first I’m reasonably sure that we could have been happy together.”

“All right,” nodded Tony. “Granted that love is a matter of coincidence, of the desirable factors of personality, propinquity, and propitiousness, so what?”

Marie looked unhappy. “He... Hedgerly... did win a nine-horse parlay, didn't he?”

“Yeah.”

“He is here.”

“Indubitably—and damnably!”

“Well,” concluded Marie, “it is distasteful, but it seems ordained. And when—like going to the dentist—you're faced with something distasteful, there's little point in fuming over it. Do it—and forget it!”

Joan jumped to her feet. Then she sat down, dejected. “Beating my head against a wall,” she said. “All right. I give up.”

Peter thought for a moment. “Look,” he said brightly, “sometimes people must take their chances. Sometimes people gotta ride close to the edge in order to gain safety. I suggest that we all elope to Yuma and have a double wedding!”

Tony advanced upon Peter with fire in his eye. “You're going to let that character walk away with this?” he demanded. “I'll kill him first.”

“No,” said Peter, shaking his head. “That won't remove the truth of his birth. What must be done is to prevent it in the first place!”

“By going through with it?” snorted Tony.

“We can all hope for a last-minute reprieve,” said Peter. “And until we're shotgunned into it, we can always have a double wedding with the cross-couples getting married. You know Hedgerly claimed there hadn't been either a divorce or a death-and-remarriage in the family for generations. Now the thing we gotta do is to get married to whom we want, and the way we can even come close is to get close enough to a preacher to have him do the ceremony. All at once and no one first. Finis, conclusion.”

Tony nodded slowly. “Me, I've been half-psychopathically afraid of any gentleman in a top hat the cloth ever since Hedgerly turned up,” he said. “So we can all go and be certain that the other is irreparably and thoroughly committing nonretractable matrimony. Then pooh for Grandson Hedgerly!”

Peter went to the telephone and dialed the number of the private airport. Ten minutes

later they were on their way to the port, and when they arrived they looked carefully, but not see the odious one. They paid no attention to the other plane idling in the background.

* * * *

Hedgerly arrived as they took off into the blue. His plane was waiting, and he leaped in quickly and told the pilot to follow the other plane.

“What’s the hurry?” grinned the pilot.

Hedgerly smiled a sly smile. “It’s a very long tale,” he said. “But the summation of it is that there are two couples in that ship who intend to get married.”

“Double wedding, huh?”

“Right. That’s what they intend.”

“And are you the irate father, the angry brother, or the jilted lover?” grinned the pilot. He gunned the engine, and the plane roared down the tarmac and lofted. The pilot was in no time in following the other plane. When the roar of the engine diminished for flying, the pilot turned to Hedgerly, who was obviously waiting for a semblance of silence before he spoke.

“I’m none of those,” he said with a smile. “I’m merely a very interested character whose future depends upon seeing the right thing done.”

“Such as?”

“Well, Party A wants to marry Party B, while Party X wants to marry Party Y. This is not to be. However, it must be that Party A marries Y whilst Party B marries X.”

“Clear as a Raymond A. Chandler plot,” grinned the pilot.

“Well, they’ve been trying to outwit me for quite some time,” remarked Hedgerly. “Right at the present time, they’re heading for this double wedding. The trouble is that they’re so befuddled and worried about doing the wrong thing that they’ll pay no attention to what the preacher is saying.”

“Who does?” laughed the pilot.

“It would be better for their little plot if they did,” said Hedgerly with a sly grin. “For all I see, I’m going to see that the preacher marries the proper parties.”

“How?”

“I know how. You see, I’ve known about this plan of theirs for quite some time. I know how it will come out. There will be a lot of confusion once this double ceremony and they think they’re safe. While this confusion is going on, the preacher-man will be out the wedding certificates. He will, of course, have forgotten the correct names of the married ones. He will look up—and he will see me. I will tell him that I arrived a little late at the festive event, but can I be of help? Let’s not annoy the happy people with details. Confused? Then permit me to supply the details.”

“Yeah?” said the pilot, interested.

“Then I’ll supply the necessary details to make certain that the marriage certificate handed to Tony Graydon will state that he is solidly wedded to Joan Willson; conversely, the certificate handed to Peter Hedgerly will irrevocably state that he is to have and to hold, until death do him part from Marie Baker *et demonstrandum!*”

“Think there’s a good probability of your getting away with it?”

“An excellent probability,” stated Hedgerly. “This, chum, is it!”

* * * *

Hedgerly arrived as the festivities came to a close. Quietly, he slipped into the back of the cottage and walked through the house until he came to the parson’s study. There he waited until the gentleman arrived, and then he said, “I am a relative of one of the fellows involved, sir. I seem to have been late for the big occasion, and I’d rather not interfere at the present.”

The parson looked up and nodded genially. “Not even to kiss the brides?”

“Later,” grinned Hedgerly. “Doubtless the brides are being very well kissed right now?”

“Thoroughly. I see your point.”

“Yeah,” drawled Hedgerly with a smile. “I’ve often thought it was a strange way to seal a fidelitous wedlock—for the bride to go around bestowing kisses on all and sundry men.”

“My point exactly. The man to kiss the bride is her new husband and none other. I am a discerning man, sir. I don’t know—”

“Hedgerly. A not-too-distant relative of Peter Hedgerly.”

“Then you know the names of all of them?”

“Known them for years.”

“Fine. Then you can help me with their names. Mind?”

“Not at all,” smiled Hedgerly. “They are Peter Hedgerly, Marie Baker, Anthony Graydon, and Joan Willson.”

The parson put the names down and then turned to his desk. He picked up a rather heavy script-pen and started to write the names in on the dotted lines in a heavy, ornate script. Finished, he arose and said, “Come on, Mr. Hedgerly.” He waved the certificate saying, “I like to write these things in with a heavy flourish. It seems to give them more oomph or taste or whatever than merely scrawling the names in common handwriting.”

Hedgerly followed at a little distance. He wanted to see Peter’s face when the young man read the certificate and found out who he was really married to. Furthermore, Hedgerly wanted to be there to point out who was wedded to whom and why.

Peter accepted the certificate and put his arm around Joan with a fatuous expression. Tony kissed Marie. They all started for the door.

Hedgerly ran forward, but the parson stopped him. “Hedgerly,” he said, “you make one mistake. Never, never, never, try to hurl any woman at any man’s head. They both will hit it. And never, never, count on anything as being certain. And always, when you’re trying to juggle the future, be certain of the true ancestry of those who have a definite part of it. I’ll give you a lift, Hedgerly, for I’m going your way, but not as far.”

“But... but—”

Parson Hedgerly smiled. “Two couples,” he said, “happily married to the right people—by their own son! Yeah, Hedgerly, you’re not the only one who has a good probability of being. But your probability is slipping from decimal point to decimal point now—and I doubt that you are even a shadow of your present self by the time we finish our trip back home.”

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* * * *

“Meddler’s Moon” has been one of my favorites, so when Sandy Marshall of Radio Station WOR was producing the science fiction series “Exploring Tomorrow” with John as commentator, I re-wrote the story into a radio script. This is quite out of chronology, since it took place more than ten years later.

As I write this, I am waiting for a release from Station WOR to print the script so you can see how things change when a story is re-written into vocal presentation.

Like any other discipline, the radio drama has its own special limitations as well as its own advantages. One of the restrictions is limiting the number of voices on the air in a scene or sequence. The script could call for other voices for other scenes or sequences, but provided the script was broken for, ah, “these commercial messages.” “Meddler’s Moon” uses five voices, spoken by three actors. One, the meddler, stays through. The other two, one male, one female, swap voices and characterizations to produce the effect of a five-person play. Also notice that I revised the names and the time period to go along with the requirements of the spoken drama.

So, with luck, here is the radio script. It must not be reproduced, or presented, without special permission from Radio Station WOR.

* * * *

(The script, reproduced here, was taken from a recording made in Germany, from the Armed Forces Network, Station AFN, in 1965, while I was there for ITT. That’s why there are in those breaks for “our commercial messages” with an interview.)

Note: The following is not to be used in any method other than its appearance in this or other printings or editions of this book by Bantam Books without special written permission from Radio Station WOR, and countersigned by the estate of George O. Smith.

Meddler's Moon

(Radio Script)

"Meddler's Moon"—RADIO SCRIPT. Presented on Radio Station WOR in April 1958 program "Exploring Tomorrow." Rebroadcast on Radio Station AFN of the Armed Forces Network in Frankfurt am Main, Germany, in May 1965. The following version of the script was transcribed from a tape recorded from the AFN presentation.

* * * *

ANNOUNCER: "This is Radio Station AFN of the Armed Forces Network, Frankfurt am Main, with studios in Hochst..."

THEME MUSIC

... It is time now for our performance at 'Command Theater.' "

MUSIC CONTINUES, SEVERAL BARS, TO

ANNOUNCER: "Before we begin our performance this evening, I want to quote a letter received from one of our listeners, Mr. George O. Smith. It goes this way:

" 'On Wednesday evening, we were listening to your program "Command Theater" and with some small surprise, we identified the commentator, who filled in with details provided the background of the story. He is John W. Campbell, the editor of Analog Science Fiction Magazine. And unless we are mistaken, the story is one of a series broadcast on New York Radio Station WOR, produced and directed by Sandy Marshall. If our guess is correct, you may someday be playing a story entitled "Meddler's Moon," which appears on the same series. I would like to hear "Meddler's Moon" for very personal reasons.

" 'I am the George O. Smith who wrote the original story, and I am the guy who adapted the story for WOR. Unfortunately, I was in the hospital when the story went out on WOR, so I have not yet heard the work on radio.

" 'Signed, With best regards, George O. Smith'

"Wishing to oblige Mr. Smith, we inaugurated a search of our AFN Program Library and, happily, we found it: 'Meddler's Moon.' We have it scheduled for this evening. And we've invited Mr. Smith to hear his play for the first time, right here in the studio.

"Welcome to 'Command Theatre,' Mr. Smith."

GEORGE O.: “Thank you. I’m glad to be here.”

ANNOUNCER: “Are you over here in Europe to do some writing, or preparing for some writing?”

GEORGE O.: “Well, in a way, yes. I’m actually working in Europe for the International Standard Engineering Corporation on a communications network for military.”

ANNOUNCER: “Then writing is an avocation for you.”

GEORGE O.: “In one sense, yes. In another, I’ve combined about thirty years of radio engineering design with my writing background, and at present I am in charge of technical documentation for the engineering section of this contract.”

ANNOUNCER: “Judging from your letter, Mr. Smith, you specialize in science fiction.”

GEORGE O.: “Yes, I’ve written quite a bit of it since nineteen forty-two, when my first story was published.”

ANNOUNCER: “And when did you write ‘Meddler’s Moon’?”

GEORGE O.: “I’d say late in nineteen forty-six. It appeared in *Science Fiction—Now Analog*—in September ‘forty-seven.”

ANNOUNCER: “And you also wrote the radio adaptation?”

GEORGE O.: “Yes. That was done early in nineteen fifty-eight.”

ANNOUNCER: “And I understand, Mr. Smith, that you’ve never heard the show on the air.”

GEORGE O.: “Correct. I was clipped by a mild coronary shortly after I sold the script, and was down sick when it went on the air.”

ANNOUNCER: “All right, Mr. Smith. Tonight you will hear your show. Settle back, now, as ‘Command Theatre’ presents ‘Meddler’s Moon,’ by George O. Smith.”

MUSIC: Theme from “Exploring Tomorrow” series. Fades into background level for

JOHN W. CAMPBELL: “The program you are about to hear is fiction. Science fiction. Life is confusing enough as it is, so we hope that this story stays fiction.”

see, time travel is most likely impossible. But that doesn't mean that it wouldn't be possible to discuss it. Tonight's story is about time travel. And if time travel is possible, what would happen if you went back and murdered your grandfather before your father was born? That is—what would happen to you?...

MUSIC: "Theme from "Exploring Tomorrow."

This is one of those repetitious things of several bars; at the end of the first whole run to background level for the rest of the following:

“... Last night when I went up the stair,
I met a man who wasn't there.
He wasn't there again today,
My gosh, I wish he'd go away!”

“It was Gelett Burgess who wrote those immortal lines. But the problem is, how do you get rid of the little man who wasn't there in the first place?”

“Well, Charles Martin was a physicist. A scientist. And his trouble started with the man who wasn't there.”

MUSIC: Fades at the end of Campbell's introduction to two to five seconds of silence.

* * * *

CHARLES MARTIN, in monotone, thinking out loud: “Sub-matrix X, integrated between two pi plus...”

SOUND: Door buzzer

MARTIN: ... Confound it!”

SOUND: Footsteps. Door latch.

MEDDLER: “May I come in, Mr. Martin?”

MARTIN: “I suppose so.”

MEDDLER: “Are you alone?”

MARTIN: “Why, yes. Of course.”

MEDDLER: “Ah, then, she hasn't arrived yet.”

MARTIN, slightly irritated: "I wasn't expecting anybody."

MEDDLER: "Well, I am. But if she isn't here yet, I'll take time to explain."

MARTIN: "*Who* isn't here?"

MEDDLER: "Oh, one thing at a time, sir. Now, first, have you ever considered the problem of time travel?"

MARTIN, scoffing: "*Time travel?* Don't be ridiculous. It's impossible."

MEDDLER: "Now, don't say 'impossible,' because you invented it."

MARTIN: "I've done nothing of the sort!"

MEDDLER: "History says you did."

MARTIN: "*What* history?"

MEDDLER: "History says that you invented time-travel machinery and applied for a United States patent, dated sixteen June nineteen sixty-four."

MARTIN: "Some history! Nineteen Sixty-four? Why, that's six years from now!"

MEDDLER: "From your point of view. But ~~my point~~ *my point* of view. You see, I've actually used one of your machines to come back from your future. Fifty years to my past to this date, your present. Understand?"

MARTIN: "You claim to have traveled fifty years through time."

MEDDLER, triumphantly: "I'm here! That's proof!"

MARTIN, scathingly: "I don't believe a word of it!"

SOUND: Light rattling of paper. Continues ...

MEDDLER: "Well—Look 'em over!..."

SOUND: Stops

... "This is your own personal notebook, fifty years later than it is now. Actually, it's the same one that's over there on your desk just barely

started. *This* is a copy of your patent. These documents say ~~say~~ right. so! You see, ~~my~~ day, you are the wealthy and famous Charles Martin.”

MARTIN: “Umph! Do you want my autograph? You may be right, but I’m neither wealthy nor famous.”

MEDDLER: “Just a matter of time. But I’m not after anything. I came here to help you.”

MARTIN, disparagingly: “I don’t need any help!”

MEDDLER: “Do you know anything about your future?”

MARTIN, scornfully: “Of course not!”

MEDDLER, boastful: ~~Well!~~ *Well!* I *do!* I know just about everything that you are going to do for the next fifty years.”

MARTIN: “So what am I going to do next?”

MEDDLER: “You are about to be introduced to the woman who will become your wife.”

MARTIN: “I already know her. We’re already engaged.”

MEDDLER: “Ah, you mean Laura Phillips. No doubt she’s a nice girl, but she’s not for you. You’ll break that engagement shortly.”

MARTIN: “I’ll do no such thing!”

MEDDLER: “History says you did. Not ‘~~will do~~’ but

MARTIN: “Like...”

SOUND: Telephone

MARTIN: ...Yes?—Yes, Laura—No, I’m not—But Laura—”

MEDDLER: “Go on. Tell her now and get it over with!”

MARTIN: “You shut up!—No, Laura, no, I didn’t mean you.” —No—No, Laura, she’s not here...

SOUND: Barely audible click:

“She hung up!”

MEDDLER: “Ah ha! She wouldn’t even listen! And your fiancée!”

MARTIN: “She wouldn’t have done that if—”

SOUND: Door buzzer, gingerly. Footsteps, door latch.

AMELIA CARTER, in hesitant voice: “Er—is—ah—”

MEDDLER: “Ah, Miss Carter! We’ve been expecting you. Please do come in.”

AMELIA: “All right. But just for a minute. No, Harry. You wait by the door, but stay close.”

HARRY: Muffled, masculine grunt, just enough to indicate his presence on the scene.

SOUND: Door closing.

MEDDLER: “Miss Amelia Carter, may I present—”

MARTIN, angrily interrupting: “Get that dame outa here!”

AMELIA: “Dame!”

MEDDLER: “Please. This is hardly the way to start a lifetime.”

AMELIA : “Lifetime? “

&

MARTIN: “Lifetime?”

MEDDLER, triumphantly: “Yes! History says so! Fifty years you’ve been together, and still going!” (Voice changes to admonition) “Now stop this hostility. You might better save time, so start off with the first names. Amelia, this is Charles. Charles nice to Amelia. You should be gracious, anxious to create a good first impression.”

MARTIN: “Don’t you tell me how to behave.”

MEDDLER: “Now, don’t blow a fuse, Gran’pa.”

MARTIN, indignant: “Gran’pa?”

MEDDLER: “I am Charles Amile Martin, the Third. Your grandson. Please note that my middle name is the masculine form of Amelia, my grandmother.”

AMELIA: “Grandmother?”

MEDDLER: “Oh yes, indeed. Your son is my father.”

AMELIA: “But I’m not married.”

MEDDLER: “But you will be. Now, Gran’pa, you sit here—”

MARTIN, interrupting angrily: “You cut this ‘Gran’pa’ stuff right now.”

MEDDLER: “I’m sorry. But I’ve been taught that it’s quite impolite to call my grandparents by their given names. Of course, you don’t look like the old duffer I know as gran’pa.”

MARTIN: “Duffer?”

MEDDLER: “Calm down. Calm down. Start making like romance. You know, you’re not even engaged to gran’ma yet.”

AMELIA: “Don’t call me gran’ma!”

MEDDLER: “Pardon me. I know it’s impertinent, but now that I see you in your youth, you’re quite a dish. I can understand why gran’pa threw over this Laura Ph girl. It’s hard to believe that you will become that sweet little old lady.”

AMELIA: “Mr. Martin, what’s he talking about?”

MARTIN: “Amelia, he says he’s a time traveler from the future who can prove that we met, got married, and—”

AMELIA, interrupting: “Don’t go any further!”

MARTIN: “I’m afraid he’s right. He says it’s history, and we can’t change history, can we?”

AMELIA: “But I hardly know you.”

MEDDLER: “Well, now, if you’d known one another, I wouldn’t have to introduce you, would I?”

AMELIA: “Maybe somebody ought to explain this to me.”

MEDDLER: “Fine! A much better start. A highball to relax, maybe?”

AMELIA: “I think I need one.”

SOUND: Glasses tinkling, cork opening, pouring.

MEDDLER: “There! Now, a little more romantic setting. Soft lights. Sit beside him, Gran’ma, and I’ll leave you two to canoodle a bit. I’ve some other business—”

AMELIA: “But Harry?”

MEDDLER: “Oh, Harry. Forget it. I’ll take care of Harry!”

SOUND: Doorbell buzzes angrily.

MARTIN: “Yipes! That’ll be Laura. Run! Hide! Do something!”

MEDDLER: “Oh relax, Gran’pa. I’ll take care of everything.”

SOUND: Door buzzer, with banging on the door panels, doorknob rattling, followed by footsteps and door opening.

MEDDLER: “Ah, you’re Miss Laura Phillips. Miss Phillips, may I present Mr. Harry-”

DIRECTION: Voice trails off to make the last name unintelligible.

MUSIC: “Exploring Tomorrow” theme rising to full volume as the Meddler’s voice trails. Run the theme stanza, end with orchestral stab.

ANNOUNCER: “Tonight, on ‘Command Theatre’ we’re listening to the radio adaptation of a science fiction novelette, ‘Meddler’s Moon.’ Well, Mr. Smith, how you like your work on the air?”

GEORGE O.: “This sort of thing is kind of time travel in itself. Right out of my past into my present.”

* * * *

MUSIC: Start with theme, fading to background level for the following:

JOHN W. CAMPBELL: “Charles Martin wasn’t the only one having trouble with the

little man who wasn't there. Everyone was, because the future can't be handled logically. It's logically impossible because, you see, the future doesn't exist yet. It doesn't exist, then, obviously, it isn't logical. But then, it's going to exist, so—well—you see what I mean. Logic is just hopeless."

MUSIC: Fades at the end of Campbell's intermission. Two to five seconds of silence:

HARRY: "I should ought to clobber you."

MEDDLER: "Oh now, be reasonable, Harry. That wouldn't prove anything."

HARRY: "But Amelia's girl!"

MEDDLER: "Get over it, Harry. They're probably arranging their engagement right now."

LAURA, angrily: "~~You~~ meddler!"

MEDDLER: "I'm not a meddler, Laura. I'm just an instrument of fate."

LAURA: "Fate? Poor Charles, thrown into the cage with that blonde lioness!"

HARRY: "You stop calling my girl bad names. You hear me?"

MEDDLER: "You're acting like a pair of spoiled ~~children~~.regret that you've lost your loves, ~~really~~ no one ever died of unrequited love."

HARRY: "Mine wasn't unrequited."

MEDDLER: "It might as well be, once they're happily married."

LAURA: *Happily Married!*"

MEDDLER: "You wouldn't want them to be unhappy, would you?"

LAURA: "I'd like a little happiness, myself."

MEDDLER: "So would we all. But stop and ~~think a number~~ of human lives depended upon you giving up a love affair, would you go on and marry the man anyway?"

LAURA: "That's hardly fair."

MEDDLER: "Then I'll put it up to Harry. Harry, if your own life depended upon preventing a wrong marriage, would you stand by and let them go ahead?"

HARRY: "Make your own plan. You're the meddler."

MEDDLER: "All right. My life depends upon it. My father's life depends upon it. Unless Charles Martin and Amelia Carter marry, neither my father nor I can be born. Realizing this, I used my grandfather's time machine—yours, Gran'pa—to come back to give them a formal introduction. Now, you can't blame me for wanting to do so I came back and fixed it up."

LAURA: "Yes—you're a great little fixer-upper!"

HARRY: "Maybe we ought to fix you up and go on as we please about it."

MEDDLER: "You don't know much about time and history, do you?"

HARRY: "No, but I could make up a—"

MEDDLER, interrupting: "No, you couldn't! You couldn't change a thing!"

LAURA: "Why not?"

MEDDLER: "If your father and mother had never met, could you have been born?"

LAURA: "Now, don't be so unkind!"

MEDDLER: "Never be scornful about stating a simple fact. Therefore I am! Say it as you please. To you, Charles and Amelia have yet to be married, and you think you can stop them. To me, Charles and Amelia were married fifty years ago and they are my grandparents. The sensible thing to do is to accept the fact. Wipe off the slate. Pick up the pieces and go on from there."

LAURA: "Such as?"

MEDDLER: "Well, now, you're both very attractive people. This matter might well start a common bond of memories—"

HARRY, interrupting: "She ain't my type."

LAURA: "I've seen better, myself."

MEDDLER: "Egad, this is a primitive era! I tell them what is best for all of us, and they want to—what's the term, Harry?"

HARRY: “Clobber you.”

MEDDLER: “Ah, yes. Clobber me.?”

HARRY: “That’s the best idea I’ve heard all night.”

LAURA: “No, Harry. Not here. Outside on the street where I can stop making like a lady. Then I’ll help you.”

MEDDLER: “Oh, you can beat me up, but you can’t change something that’s already happened, now, can you?”

LAURA: “I’ve taken all I can. I’m going home.”

HARRY: “Uh—er—ah, uh, can I, er, ah, take, yuh—”

MEDDLER: “Now, that’s a fine practical arrangement. Find sympathy in one another. It’s the better thing to do. And maybe you’ll find happiness in one another.”

MUSIC: Orchestral stab, followed by opening bars of the theme music, trailing off to two to five seconds of silence.

AMELIA: “Charles, can’t we get out of this somehow?”

CHARLES: “Well, Amelia, if I cut my throat, I can’t invent the time machine, and then he couldn’t come back to mess up our lives by forcing me to marry you.”

AMELIA, wailing: “Ooooh—you’d rather commit suicide than marry me!”

CHARLES: “Amelia, stop it. That’s not so.”

AMELIA, sarcastically: “So—you’d rather marry me than commit suicide?”

CHARLES: “Confound it! Stop the bawling and let me think.”

AMELIA, slowly and thoughtfully: “Charles, do you—think he’d go away—if we made it look like—like everything was running smooth?”

CHARLES, quickly: “Whadda y’mean?”

AMELIA: “Suppose we stopped squabbling—and complaining— and make it look as if we’d been making up to one another. Mightn’t he think everything was going away? Maybe he’d go back where he came from. Then we could do as we please.”

CHARLES: “Won’t work, Amelia. That character is our grandson. Right now he already knows what we’re going to do.”

AMELIA: “Maybe he does know, but we don’t. Aren’t you willing to give it a try?”

CHARLES, in a tone of despair: “All right. I’ll try. But it’s futile!” (Voice changes to furtive curiosity) “Just what did you have in mind?”

AMELIA: “Why, I ~~just~~ know he’ll be checking in tonight. We could make it look as if we’d—been—getting acquainted.”

CHARLES: “And just what have we been doing for the past couple of hours? Playing tiddy winks—HEY! Hey! Hey, let go of my necktie!”

AMELIA, speaking through Charles’s unintelligible interjections: “I’m just messing you up a little bit. If we’d really been getting acquainted, we’d hardly look as if we’d been here with folded hands, would it?” (Pause) ~~So Charles!~~

CHARLES: “If we’d really been getting acquainted, you wouldn’t mind having your hair a bit mussed up, would you?”

AMELIA: “Suppose not. There! Now we look as if we’d been coeducational wrestling. Now—where’s my bag?”

CHARLES: “What for?”

AMELIA: “Lipstick. You should have a smear or two.”

CHARLES: “With you looking like a magazine cover? Lipstick is a two-way smear, right?”

AMELIA, hesitantly: “Ah—yeah—I suppose so.”

CHARLES: “Amelia, you sound as if Harry was the only man you’ve ever kissed.”

AMELIA: “And if we get around to it, Charles Martin, you’ll be the only man who’s ever been kissed just because history said he had to be.” (Pause) “So there. So gotta, I gotta!”

CHARLES: “Once—for history.”

AMELIA, after medium-long pause, giggles, another medium-long pause: “Let’s see you now.”

CHARLES: "Um—you need more of a spread."

AMELIA: "Mmmm—umrnmmm." (Long pause, throaty chuckle) "You need a touch right there. Hold still a minute."

CHARLES, after a pause, lets out a satisfied sigh: "Ah-hah! There's one thing that history didn't mention."

AMELIA: "What's that, Charles?"

CHARLES: "History didn't say that this could be fun."

AMELIA, following pause: "Be funny, wouldn't it?"

CHARLES: "What could be funny?"

AMELIA: "If Junior's trick worked."

CHARLES: "Meaning?"

AMELIA: "That we found out—after we went back—that we really liked it?"

CHARLES, dubiously: "Yeah—wouldn't it!" (Pause)

SOUND, following pause: Door buzzer, "shave and a hair-cut" tattoo.

AMELIA: "Charles?"

CHARLES, after a short pause: "Yes?"

AMELIA: "Isn't that the doorbell?"

CHARLES: "Yeah. So let 'im wait!"

SOUND: Door buzzer again, sounding impatient.

CHARLES: "Now, remember to look flustered, as if he is interrupting something."

AMELIA: "Try to wipe your face, too. As if you were trying to hide the evidence."

SOUND: Footsteps, doorknob.

MEDDLER: "Ah, good! I see that everything is progressing fine."

CHARLES: “All right. All right. Now—now—now— er, go away.”

MEDDLER: “Oh, I’m not going to stay. I just wanted to see how things are getting along. I know when I’m not wanted.”

CHARLES: “Then how come you came here in the first place?”

MEDDLER: “Right now, you think you hate me for my interference. But I’ll remind you that, fifty years from now, the pair of you will be sending me off in the time machine *to* do this job of interference. And you, Gran’ma—”

AMELIA, interrupting: “Don’t call me gran’ma!”

MEDDLER, laughing: “You’re still my gran’ma, and you’ll tell me what I’ve known all along: that you and gran’pa wasted your first kisses trying to fool me into leaving. But now I’ll trot along—be back tomorrow. Don’t keep gran’ma out too late, Gran’ma!”

AMELIA: “But what did you do with Harry?”

CHARLES: “And Laura?”

MEDDLER: “Oh, I fixed that up just fine. Harry volunteered to escort Gran’pa’s former girl friend home.”

AMELIA; “Harry—with Laura!?”

CHARLES: “Laura—with Harry!?”

SOUND: Door closing.

AMELIA. wistfully: “Charles?”

CHARLES: “Yes, Amelia?”

AMELIA: “To heck with history. ~~Kiss me~~ *Kiss me for me!*”

MUSIC: Orchestral stab, followed by theme music long enough to signify the end of “/ One” Silence.

* * * *

ANNOUNCER: “George O. Smith, the author of the show we’re listening to tonight, is right here in the studio with us. Mr. Smith, how do you like it?”

GEORGE O.: "I like it fine. But there's one problem. I know how the ending comes out."

* * * *

SOUND: Door buzzer, light and hesitant.

CHARLES groans, coming awake: "Egad!"

SOUND: Rustle of bedclothes, footsteps in bare feet. Unlatching the door.

CHARLES: "Laura! For goodness sake, It's three o'clock in the morning."

LAURA: "I know what time it is."

CHARLES: "Bub—but—"

LAURA: "I came to see what you were doing."

CHARLES: "I've been trying to think."

LAURA: "Y~~da~~ook as if you have everything all settled."

CHARLES: "So what can I do?"

LAURA: "Well, you might wash that blonde hussy's magenta lipstick off your silly face."

CHARLES: "Now Laura—Laura—I—I can—I can explain."

LAURA, sarcastically: "I'm listening. Convince me—go on and convince me that you got all smeared up without enjoying it. Convince me."

CHARLES: "Well—you went home with Harry the Beef Trust, didn't you?"

LAURA: "I didn't see anyone around to make any other offer."

CHARLES: "But I was—" (Voice trails away)

LAURA, haughtily: "I know. You were working like a little beaver, making history come out right."

CHARLES: "So what am I supposed to do? Bang my head against brick walls? Tilt at

windmills? Confound it, am I the only one around here who has sense enough to know when I'm licked?"

LAURA: "You might not be so easily licked if Amelia Carter was as ugly as a mud fence."

CHARLES, sarcastically: "Well, it does make my defeat less difficult to bear!"

LAURA: "So let's make it complete, then. Have this expanded to fit her pudgy little hand."

CHARLES, disappointed: "My ring! But Laura—but—"

LAURA: "Good-bye, Charles."

CHARLES: "Please wait—don't go."

LAURA: "What's to stay for? To be the maid of honor?"

CHARLES: "If you came to quarrel with me, you yourself are doing everything to prove Junior's point. If he were here, he'd be cheering you on, and using my telephone to call Harry to take you home."

LAURA: "I didn't come here to ~~with~~ fight you, Charles. I came here to fight for you. But you're not fighting!"

CHARLES: "But Junior knows all the moves. Everything I try rums out to be his way."

LAURA: "Like your experimental smooching session?"

CHARLES: "Yeah—that, too! He was amused."

LAURA: "I'm ~~not~~. Your game may have started out as a deliberate frame-up, but it ended ginger-peachy for him."

CHARLES: "I try to tell you—he ~~knows~~ move. He came back to tell me that you went home with Harry."

LAURA: "And fifty years from now, you and Amelia will dodder over to his time machine and kiss your brat of a grandson good-bye as he takes off for the introduction. That's the program, isn't it?"

CHARLES "But what can we do?"

LAURA: "Charles, you say that everything's fixed and solid, that nothing can be changed."

CHARLES: "That's the way it is."

LAURA: "But what might happen if you could un-fix Junior's little apple cart?"

CHARLES: "Then we could go on as if he hadn't arrived."

LAURA: "Couldn't you?"

CHARLES: "I can't prevent what's already happened. He exists! He is! He's alive and here—in the flesh!"

LAURA, voice drops to disappointment: "So—I suppose you can't change that, can you."

CHARLES: "Unfortunately, no."

LAURA, very slowly and hesitant, reluctantly: "Well, then—goodbye, Charles. If he exists, he exists."

CHARLES: "Confound it, he does exist!" (Pause) "But wait a minute, Laura. Junior does exist, but what if Junior was a different kind of a guy?"

LAURA, quickly: "What do you mean?"

CHARLES: "Look, Laura, Junior is my grandson, right?"

LAURA: "Um?"

CHARLES: "If I don't marry Amelia, he can't be born. He can't exist unless we follow e move, right down to the last letter of the history he talks about. Right?"

LAURA: "Yes, but—?"

CHARLES, interrupting: "But let's assume that the ~~of the~~ future is and solid recital of recorded history."

LAURA: "Everybody has been saying that all along but you and Junior, but you keep pointing at Junior's history book and shouting 'No!'"

CHARLES: "But suppose that Junior's history book is ~~one of~~ only possible

histories.”

LAURA: “So how do you explain his solid existence?”

CHARLES: “Floating a brick on water is not impossible. It’s just extremely unlikely.”

LAURA: “Stop talking like a mathematics professor discussing infinity. Get down to the important point.”

CHARLES: “Until Junior arrived with his books and his papers to show me—us—how we are going to act, we might assume that his existence was no more assured than any other future probability.”

LAURA: “Ummmm, go on, Charles.”

CHARLES: “But with his papers and books, he convinces us of his existence, and he becomes a very strong probability. In other words, he exists because he did the things that put history on the road that leads directly to him.”

LAURA: “Well, you could rob a bank and get tossed in jail. And that would stop you from marrying anybody.”

CHARLES: “No, we can’t change things that drastically. So Junior exists as a multi-sigma probability. But we might slip a little change in Junior’s character.”

LAURA: “How can you do that?”

CHARLES: “Suppose we could create another strong probability. Mightn’t he come back and fight, just as strong, for his own existence?”

LAURA: “I don’t follow.”

CHARLES: “He’s my grandson. Amelia is his grandmother. But suppose—*will you marry me right here and now?*”

LAURA: “Charles! At three-thirty in the morning?”

SOUND: Door buzzer, cheerful tattoo.

LAURA: “Charles—it’s Junior again. Don’t go! DON’T GO!”

SOUND: Bare feet walking, doorknob.

LAURA: “Oh ~~no~~! No! No!”

MEDDLER: “Good morning, I’m in time, I see!”

CHARLES: “Do come in. I was expecting you.”

MEDDLER: “Good morning, Miss Phillips. May I introduce myself? I am the Reverend Charles Laurence Martin, the Third. You’ll notice that my middle name is the masculine form of the given name of my grandmother, Mrs. Charles Martin, nee Laura Phillips.”

LAURA: “Why Charles—this is the other probability.”

MEDDLER: “Precisely, and stronger than the other.”

CHARLES: “Let’s get along with it. Quickly. Before something else comes up.

MEDDLER, calmly: “Please. We must not be impatient. There must be witnesses. But I have prepared for everything. Everything!”

SOUND: Door buzzer.

MEDDLER: “Permit me.”

SOUND: Walking in shoes, door opening.

MEDDLER: “Please do come in. Come in! Oh, but this is a most auspicious occasion, despite the time,”

LAURA : “Amelia!”

CHARLES: “And Harry! What are they doing here?”

MEDDLER: “Witnesses. And not only witnesses, but greater support for my probability.”

LAURA: “I’m still a bit confused.”

MEDDLER: “You have forgotten that a person has four grandparents. I said that I’d prepared for everything. It is not often that a man has the opportunity of officiating at a double ceremony, to unite his grandparents.”

CHARLES: “Can you make this stick?”

MEDDLER: “Why yes—unless I double-cross this double ceremony. Charles, take Laura’s hand and stand away over here on my left. Harry, take Amelia’s hand and stand to my right.”

SOUND: Walking, two female, one male with shoes, one without.

MEDDLER: “Now we’re all sorted out properly. Fine! History says that Charles and Laura will have a stalwart son. Harry and Amelia will have a beautiful daughter. So and daughter are my own parents.”

LAURA: “Are you sure?”

MEDDLER: “I arrived a bit late, my dear, because I’ve been quite a busy man. I made a stop on my way through time, pausing long enough to unite your son and daughter in marriage. It was a ~~very~~ wedding!”

MUSIC: “As Time Goes By” several bars, fading to background level.

JOHN W. COMPBELL: “Ah yes! ‘As Time Goes By.’ Woman needs man, and man must have his mate. But that doesn’t mean that you’ve got to be stuck with any particular mate. There’s freedom of choice there. You see, the way you get rid of a little man who wasn’t there is to have a different little man not there. And that takes care of that!”

ANNOUNCER: Here in our cast tonight were Lawson Zirby, Connie Lempke, and Robert Webb. Script was by George O. Smith. Produced and directed by Sanford Marshall in New York.”

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* * * *

Everything changes. I escaped from my minimum-security prison in Germantown by finding a small apartment in a suburb known as "Indian Queen." This, by malice or misguided advice, was promptly re-named "Indian Queer"; that spread through fandom.

With my own place, my chasing up and down slowed. L. Ron leaked the dianetic story to John just in time to create publicity that helped L. Ron's book on the subject in the eyes of the publishers. John, as L. Ron said he would, jumped in head first and went to the whole way.

Science fiction story problems could no longer be solved by some tablecloth engineering, and the villains weren't being villainous because of their heartless search for money or position. The story problems were caused by the engrams created while the character *was* *in utero* when father or mother groaned, "Oh, why must everything go wrong!" So, in adult life, the character always pushed the wrong button, used chisels for screwdrivers, and drove the wrong way on one-way streets. The story problem was solved by Our Hero, who prognosed the situation as a "fifty-hour case." After which our character repaired the spacecraft and rescued the lovely Lady Bountiful from the fate worse than death, threatened by the villainous Captain Lecher who refused treatment that would have made him a "clear."

And I wasn't about to be lectured by John W. Campbell, nor "cleared" of my engrams by the editor of a science fiction magazine, so my remain-at-home program took on several aspects.

I may be out of kilter with time; forgive me, it's a long number of years ago. But somewhere about here, the news of the group in Toronto and their plans began to make headlines about their "Torcon," which became Torcon I recently when Torcon II was held. At that time, Fred Pohl and wife were going to drive to Toronto, and they asked me to ride along.

This was in the days long before the "big" conventions. Torcon I may have had in the neighborhood of a hundred and fifty of us. It was small, but it was also friendly, since most of us knew one another.

Robert Bloch was the guest of honor. His talk was a classic, "The Seven Stages of Science Fiction Fandom." It went from Stage One, where the fan first learns that there is an organized fandom and makes his first effort to join. The stages go higher and higher up to Stage Seven, when the whole-time fan is so busy writing for fanzines and publishing the

that he collects the prozines but doesn't have time to read them. Robert missed one p but we forgive him because the fan or stage hadn't been invented yet. That's a group v think that science fiction would be better if there were no mention of science in it, and t conventions would be better if there were no pros to attend.

Also present was Bob Tucker, who had recently run off the first of the questionn and canvass studies. He gave his report on the subject, complete with charts and diag of this, that, and other things in fandom.

On Sunday night, the Toronto group had come up with some 16-millimeter films atomic energy that might have been excellent for someone who had never heard of Hiroshima or the Manhattan Project, nor read the Smyth Report. I doubt that one of the hundred fifty were that unaware of anything. It started with Hahn and Strassmann, who discovered the fission of uranium 235 back before the war. I "think" it ended with that f blast in Alamogordo. I use the word "think" because there was a fair exodus from the a to the nearest bar. When the film ended, there was a break while the Toronto crew sc the bars seeking those who had escaped, and the next speaker of the evening. They t me, and I was escorted back to the convention, where Sam Moskowitz said, "George, your day!"

"Yes?"

"After that film, anything you say will be greeted with cheers!"

Well, not long earlier, Arthur C. Clarke had written an article about the radio power required to send messages to the moon and some of the nearer planets. I boiled down data, added a sauce of science fiction, and used the latest thing in transmission inform and discussed the simple prospect of communication with the first lunar landing. It cov single voice channel in simplex; that is, speaker and listener swap roles in conversatio Sam was right. They kept me there until about eleven-thirty answering questions, and I rescued by Dave MacInnes, who asked the last question: "George, do you think that b you were admiring is still in that bar?"

Exodus!

They asked me, on Monday, to be the host for the entertainment. I agreed, and a who had something to present. They didn't, and suggested that I pull something toget tried, and thanks to a few fans with good senses of humor, and Robert Bloch, who did take-off on Bob Tucker's report (ending with a chart showing "... a fan broken down by sex!").

Torcon I ended in a party in which, I think, half of the hundred and fifty either got my room or tried to. The biggest subject of conversation was where was the next conv to be held. In the midst of this party, the phone rang and I, being trapped in the

filled-to-standing room next to the telephone, answered. It was the group in Cincinnati, just heard that there was some problem, and suggested that they'd be happy to give the con. I got silence, made the announcement, and it was MacInnes who shouted, "There's one name for it. It's the Sinvention!"

* * * *

Sometime earlier, John said in one of his eight-page letters that he was going to try a stunt. He outlined, briefly, a story idea, or basis for a story, and asked for a 10,000-word target. He said he was also sending copies to Hal Clement and A. E. VanVogt, and that he intended to print all three of them in one issue, just to show his readers how three writers with the same idea can be so widely varied in their output.

The stunt didn't work. John reported that the three stories were so different that no one could find any connection. He did not tell me the names of the other two stories, so I can't recite them to let you paw through your collection of the past. Mine was that slight offshoot on the Venus Equilateral stories, "Lost Art," and John's story gimmick had come from an observation of his that, in one of the various manuals and handbooks that I used in engineering, a vacuum tube manual (today it would be a semiconductor manual), there was a veritable wealth of information on the various ways in which the many kinds of tube can be used, and the working parameters for each—but nowhere does it say that the radio receiving set using X number of tubes connected in W, Y, and Z ways isn't going to be a hoot unless someone has built a transmitter.

Well, now, I'd written "Rat Race," and "Meddler's Moon" for Campbell, and, needing a quick buck, wrote "In The Cards," for Sam ~~Merrill~~ *Wonder*. Once more, the publication dates seem amiss, but again, the reason is that the editor puts his magazine together from the stories in his files and prefers to have both the writers and the story widely varied.

IN THE CARDS

When Jim Forrest stole the block of zonium from Ellen Haynes he almost upset the entire Solar System, but he had the most compelling motive for theft in history!

CHAPTER I

The Theft

THE masked man crept down the corridor stealthily. It was quite dark in the hallway but he knew that it was a synthetic darkness, a matter of temporal convenience, for on a spaceship, time is regulated by the Terran daily cycle of twenty-four hours.

On spacecraft the passenger-sections observe a strict twelve-hour division between sheer brilliance and utter darkness. He estimated that it was a full two hours before light-time, which meant that those couples who preferred to sit and hold hands whilst savoring at the rather over-stable aspect of the sky were by now bedded down and asleep.

Even so the masked man understood that with such it was not the sky that was appealing, and that under such circumstances time was a minor and often disregarded item. So he went carefully just in case he should happen upon such.

He was lucky. There were no couples immersed in one another and so the masked man went all the way from the auxiliary spacelock near the 'B' deck to the just below the rounded hemisphere of seamless plastiglass that domed the top of the spacecraft.

He entered the corridor that led to the staterooms and, by the dim hall lights, found the room he sought. The lock was obviously intended to keep out only honest men and the door was of the same manufacture. He took a tiny fountain-pen-sized implement from a loop on his belt and applied the business end to the door.

There was neither sound nor light. Silently the thing worked and it completely removed a sliver ten-thousandths of an inch wide as he moved the tiny beam in a careless square around the lock. He grasped the knob in his hand as he completed the cut. That way it would not drop to the floor and make an unwanted racket. .

Shoving the door open gently, he entered and closed it behind him. He took a moment to replace the square of aluminum with the lock and, with a couple of quick motions, he replaced the square back in place.

An experienced welder would have called ~~it the job~~ because the patch was held by only ~~two~~ minute battens of welded metal. It could be broken out with a single twist of the hand.

Then, reasonably safe from outside detection—if the steward passed, he would not notice unless he gave each door a careful scrutiny—the masked man took out a tiny flashlight and searched the room quickly.

A tousled head of luxuriant hair half covered the pillowcase but the face beneath it was not visible from the door. The masked man shrugged and turned to the wall compartment where the baggage was stored. He knew about where to look. He fumbled through three drawers, and finally came upon ~~one~~ of some ten cubic inches.

It was not too heavy and the masked man tucked it under one arm and smiled confidently. His pen-beam he used to weld the call-button to its frame so that it could not be pushed. He used it to weld the lock in a barred position and, again outside, he welded the patch together firmly. The inhabitant was to all intents and purposes a prisoner until she could command attention by yelling and beating upon the door.

With the same stealth that he had used in coming this way he returned to the auxiliary spacelock. He donned the spacesuit he had left there and looked at the safety-switch which had been welded closed. He shrugged—no need of opening the switch to close the circuit upon it. He welded the switch shut so that opening the auxiliary ~~light~~ ~~panel~~ the warning lamp on the ~~panel~~ ~~panel~~.

Then the masked man stepped out of the airlock into empty space, kicking himself from the side of the spacecraft. At once he became a separate celestial body, and the motion of the ship with regard to his present status was an acceleration of one gravity, though his velocity was intrinsically that of the spacecraft upon his instant of severance.

But intrinsic velocity of this nature never harmed a soul and the action as he saw it, was that the ship was stable and he was falling with Terran constants towards the tail.

HE WAITED, counting off the minutes by his watch. The spacecraft dwindled and was finally lost in the distance. Yet he waited, for the first use of his suit-drive would raise a ~~cloud~~ on the ~~planet~~ celestial sphere, giving warning.

An hour later he applied the drive on his suit and, using a small direction finder, he located another, arriving ship. Using extreme care, he put himself in the course of the oncomer and applied his suit-drive with extreme caution. He matched the acceleration of the other ship, matched its course and then, by increments, let the ship catch up with him.

Eventually it passed him close enough, and he drove himself through the main open spacelock. He slammed the airlock door and went to the control room. He made a rapid turnover and applied the drive to put as many miles as possible between himself and the pirated superliner.

Only then did he remove his suit, stow it, and address his interest to the package. It contained a strange crystal. The crystal was a perfect cube two inches to a side. From one face to opposite face it was as transparent as space itself. Even the surfaces were non-reflecting. Looking through it one derived a sort of tunnel effect, for the surrounding faces were opaque. Holding it at a distance from the eye and looking through it gave the impression of a two-by-two square tube made of some metal having zero thickness. A square—an optical illusion—marked the boundary of the optical axis.

He nodded. This was the crystal he sought. He checked one of the opaque pair of faces with a continuity tester and confirmed his belief. For one axis of the crystal was optical and another axis was a superconductor of electricity. The third axis was a magnetic axis and the fourth was a perfect conductor of magnetic flux. This was harder to check with simple equipment but the testing of the other two axes gave him sufficient proof.

He nodded in satisfaction.

Success!

Now, give him time to work out his problem, and everything would be just as he had planned. Getting his hands on that crystal, he felt, was going to be the first step in the success of Jim Forrest. He opened a cabinet door and started to push things aside to make space for it, when from behind him, a cool voice said:

“I’ll take that!”

He turned at the voice and his face went through several changes, coming out finally with a stunned look.

“You were locked in.”

“Yes? The girl shrugged. Well, you were locked out!” ~~No~~ ~~take~~ ~~that~~ ~~crystal~~ ~~Her~~ statement was backed up by a heavy blaster that looked like a semiportable in comparison to her spacegloved hand. The hand was small and the blaster was heavy but there was no waver to the green-crystal muzzle. It was trained perfectly upon ~~him~~ ~~Forrest~~

“Yes? And where will you take it?”

“None of your business,” she snapped.

He looked at her suit and shrugged. “Better call for aid,” he said, pointing at the space radio. “You’ll never make it in suit-drive.”

“Drive!” she snorted. “You’ll run me near Terra before we part.”

“My dear Ellen Haynes,” he said with exaggerated politeness, “I point out that we are not going to Terra?”

ELLEN laughed nastily, which made it seem worse because it went against the human grain to hear such purely vicious laughter coming from such an attractive girl.

“We’ll go,” she said shortly, “whether you drive or not. I can run this doodlebug too. She waved the blaster suggestively. “Turn it—or else!”

“Y’know,” he replied, “maybe you’d better drill me. I don’t know that I like the idea of chasing all over the solar system with Ellen Haynes.”

“Turn the ship and get going.”

“No,” he said flatly. He stretched and went into a relaxed posture. “We’re heading for Ganymede.” He looked at her—stared at her—and smiled slightly. His attitude became almost paternal, as he stepped forward. “You know,” he said quietly, “we both want the same things. We ought to do them together.”

“Not on my life,” she said. “And stop right there!”

“You stole it first,” Jim Forrest told her. “Right out from under my hands. I know why. You want to prove the opticostrictive effects, don’t you?”

“It is my right to try it,” she said flatly. “And I’m going to do it my own way!”

“But I know more about it than you do,” he told her gently.

“I doubt that,” she snapped.

“I’ve studied it,” he said quietly. “I can identify the proper magnetic and electric axes without test. Can you?”

“I can learn,” she said sharply. “Now stop—or I’ll fire!”

“You see, when your dad discovered this thing he turned it over to the government. That was the law with any by-product of the uranium pile. They, however, happened to be working on something else, looking for some definite effect and couldn’t take time off to investigate a crystallographic monstrosity. So it just laid around and grew dust until I—”

“I know all that,” she snapped. Now . . .”

“Right,” he said calmly. “Right. And I was merely holding your attention until . . .” He leaped forward—forward and slightly to one side. She pulled the trigger hastily and the beam spat viciously but invisibly, scorching the aluminum wall of the little craft, where its reflection ricocheted across the room to burn a wall map. The aluminum behind that reflected it again, and this time it lost itself in the absorbing surface of some methacrylate plastic, which swelled and exploded gently into shards of gooey stuff.

By this time, Jim Forrest was beside the girl. He chopped down on her arm viciously. She dropped the blaster and he kicked it into the corner. Then, using his weight, he crowded her into the pilot’s seat and reached over and slammed on a full five gravities.

“I can take that and move,” he told her. “But you can’t. Ellen Haynes, we’re heading for Ganymede.”

“Captain Turner will kill you,” she snapped.

“Captain Turner will have to catch me first.” He laughed. “And in the meantime perhaps we can come to some agreement.”

“I’ll never deal with a common criminal,” she told him.

“How righteous!” he scoffed. “And how did you come by this in the first place?”

“Well, it was my father’s,” she told him.

“A matter of opinion only,” he said. “Just your opinion against most of

the Solar System. The odds, Ellen, are against you!” He laughed. “And your Captain Turner? Whose side will he take? Yours—or the Solar Guard, for whom he has worked for eight years?”

“Mine,” she said stoutly. “He understands moral justice.”

Forrest laughed bitterly. “Uh-huh—and a pair of luminous, provocative brown eyes!”

She turned her head angrily away. There was no sense in arguing with the man. Furthermore, she knew that Captain Turner was a long way from an impersonal member of the law so far as Ellen Haynes was concerned. She would bide her time.

Turner would be certain to find them soon and then this criminal would get what he deserved—even if she had to use her charm to enrage the officer. She knew that Jack Turner would see a mad, flaming red if he thought that Forrest had harmed her in any way.

CHAPTER II

Rescue in Space

NOT very far behind them, Captain Jack Turner of the Solar Guard was following the little cruiser grimly. When it leaped in acceleration to five gravities, he assumed that they knew he was following them and decided that stealth was no longer necessary.

He crammed his power on, getting a full six gravities out of the Guardship. From time to time he considered the problem that confronted him. His—well, she was not his fiancée, but she meant more to him than the word ‘friend’ implies—was in possession of material labeled contraband. Nothing of intrinsic value, true—normally it would never have been missed—but it had been removed from the specimen files of the Solar Laboratory, and that in itself was a breach of the law.

There seemed to be a dog-in-the-manger effect here. The government physicists might never get around to looking at the thing regularly, so busy they were. Yet they could not permit any other experimenter to do more than study the peculiar thing through a plate glass specimen case.

Turner's mind rejected the problem. He did not know the circumstances wholly. His matter-synchronized detector told him that the crystal had embarked on the spaceliner from Venus to Terra, that somehow it had left the liner and was now decelerating in such a back-vector that he suspected one of the Jovian satellites as its destination.

The problem of what he would actually do, he disregarded. Up to the time he confronted the girl he could view the problem dispassionately and impersonally. Whether his love for the girl would overcome his sworn duty—he'd face that when it came.

Watching his range integrator carefully, he set the autopilot to bring him into contact with the fleeing ship and then sat back to relax. It was hard on the human system to hit it up at six gravities, though everything possible had been done to make the flyer comfortable under such accelerations.

Even so, loaded with gravanol, which added tonus to the muscles and prevented the draining of blood from the nerve and brain centers, the record was held by a small, wiry fellow named Tom Whitcomb: Eight gravities for four hours before blackout was his mark.

Whitcomb, of course, was merely out for a record and did not have the emotional impetus of a project to steel his system with adrenalin.

The Guardship approached the fleeing craft and Turner dropped his acceleration to match the other ship. He sent a flaming beam at them that racketed against the hull and flared greenish hell through the observation ports and rang all the alarms in the ship. His audiostrictor beam caught the hull and his voice, as he spoke into the microphone, made the little cruiser ring to his stentorian tones.

“Guardship under Turner!” rattled the ship's hull in a controlled vibration that shook the eardrums. “Drop to one gravity! Prepare to submit to search!”

In the other ship, Forrest shrugged. “There's your little pal now,” he said.

Ellen looked at him, white-lipped. “What are you going to do?”

He laughed as he flipped the power switch down to one gravity. “This is a personal cruiser,” he said. “We have nothing to fight back with other than harsh words and a set of knives in the galley. I should dislike to have this

crate riddled by a Guardsman. I should even further dislike the possible discontinuation of my checkered career. We'll see your little chum."

"He'll help me," she said with a positive air.

"That's swell." He grinned wolfishly. "I wish you both luck. But I'm sensible enough to think that it might be better if we could circumvent him."

Forrest smiled wearily. There was no reason to tell the girl that laws were laws and therefore inflexible regardless of the instantaneous injustice to an occasional individual. By and large, laws worked for overall justice or they would not be laws. He rested easily, getting up only once to retrieve the girl's heavy blaster, which he inspected and dropped into his pocket idly.

THEN the Guardship was upon them close enough to reach out and take hold of the little cruiser with tractor beams. The spacelocks came together under Turner's manipulations of the beams and both space-locks clanged open.

Jack Turner swallowed deeply. Whatever the score at this point, he was confronted with the problem of his life. "You surrender?" he demanded as he entered the control room.

"You're in," said Forrest cryptically. "Now what?"

"The zonium crystal," stated Turner shortly. "I'll take that first. It is the property of the laboratory."

Ellen looked quietly at him. "What about him?" she asked, indicating Forrest.

"Well?" he said shortly.

"He stole it from me," she said plaintively.

"But you stole it from Venus," said Turner. "Under the law, you are conspiring to deprive the government of its rightful property."

"I presume that I am listed as a criminal?" asked Ellen, more plaintively.

Turner blinked. "What can I do?" he asked.

Ellen looked pleading. “Dad discovered zonium,” she said. “Dad predicted it and spent six months producing the single crystal we have. Then because of laws, Dad was deprived of the possible benefits of his study and work. Is that fair?”

“Who is to judge fairness?” asked Turner. “It has been the law for seventy years that any product of the uranium piles is the exclusive property of the government. That is because danger might attend any individual experimentation on unknown materials. “If you do not know nuclear history I can tell you that Tompkins and Clagone nearly blasted Terra off of the map because they inadvertently stacked a couple of transuranic elements side by side. To prevent such mishaps the law was set up. I ask you, Ellen, do you know anything about zonium?”

“Not much excepting its principal properties.”

“Then you might be meddling with something that could destroy Sol.”

“Not likely,” she retorted.

“So?” asked Turner with a smile. “Remember that the unpredictable effects start with the uranium series. Fission occurs in several of the uranium-rare-earth metals, plutonium and the uranium isotopes two hundred thirty-four and two hundred thirty-five. Number ninety-seven was never known until the uranium pile made it, you know, and it, like other elements of the zero group, is an inert gas.

“But it is a gas which exhibits magnetic properties. Number ninety-eight has been known to combine with all of the acid elements. And number ninety-nine is naturally radioactive, breaking down to protoactinium by a double emission of alpha particles. Unless you know what to do with zonium how can you predict its behaviour?”

“Is it right to bury the results of a man’s lifework?” demanded Ellen.

Guardsmen Turner faced Jim Forrest. “What can I do?” he asked simply. “My affection and my duty are opposing. I understand both viewpoints. It is hard to see a life work set aside by officialdom, rules and what might seem like bureaucracy. On the other hand I am a member of the Law. I cannot turn traitor, yet I cannot harm Ellen. I would like to retain both Ellen and my self respect.”

“My father—” began Ellen harshly.

“Was, after all, working for the Lab,” interrupted Turner. “He was amply paid.”

“Yes,” she said bitterly. “A laboratory fee. You know very well that every technician in the Lab that discovers something useful is given a royalty in addition. That’s what I’ve been cheated of!”

“They may yet investigate it,” said Turner.

“I’d prefer the rewards before I’m a hundred years old,” said Ellen.

“Look,” said Turner after a moment’s thought. “Admittedly the government lab ignored zonium for more important things. The government was not interested in zonium until it was stolen. But consider—this crystal has been stolen by people who have experimental experience.

“The government will wonder just why it is so important that an individual will break interplanetary law to possess it. That is a question that will probably force someone to work on it. Then you can gain the benefits legally.”

ELLEN considered that for a moment. It was more or less true. “Then tell me how it is to be returned?” she asked.

“That is easy. I can make you a temporary deputy of the Solar Guard. You return the crystal to headquarters. I continue to pursue the thief.”

Forrest, who had been sitting easily in his chair watching the play of personalities, suddenly sat up and looked at Jack Turner pointedly.

“You mean me?” he asked.

“I do.”

“That’s a nice trick,” snapped Forrest, “Why not deputize me and go hunting her?”

“Because you have nothing to lose by jumping deputization,” said Captain Turner shortly. “Miss Haynes has every reason in the world to do exactly as I said. As for the true thief, my report will state honestly that I

located the crystal in this ship—your craft, Forrest. I will also state that it is my belief that Miss Haynes was not here of her own free will.”

“She came here unasked,” snapped Forrest.

The Guardsman nodded. “So did I,” he said easily. “And possibly for the same reason. To return the zonium crystal to its rightful owner.”

Forrest laughed harshly. “Nice sophistry,” he said with a sneer. “You’ll omit the fact that your definition differs from that of Miss Haynes as to the term ‘rightful owner’? She thinks it belongs to her, you know.”

“When she returns the crystal,” said Turner, “her intent will be shown by act regardless of her statements—or your statements for that matter.”

Forrest smiled. “The scales of justice seem to have become unbalanced by the added weight of a lipstick,” he said cynically. “I hope you two will be very unhappy together.”

“Accusing members of the Guard will get you little,” said Turner.

“I seem to have been got already,” grunted Forrest. “Frankly, why don’t you return the crystal and let Miss Haynes pursue me? As any pursuit is going to be a laughing matter since you’ve already caught me, I’d prefer to be pursued by Miss Haynes.”

“No thank you,” replied the girl. “We’ll do it as Captain Turner suggests.”

“And he’ll chase me all the way to Ganymede while we’re living in the same ship—with his crate fastened on to mine?”

“That need not be mentioned.”

“Well, I’ll darn well mention it!” snapped Forrest.

“You can’t prove it,” she told him.

“Ellen,” said Turner to the girl, “you go into my ship and get the tender ready. You’ll take off and head for Mars in the tender, which will be a little rigorous but not too uncomfortable nor dangerous.

“Once you reach Mars, you contact Guard Headquarters at the

spaceport.

“Your arriving with the ship will give you amnesty until you can see General Harris and I’ll write an official letter proving your deputization. Check?”

Ellen Haynes nodded. She turned to Jim Forrest and said, “It doesn’t make much difference who does the work on zonium so long as it is done. At least it will not be done by you.

“And when it is done I’ll get my legal share, which can’t be claimed for any work done by Jim Forrest.” Then she turned to Captain Turner. “Be careful,” she said sincerely. “He’s a glib operator.”

“He’ll not get away from me,” said Turner. Ellen Haynes took the crystal out of the cupboard and tucked it under one arm. Since she was still in space suit she merely flipped the helmet bowl over her head and left the pilot room to make Turner’s tender ready for a spacehop.

CHAPTER III

Counteroffensive

SO,” SAID Jim Forrest, “she won.”

“Won?” replied Turner. “She said that she’d end up with the crystal. What makes you think that if she stole it once from the laboratory she wouldn’t steal it from you the second time?”

“Ellen Haynes is no thief!” snapped Turner.

“No? Well, consider this, Turner. Ellen Haynes does not consider herself a thief when she appropriates that rare hunk of rock. So far as Haynes is concerned, she believes that she has every right to it, especially in view of the fact that the government ignored it, thus depriving both her and her father of whatever benefits it might bring. Since she considers herself no thief, she is under no moral compulsion to deliver.”

“She is a deputized Guardsman,” said Turner. “As such, she is sworn to

uphold the law.”

“She was—and until proven otherwise—a citizen and equally responsible to uphold the law,” said Forrest. “But who took the thing in the first place?”

“She is now a sworn member—”

“Look, Captain Turner,” interrupted Forrest sharply. “Do you mean to stand there and tell me that a policeman is morally better than a citizen?”

Turner flushed. If he said ‘yes’ he’d be talking like a hypocrite—if he said ‘no’ he would almost be admitting that he might have been mistaken in sending the desired crystal out under the supervision of the one who had initially stolen it. His training and loyalty to the Guard made him believe that a man dedicated to the interests of the law was under more compulsion than a mere citizen without an oath.

He admitted it was wrong. He was forgetting that a criminal can swear an oath and be unfaithful to it because he doesn’t mind adding false witness to a list of greater crimes providing it is gainful for him.

Forrest noted the turmoil in the Guardsman’s mind and pressed his point. “Ellen told me that you’d help her,” he said. “And you have. I think that Ellen believed that you’d go all the way and eschew your uniform for her, but the way you did it was to both of your advantages.”

“Ellen wouldn’t lie to me,” said Turner stoutly.

“I know,” said Forrest cynically, “because she loves you. Fine. So if she loves you in the first place, why does she break the law you’ve sworn to uphold? To heck with appearances, Turner. You know in your own mind that if you condone her theft of the crystal you might as well throw that fancy black and gold suit into the converter and join her in a life of—well, she’s no criminal save for one breach—petty crime. No doctor ever got along with a medicophobe for a wife. No policeman ever spent a happy married life with a she-pickpocket. So it is either your life or hers that you’ll have to follow.”

“Perhaps not,” replied Turner. “If she does as I expect her to and returns the crystal she can erase her minor offense. Everybody makes mistakes, Forrest. The smart man seldom repeats his errors.”

“You’re still forgetting that Ellen Haynes considers her act no crime.

Whatever the crystal is good for she has been deprived of benefit by a situation that ignores its existence. Her theft of the thing works no hardship on the Solar System or any of its people. Define theft, Turner.”

“Look,” snapped Turner, “Ellen is no criminal. She has committed a crime which she can erase by her own hand. Why should she be punished for an interplanetary offense when she can and will do that which will nullify her crime?”

“Meaning?”

“Meaning simply that the uninterested arm of the law will be more convinced when she turns up with the crystal and knows that I am still pursuing the thief. I’ll gladly sacrifice one criminal—you—who have no justification as she has, in order to see her free and rewarded.”

“Well,” said Forrest standing up and stretching, “I think this has gone far enough, Turner.” He picked up a package of cigarettes from the table, put one in his mouth, and then felt for a match. He lifted the fountain-pen-sized blaster from his belt and triggered it.

The tiny beam lit his cigarette and he drew in a lungful of smoke. He blew out the smoke in a large cloud that hid his actions momentarily. Under the cover of the smoke he turned the cap on the little gadget, pointed it at Turner, and pressed the button.

THE tiny beam seared the air and drilled a tiny hole in the broad green muzzle-crystal of Turner’s blaster. It heated to dull-red almost instantly, and Turner hurled the weapon from him with a shock of unexpected pain. The weapon charred the floor as it landed.

Following the beam as fast as he could Jim Forrest threw his Sunday punch while Turner was still reacting from the burn-shock. The flying fist caught Turner on the jaw and the guardsman went down like a pole-axed steer. He came to as Forrest was snapping the Guardsman’s own handcuffs on him.

“I’m no murderer,” he told Turner. “I calculate it to be sixty hours to Mars at one gravity. I’ll set the autopilot that way. I’ll set the warning-radio also. I’ll lock you in the living-suite below, where you will have all the comforts of a celibate home excepting the means with which to get out. In

sixty hours your velocity will be zero with respect to Mars and the warning radio will hurl out your own personal distress call.”

“You’re . . . !” blazed Turner.

“Yes, I know,” smiled Forrest. “A criminal. Well, kidnaping a Guardsman is merely adding to my long and checkered career. But you see, Turner, I want that crystal. You can also add theft of an official Guard-ship to my roster of criminal acts. So, lead the way to the living-suite below.”

“I’ll”

“Oh. Turner, I might suggest that when you come looking for me you be very careful. I’ll be driving a Guardship, you know, and if someone takes a shot at me I’ll be psychologically forced to defend myself as a mere matter of survival. Guardships are pretty well-armed, or need I tell you?”

Turner blazed with anger. “Okay,” he snarled. “Lock me in. But you can’t lick the whole system! We’ll get you cold! And if in the meantime you intercept Miss Haynes, remember that you are interfering with an official deputy.”

“Then,” smiled Forrest quite cheerfully, “I’m actually helping you to prove that Ellen Haynes is no criminal, aren’t I?”

Turner fumed and continued to fume as Jim Forrest welded the living-suite door shut with his pen-beam.

Twenty minutes later, Turner felt the ship turn and accelerate towards Mars. He felt a slight shock a moment later and knew that Jim Forrest had just cast off in his Guard-ship. He cursed roundly and then, sensibly, he sat down and relaxed.

He concluded sensibly there was little to be gained by spending sixty hours in self-villification.

He’d failed temporarily but Forrest couldn’t lick the whole solar system. . . .

Using Turner’s matter-synchronized detector, Jim Forrest tracked the tiny space tender down in a matter of less than two hours. The tender, of course, was helpless when the Guardship tractor beam fastened onto it, and it was drawn easily into the tender-lock and anchored.

The door opened and Ellen Haynes emerged, furious.

“Before you say anything,” said Jim, “tell me whether you were really going to headquarters or were just making off with the crystal again.”

“What difference does it make now?” she asked bitterly.

“No difference to me,” said Forrest idly. “I’m just trying to estimate your character.”

“I’m not taken in,” she snapped. “With certain individuals you might stir their interest enough to make them look at it askance. But with the Solar Lab, who’ve already ignored the thing for years, they’d continue. So”

“So you think you’re going to work on it yourself?”

“I most certainly am,” she said with conviction.

He laughed shortly.

“You think not?” she demanded. “Either alone or with you, since you’ve been after it and seem to have both me and the zonium at the same time right now.”

“Ellen,” he said slowly, “I intend to destroy that crystal!”

SHE grabbed for the box and shielded it with her body but Jim shook his head. “Not here,” he said. “There’s nothing here that would destroy it.”

“Your blaster?”

“Wouldn’t touch it.”

“I—a blaster wouldn’t touch it?” asked Ellen Haynes in amazement.

“Wouldn’t touch it,” he said firmly and convincingly.

Ellen’s eyes opened wide. “Armor!” she breathed. And in that one instant the whole mighty idea came, flooding her mind and making her almost reel in dizziness at the flood of jumbled ideas.

Guardships plated with zonium for protection; personal armor because zonium was light in weight; zonium-lined blaster barrels to keep the things from falling apart after a hundred or so shots and perhaps even super-projectors protected by zonium liners.

The big projectors used on the Guardships were none too efficient because they etched themselves into uselessness after a hundred or less of the gigantic blasts. Half of a Guardship's bulk was filled with spare blaster replacements.

“Armor,” he nodded, with a look of horror.

“What's wrong with that?” she demanded sharply.

“That's the point. There's apparently nothing wrong with it,” he said, “except that there's no real reason for it. Who or what will attack a Guardship? There is no common enemy loose in the Solar System and we know that there are no extra-solar races capable of any massed attack on Sol's family—so far, anyway. There is an occasional, wild-eyed pirate but he is usually tracked down within a few weeks after he takes his first victim. With zonium armor there could be piracy because a pirate could then laugh at the heavily-armed Guardships.”

“But it sounds good,” she interrupted.

“And you know darn well that the Guard would immediately plate their ships with zonium!”

“Certainly. And my income from that ... Why, I'd be unmentionably wealthy!”

She positively glowed for a moment with the idea. Then she turned to him and said, “But if a blaster wouldn't touch it, how do you hope to destroy it? Toss it into the sun?”

Jim Forrest paled. He walked over to her and pushed her aside. He took the zonium crystal from the box and hefted it while Ellen looked on in fear that he would destroy it then and there.

“Ellen Haynes,” he said solemnly, “this much zonium if hurled into the sun would create a nova!”

“But it is so small.”

“Yes, but zonium is a strange metal,” he said. “The mass-energy relation is carefully disregarded by zonium. In normal matter, energy equals the mass times the square of the speed of light in centimeters per second.”

“But its mass is not considerable.”

“Zonium is a temporal metal,” said Forrest. “When it is under the influence of a magnetic field passing through the magnetic axis—an electrical current through the electrical axis—and a beam of light through the optical axis its mass increases according to some exponential function of the energy levels of the radiation that is passing through it.

“Throw it into the sun where the radiation-energy output is some four million tons of energy per second and zonium increases its apparent mass by a factor of the cube—one exponential power for each axis accepting and passing radiation—of the mass of the zonium times the factorial expansion of the energy passing through it. It would be much like hurling Jupiter into the sun.”

He handed her the crystal. “Ellen Haynes,” he said dramatically, “you hold in your hand the agent of Sol’s destruction!”

She looked at it with fascinated horror and gingerly replaced it in the packing.

“So develop it. Plate your ships with it. Line the millions of blasters with it. Line your power converters with it. Use zonium in the units that give each dwelling light and power. Load every sportsman’s crate with it and have everybody tossing cubes of the stuff around. Interesting stuff—kids will be playing with it. Then calculate your chances of keeping a bit of it out of the sun.”

Ellen Haynes shuddered. About once each year some spacecraft didn’t return, usually a small, privately-owned job that was trying to cut the perihelion too thin. The mortality was rather high on the drones that rode the inner flame-area of Sol’s domain with automatic recorders. Yet, with good supervision, zonium would be safe.

“How,” she asked drily, “do you hope to destroy it?”

“I don’t know,” he said. “But it must be destroyed.”

CHAPTER IV

Biggest Meddler

ELLEN nodded slowly. Her dream of untold wealth dimmed somewhat. Yet she knew that supervision of the zonium metal would insure its safety. It had been so with the original fission of uranium and plutonium.

What had been made before could be made again. She would let Jim Forrest destroy it and then set about getting it rebuilt again in the government laboratory. What could any one man do to stop the development of any single phase of science?

The thing to do now was to agree with him, learn from Jim Forrest all the math and reasoning behind the stuff. Just how did he know—he alone of all the worlds of Sol and their teeming billions—that zonium would react that way. Especially when he had not worked with it.

But Ellen knew that before she could interest the laboratory in zonium, she must have scientific and mathematical basis for her predictions. With that, not only could she interest them but she would be forgiven for her original theft. She would go along for now and learn as much as she could about zonium.

“Tell me,” she said interestedly, “how do you know all this about zonium?”

“Know matrix-math?” he asked.

“A little.”

“I’ll bet I lose you along the way,” he said. “But we’ve a week of hard travel between here and Ganymede in which I can prove to you—and also teach you how to handle matrix-math—that everything I’ve said is true.”

Jim Forrest locked the crystal in the cabinet, and found paper and pencils. He started to talk and he wrote equations as he spoke, explaining each step as he went along. Ellen Haynes nodded. It was thick, and she would require the whole week even to catch up to the theories of Jim

Forrest... .

Captain Turner, imprisoned in Jim Forrest's personal cruiser, spent a full twenty-hour period wondering. He had been resigned at first, but the idea of sitting there was against his grain.

The welded door was a mean problem. How does one breach a solid aluminum door when the thinner panels are three-sixteenths sheet aluminum-magnesium alloy and the edgings and crossbars that hold the panels are one-inch stock?

He undid the floor thumbscrews that held the chair down against maneuverings in space and hefted it. It too was aluminum alloy. He swung it at the door and dented the panel, but broke the legs of the chair. Had the seat been heavy and solid that would have done nicely, he thought.

But the chair-bottom itself was a mere frame upon which was woven a plastic-rope in the standard pattern of a cane-bottomed chair. The metal of the chair was brittle and he broke it after three swings that put but a few minute scars on the panel of the door.

The floor-lamp was little better—aluminum-zinc-magnesium die-castings. Not only were the parts light and brittle, they were positively friable.

He tried the drawers in the dresser and they added to the pile of broken metal. The bed was no good at all—just a welded-down shelf on top of which was a thick airfoam mattress.

The kitchen quarters produced a couple of sharp knives, which he employed to some advantage, but their very-long blades left Turner with too little leverage until he broke them off short. Cutting three-sixteenths aluminum alloy panel was no job for a knife.

HE SAT down to think after that. Brute force was useless—brainwork might produce an answer.

Aluminum is soluble in certain reagents—and he was in what amounted to a three-room apartment. What common reagents did exist in the average apartment? A few ounces of vinegar—three percent acetic acid. A pound of salt—sodium chloride. Aluminum is soluble in a solution of sodium hydroxide. Electrolysis of water containing sodium chloride produced chlorine and sodium, which reacted with the water and produced sodium

hydroxide.

It looked like a long process. He was not a chemist, and therefore he was not too certain of any effect. There was no reaction that he knew of that would attack that door. Perhaps a chemist would know and no doubt he would be laughed at by the chemists of the Guard when he told of his futile attempts.

He went into the kitchen again. The drainage from the sink went into the converter far below him in the ship. He had no chance of getting to that at all. There was a small ventilator in every room but he was neither an eel nor a cat and removing them, if he could, would give him no chance. The air was forced out through a larger duct by an electric fan but even so it was too small for him.

The electric fan?

The electric fan!

He tackled the fastenings with a dinner-knife and succeeded in removing the small fan. He hitched it to longer leads from the floor lamp. He removed the blade and saw the swiftly-rotating shaft—it could be used as a drill.

It was blunt and polished, instead of sharp, but none the less a drill in embryonic form. To sharpen it

He pawed through the bathroom cabinet and returned with a small nail-file. There was a corundum sharpening-stone in the kitchen. He filed and he honed and the end of the fan-motor shaft took on a wide, flat point. He set it against the door and tried to drill.

It was slow work but he made progress. He drilled through and then set the drill near the first hole and continued. Slowly and inexorably Captain Turner of the Space Guard added to his line of holes. He forgot eating, ignored sleep. And as the hours passed Jack Turner came closer to freedom by the minute.

At last he had a rough oval of holes in the bottom panel of the door. Then, taking a heavy iron frying pan, Turner hammered at one side of the oval where the holes were almost tangent. He broke through, turning the slight end outward.

He hammered until he could set one end of the iron handle through, and then he pried. The webbing between the holes tore until he had an opening

that prevented the use of the utensil at all.

He pried with knives, with fragments of the shattered chair, with his bare hands. He finally took the motor itself, which was of steel and heavy though small, and he swung it on its wire leads. He hurled it again and again at the oval. The ship rang with the blows, but each crash saw the oval leaning outward just a fraction more.

And then, lying on his back, Jack Turner kicked the oval outward with his heels. He was free!

Thirty hours instead of sixty—Turner raced to the control room and set the ship on course toward Ganymede. He crammed on the power until he could hardly stand to slow the course for Mars that he was on—almost at turnover where his velocity was highest—and he added a vector that would curve him through space toward Jove. Then, utterly weary, Jack Turner found his bunk and went to sleep. . . .

“You seem to know quite a bit about zonium,” said Ellen.

Forrest smiled. “I’ve had little to do but think about it.”

“But why the interest?” she asked him.

“Just think of me as an infernal meddler,” he said.

Ellen bit her lip in disbelief.

“Well, I am,” he said with a laugh. “I’m the biggest meddler of all time. Now, let’s get to work. We’ve a week.”

ELLEN HAYNES nodded. She did not know what to make of Jim Forrest. Here on cold Ganymede he had a comfortable brick building that was built along the lines of a good sized mansion. Though the cold and the winds beat at the outside with an ammoniac odor, inside of the building it was warm and pleasantly filled with the smell of a Terran garden.

Jim Forrest, she knew, was wealthy. But the word ‘wealth’ had a world of meanings. After Ellen had seen the building and had seen shown the inside—part of it anyway—the was beginning to understand just how wealthy the man must be.

She had wondered about her relations with this strange man until he showed her a small suite of rooms that he said were to be hers. That in itself was comforting but it posed a greater question as to his character. For the apartment was not devoid of the signs of human occupancy—feminine occupancy—also young feminine occupancy.

There were the collections of scents and cosmetics and silks that are unmistakably those of a young, desirable woman. The apartment was more luxurious than any that Ellen Haynes had ever known and, though she felt distaste at the idea of using another woman's things, she found them all cleaned and properly pressed. The cosmetics were enigmatic—some of them looked used and some of them had their original labels and seals intact. The used-appearing ones, on the other hand, bore the stamp of the immaculate. They were unmarred, neither smudges nor fingermarks.

The clothing was a passable fit for Ellen Haynes—not perfect, as were her own clothes, but passable.

Ellen wondered. She wondered even more as he led her into what would have been the grand ballroom of the mansion-design and found it to be fitted as a physical laboratory. She looked around at the vastness and shuddered slightly at the unpeopled silence of the great house.

“Doesn't the lack of company get you down?” she asked.

“Seldom does,” he smiled. “Besides, it is seldom this unpopulated. I've seen the day when the place was positively bulging with people. I hope to return to that happy state soon.”

“But that suite you gave me . . .”

“That's been used, but not recently.”

“By whom?” she persisted.

“By several persons,” he said noncommittally. He smiled inwardly, knowing what she wondered about. He let her go on thinking mostly because it made no difference and it kept her from brooding on the matter of her father's discovery of Zonium and the things that it implied.

“What are you going to do?” she asked.

“I'm going to make a few tests,” he said. “This rock has got to be destroyed. Not just thrown away or buried, but completely destroyed.”

Disintegrated.”

“In what way?” she asked.

“I’m going to try bombarding it with neutrons,” he said. “The easiest way, of course, is to transmute it.”

“Where will you get a neutron-supply?” she asked.

“I haven’t got a uranium pile,” he said unhappily. “But I have got a healthy cyclotron here. We bombard beryllium with deuterons and place the zonium in the resulting output. You see, that is one of the $\text{Be}^9 (\text{dn}) \text{B}^{10}$ reactions, yielding a goodly spread of neutrons with energies from zero to nine million electron volts. I’d try other particles, but the neutron transmutation is always best.”

He recalled Turner briefly and smiled. They had a sixty hour start on the Guardsman at least and the vectors of travel made it almost certain that they had a full week before Turner could get away and come after them in a new ship.

He did not believe that Turner could break out and he thought that if he did, the Guardsman would repair to Mars anyway to get himself a new Guardship. There was little sense in a Guardsman trying to fight an armed Guardship in Jim Forrest’s unarmed sports cruiser.

CHAPTER V

Revelation

UNFORTUNATELY for Jim Forrest his mansion was not equipped with space radar and so the only indication of the arrival of Jack Turner was given in the control room of Turner’s captured ship. Turner landed in Forrest’s ship beside his own and viewed the huge mansion wonderingly.

Then, shrugging, Captain Turner checked his blaster, appropriated from Forrest’s supply in the pilot room, and stepped to the front door of the mansion.

He set the blaster against the doorlock and drilled it once, silently but

effectively. He pushed the door open and went in on silent feet. He prowled the place quietly, eventually coming to the laboratory. To find that, after the scene of carpeted floors and all of the myriad things that could be expected in this mansion were it upon Terra, made Turner blink. Incongruity followed incongruity—first this definitely lived-in house on a barren place like Ganymede, then this magnificent laboratory stuck right in what should have been a ballroom.

What manner of man was Jim Forrest?

He stepped into the room, and saw the opened stairway to the cellar—a heck of a place for such, he thought. He went down and saw the cyclotron and it stopped him with sheer wonder. He saw Jim Forrest and Ellen Haynes, busily engaged in working over the cyclotron-target.

He lifted the blaster and said, “Up with ‘em!”

They turned and blinked.

Then Forrest smiled.

“Well,” he said in amusement. “Now the picture is complete! We have three factions present. One that wants to make zonium work. One who wants to destroy it utterly. One who wants it to sit in a laboratory case and moulder. Now what, Captain Turner?”

“You are my prisoners,” he stated flatly. “You, Jim Forrest, are now accused of attempting to experiment on government property as well as stealing it.”

“I intend to destroy it,” said Forrest flatly.

“I intend to stop you,” said Turner sharply. “And I’ve had enough foolishness!”

Ellen smiled. She turned, picked up the zonium crystal and handed it to Turner. “Jack,” she said softly, “I know what it will do now.”

Captain Turner of the Space Guard smiled bitterly. “Well,” he said, “what will it do?”

“It will withstand the blaster beam,” said Ellen Haynes.

“I don’t believe it,” said Turner.

She placed the cube on a metal table and motioned for him to drill it. Turner shrugged.

“No,” he said, “I’ll not destroy government property.”

“But you won’t,” she said.

“There are other things that will withstand the blast,” said Turner. “Less difficult elements to make than zonium.”

Forrest smiled. “Go ahead and fire,” he said. “You’ll hurt nothing.”

Doubtfully Turner lifted the weapon. Neither of them would have told him to do so if it were not true. Both of them had been willing to steal to get it. They’d not see it destroyed, for Turner did not believe Forrest’s statement to the effect that he intended to destroy it.

He pressed the trigger of his blaster and—Nothing happened!

He turned the weapon away from the crystal, pointed it down into the concrete floor and tried again.

Nothing happened!

“What is this?” he asked, checking the weapon. It was charged. It should have worked.

“This,” smiled Jim Forrest, “happens to be one place in the Solar System where no blaster will fire. I have an anti-radiation field working in here that selectively prevents blaster output. Your blaster beam will just not propagate here.”

“There’s no such field known,” said Turner stolidly.

Forrest smiled, went to the wall and pressed a button. “Now try it,” he said.

Turner blasted the floor and it worked, but violently. Forrest then released the button.

“So,” said Forrest, “we need not fear your weapon, Turner. Now, may I explain?”

“Do so.”

FORREST smiled genially. “Come on up into the living room,” he said. “It’s a long story and we might as well be comfortable. I promise that there will be no violence. I’ve worked rather hard to see that this identical situation obtained. I’ll not spoil it now!”

Wondering, they followed Forrest, who had taken over the leadership again. Forrest mixed a drink at the serviette and handed one to each of them. He opened cigarette boxes on the coffee table before the sofa upon which Ellen and Turner were sitting. He turned to the fireplace and touched a button. The logs flickered.

“Artificial,” he said unhappily. “I hope some day to go where I can have a real fireplace but everything that goes up the chimney as air must be replaced from somewhere, since we couldn’t use Ganymedian air very long without developing a vicious case of bronchitis. But it looks pleasant anyway.”

“Zonium,” said Forrest, “is a rarity. Do you know where the elements of the universe come from?”

“Do you?” asked Ellen skeptically.

“According to established theory,” replied Forrest, “the sun is running due to the so-called Solar Phoenix. Carbon is forced to combine atomically with hydrogen under the pressure-temperature conditions of the sun, releasing a gamma quantum, and producing nitrogen thirteen which is unstable and by ejecting a positron returns to carbon thirteen. “Carbon thirteen takes on another hydrogen, becoming nitrogen fourteen, which is stable. Nitrogen takes on hydrogen, becoming oxygen fifteen, which ejects a positron and becomes nitrogen fifteen. Another hydrogen makes it oxygen sixteen, which is stable excepting in the solar conditions, where it ejects an alpha particle and reverts back to carbon again, ready to go through the same process.

“Sometimes the oxygen does not break down but takes on another hydrogen again, becoming fluorine seventeen, which breaks down by positron ejection to oxygen seventeen—and another hydrogen brings it up to fluorine eighteen, back to oxygen eighteen and up to stable fluorine nineteen. You can go up and back, adding hydrogen, to make every known

element.

“The curve of elemental stability peaks across iron. Elements lower than iron are more easily built up and elements above iron are more easily broken down. The whole roster of natural elements is accepted as being built by offshoots of the Solar Phoenix.”

“And zonium?” asked Turner.

“The ability of zonium to withstand the blaster beam,” said Forrest, “is due to the fact that zonium is really an element from another universe!”

“Another universe?” exploded Ellen Haynes.

“Right,” he said. “A universe which operates differently from our own but which produces elements fundamentally constructed of the standard atomic particles of energy, which are basic. Zonium will not combine chemically with any Terran element. Its physical effects are outrageous compared with even the transuranic elements which carry the Solar Phoenix to the extremes far above uranium.”

Forrest went on to explain in detail the effects of zonium on the sun. “Zonium came into being by unhappy accident,” he said. “Only the furious energy of transmutation can breach the dividing energy-levels between the universes of the Cosmos. It takes place under high magnetic, electric, and optical conditions.

“These effects took place, according to my theory, at a coincidental instant when the element under bombardment was adjacent in space-time with a small crystal of zonium in the other universe.

“Using that for a pattern, this crystal of zonium came into being, was measured and accepted as a certain element in the scale. The space occupied by zonium on the periodic chart is fillable, but the metal that will be made will not be zonium like this crystal.

“Any more zonium of this type must have a splinter of this rock for a matrix to start the peculiar intra-atomic structure that gives zonium its bizarre properties.

“Once this is destroyed, as it must be, it can be made again only by extreme happenstance, for the possibility of conjacent matter between the two universes is no less a probability than possible collisions between—not

suns in the galaxy but the galaxies themselves!”

“But why couldn’t all this be explained?” demanded Turner. “It seems to have entailed a large amount of mad galloping.”

FORREST smiled. “You two people are very much involved,” he said. “You are attracted to one another, which is itself good. Yet your viewpoints differed greatly. So long as the zonium existed you could not but let it mar your love. Ellen felt deprived of possible benefits. Jack was a symbol of that which barred Ellen and Ellen was a symbol of that which resented everything that Captain Turner of the Space Guard held honorable.

“It is certain that the future existence of Sol depends upon the destruction of this crystal. A stasis existed during all the years of its dust-collecting stay in the laboratory, a stasis that merely was a threat to the future. For destruction must be complete!

“Supposing I merely hurled the thing into space at a velocity high enough to send it, eventually, into the gravitational grasp of some distant star. A nova would result—a nova with the Solar Phoenix gone wild and with a sample of zonium upon which to build uncounted tons of more zonium, which in explosion would be hurled throughout the universe! A chain-fission extending to every star in the universe, given time!

“Where then,” he asked loftily, “would the hoped-for Grand Galactic Civilization be? Yes, I am planning on fifty million galactic years, with Sol grown cold and dead ere man is united throughout the universe. It must have its chance!”

“But why the penny’s worth of plotting?” asked Turner.

“I had to do that which would bring you two together,” smiled Forrest. “The silent inert threat of zonium in the laboratory was bad enough but stabilized. I could watch that. Knowing that Ellen Haynes would try to take it eventually, I merely spent my time keeping tabs on the young and attractive lady until she swiped it. Then I took it, knowing that you were on the trail.

“I was a little surprised to find Ellen in my spaceship but it saved me the trouble of collecting her at a later date. I anticipated that you would arrive and that I could cope with you, Turner. Well, my machinations over that incident went to pieces and I planned then upon the fact that Ellen was available.

“So I spent the intervening time explaining to her just exactly how I knew the dangers of zonium. I knew also that you’d be arriving but I didn’t know how soon. I’ve still to destroy that rock, you know. But now that I’ve shown Ellen and explained to you, your psychopathic animosity toward one another’s principles is gone.

“By stealing the rock from Ellen and giving you the chance to offer her a means of absolution I showed her your interest. By preventing her experimentation when she took off with it I prevented disaster.

“Instead of zonium, Guardsman, I offer you the anti-propagation field. Here are notes—you and Ellen take them and expand them so that the invention will be yours.

“And now,” he said, “I’m going downstairs again and blast this zonium rock into something inert.”

“And we?”

Forrest laughed. “You are to go back and explain your deputization of Ellen Haynes and my theft and destruction of the zonium block. Also,” he grinned, “you two have been racing all over the system together. You’d better marry the wench, Turner, and save her good name.”

“Will you, Ellen?” asked the Captain. She nodded vehemently but her gaze was on Jim Forrest.

“But you, Jim,” she said. “They’ll be hounding you from here on.”

“Oh me? I’m a lawbreaker,” he said. “I’ll escape easily.”

“How?”

“Easily,” he said. “I’ll be out of here in time. Just give me time!”

He grinned and insisted that they leave at once. He escorted them, walking between them to the Guardship. He shook hands with Turner and congratulated him. He turned to Ellen Haynes and, with a half-smiling, half-serious expression, bent forward and kissed her lightly on the lips.

“Goodbye—Grandmother,” he laughed.

He shoved her inside the spacelock and snapped the starting switch on the frame of the door. The lock clanged shut.

“Grandmother!” exploded Ellen. “What did he mean by that?”

Jack Turner had a flash of inspiration. “He said he would escape in time,” he muttered slowly. “The greatest meddler in all time. But look, Ellen, his name is Forrest, not Turner.”

“Funny man,” she said dreamily, “Egotist. Ever give thought to the idea that your—our —firstborn might be a girl?”

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* * * *

The next episode took place in my apartment in Indian Queen. It was Saturday mid-afternoon-ish, and I was merely puttering around, picking up the place, washing dishes (and the floor) and so on, being a good housewife to myself, when the doorbell rang. I was a bit stunned; not at the doorbell ringing, but at my caller.

It was Doña Campbell, who'd driven down from Westfield. While I stood there with my face hanging out, she blurted, "George, build me a good, stiff drink!"

John, she reported, had taken up dianetics, seriously. There had been talk of renting office space for a clinic, but L. Ron was running here and there giving lectures, and training the next echelon of adherents how to recognize an engram, and what to do when it was caught, so he'd left the rental process to John. But John had taken up dianetics as he had taken up everything else, and was using the cellar as his clinic. She took a dim view of anyone without academic schooling in medicine or the mind playing with what she called an "offshoot" of psychiatry. John had painted spiral stripes on one of his old turntables and was using it as a concentration gizmo to put his visitors in a lulled, talkative mood. That, she thought, is hypnotherapy, no matter how violently they all object to the simplest suggestion that hypnosis has any connection whatsoever with dianetics.

The following year and a half is none of your business, except that John was satisfied so long as the house was clean and there was food in the place, and especially happy when Doña left the place, so he could have his dianetic sessions without someone waving an admonitory forefinger from left to right while her head moved right to left in opposition.

I resumed my traveling habits, leaving from Wayne Junction on Friday evening for the Royal Blue, having dinner in the buffet car, disembarking in Plainfield to meet Doña Campbell driving back to Indian Queen. On Sunday night, we reversed the process.

* * * *

Here I am going to quell the gossip by telling the truth. It was in the very early spring of 1954. As I emerged from the Royal Blue, Doña said, "Y'know, this simply can't last forever."

"So?"

"Let's get it over with."

“All right. It had to come sooner or later.”

John looked surprised when we turned up. He said, “Shouldn’t you be on your clandestine way to Philly?”

“We should,” said Doña, “but this business has to come to some sort of finish sooner or later.”

“And what do you want me to do about it?”

“John, I want a divorce. I want to marry George.”

“And has George been asked about it?”

“John, it’s only in those silly romantic novels of the Victorian Period where the man throws himself on his knees, places one hand on his heart, and supplicates his lady love to give him her hand in holy matrimony.”

“Okay, if that’s what you want, but I don’t think it will work.”

“John, if it doesn’t work, it will be our fault, and ours alone, and outside interference isn’t going to help.”

John looked at his watch. “It’s too late to call Bruce (the family lawyer) this evening but I’ll get in touch with him and see what can be worked out. Now, get along to Philly, please, don’t stop in New Hope on your way. It makes me nervous when people drive a couple of quick ones.”

Doña went to the Virgin Islands, returned in the summer, and we were married in August, 1949.

So discount those stories about George eloping with Doña while John fired the all-white shotgun.

My writing went on the downswing, not because John hated my guts, but because Philco had taken on a military contract to develop a new anti-submarine device. It was developed in prototype and demonstrated to the NATO nations in competition with a couple of other devices developed by other nations. The idea was to select the most efficient NATO recommendation and thereafter be used by the NATO nations.

Unfortunately, like so many ideas that look good on paper, it was difficult to put in hardware, and we all went on long overtime, and I spent a lot of time flying around in an anti-submarine airplane testing the device.

On one occasion, we were in the Patuxent River Naval Base, and for some reason the movie had been cancelled, so I was with a bunch of technical officers, mostly talking about the various processes of color television. (Columbia had received the go-ahead for their color-wheel system, though everybody objected out loud. Philco almost got the award when they built one for a fair-sized screen, which took a six foot wheel that had to revolve at some frightful speed. I forget the figure, but it was enough to make strong men crawl off the floor.)

We went on to other matters, until one of the tech officers said, "You know, George, what I'm really interested in is the magnetic properties of rhodium."

I eyeballed him. "Rhodomagnetics? You've been reading Jack Williamson!"

Need I say more? It's nice to meet a fan in strange settings.

The anti-submarine device was a stinker for an involved technical reason that I'll explain over a bar at some convention if someone is interested. It didn't work. We were saved by the bell from having to demonstrate our half-developed device by the "end of the Korean campaign; the ships and airplanes we were to use in the NATO operation were to the Pacific, and we who were to go to Europe were told to continue as we had been. Keep the prospective mobilization day a secret. So we waved our passports and wrote about the trip and what we hoped to do, and that we had permission and there would be time to travel through Europe.

The overtime stopped while we tinkered on, and I came up with some blunt remarks about someone's mentality by proposing a device that couldn't work without a major basic revision in its paper design.

This did not endear me to Philco Management, nor to a couple of the naval personnel, and my progress stopped. I was the oldest senior engineer at Philco, having been put back from "acting" project engineer.

Then a former boss of mine turned up as chief engineer at Emerson Radio & Phonograph, in New York, and I was invited to take on the job of managing the component engineering department.

So long, Philly. Hello, New York!

* * * *

The relationship between John, Doña, and me had, naturally, started out with friction. So things do despite the "let's be civilized about this" attitude. The friction diminishes once done-in one discovers that he or she and all the rest are a damned sight happier than before.

John had met, and married, Peg Winters. Peg was a strong woman, independent, clever in business, and determined enough to say, "Oh, come now, John!" and make it happen when John got off on one of his wilder ideas and tried to make it sound logical. One argued with John. One listened to him. Until Peg. My personal opinion is that Peg was what he really needed, a bouncing board hard enough to slap his balls back at him with the off-spin to make ~~him~~ think.

It was, we discovered, a case in which the only blockage to the "bygones be bygones" road was a mutual waving of the olive branch.

The olive branch was the birth of Douglas Stewart Smith. He presented the two Campbell girls a half-brother to visit, and coping with these infrequent visitations required communication. John no longer wrote me the eight-page letter, but while passing along, and bus schedules, John used the telephone in lieu of the eight-page letter. In one ending-up, John remarked that they were paying five cents a word, and why not tackle the typewriter again.

Knowing John, who is a real "dog" person, and his enthusiasm for the Cliff Simak stories about the up-and-coming dogs, I tried the following.

HISTORY REPEATS

Illustrated by Martinez

There are—and very probably will always be—some Terrestrials who can't, and for that matter don't want, to call their souls their own....

Xanabai lays across the Spiral Arm, a sprawling sphere of influence vast, mighty, solid at the core. Only the far-flung boundaries show the slightebb and flow of contingent cultures that may win a system or two today and lose them back tomorrow a hundred years from now. Xanabai is the trading post of the galaxy, for only Xanabai is strong enough to stand over the trading table when belligerents meet and offer to take them both that once if they do not sheath their swords. For this service Xanabai assesses her percentage,

therefore Xanabaris rich. Her riches buy her mercenaries to enforce her doctrines. Therefore Xanabaris rotter at the under-core for mercenaries have no god but gold.

The clatter of a hundred tongues mingled with the clink of glasses and floated through strata of smoke from the burning weeds of a hundred planets. From one of the tables, voices rise in mild disagreement. There is a jeering laugh from one side and a roar of anger from the other. Two women rise and face one another ready to follow their insults with violence. Before the eruption can start, a mercenary steps forward on lithe feet and lightly catches the back-swung arm, a quick hand removes the poised glass before it can be thrown into the adversary's face.

"Sit!" says the mercenary in a cold voice and they sit still glaring at one another.

"Now," says the mercenary, settle your differences by talk. Or depart in opposite directions. This is Xanabar!

"He lies! He brags!"

"I do not lie. They are barbarians. do not brag. I can bring you one."

"You—"

"A wager," said the mercenary. A wager Xanabar can take no tax in blood. He faces one. "You claim you can do that which he says you can not." Then not waiting for a reply he faces the other; "And if he does, how much are you willing to pay?"

"How much is his life worth?"

"How much are you willing to pay?" demands the mercenary boldly.

"Five hundred weight of crystal-cut."

"An honorable sum. Do you agree?"

"Not enough—"

"For a task as easy as you claim it to be," said the mercenary; "Five hundred weight of crystal-cut seems honorable."

"But it means—"

"We in Xanabar are not interested in the details. Only in the tax. An honest

wager-contract outlanders. Otherwise, a rule that your eruption merely disturbed the peace?

The two outlanders looked at one another, schoolboys caught fighting in the alley by a monitor who demands a bite of their apple in lieu of a visit to the principal. As if loath to touch one another, they reach forward hesitantly and handshakes in a quick light grip.

“Good! glow the mercenary. He waves a hand and his fellows converge with contract-plate and detaching stylus: “Now, gentlemen, please state the terms for Xanabar.

Peter Hawley strolled down a side street with a dog at his heel. It was a dog of many breeds but not a mixture of careless parentage. Peter paused at a cross-street and looked uncertainly left and right: “What do you make, Buregarde?”

“The noble dog says right,” replied Buregarde.

“Right,” said Peter turning up the street: “And stop this ‘Noble dog routine.’

“Man is dogs best friend,” said Buregarde: “If you’d called me something sensible, would I not have looked it up. There is a statue to me in the Okefenokee back on Earth. I am the noble dog, Pogo says so.”

“|—”

“Easy Peter! said the dog in a near-whisper.

“All right. Do we play down the chatter?”

Buregarde sat, lifted his nose and sniffed. His natural voice gave a faint whine of discontent: “I’m supposed to have a nose,” he complained. “This is like trying to smell but a lone mouse in a zoological garden in midsummer.

“Why the warning?” asked Peter.

“All races smell the same when they are poised for violence,” said the dog. “Trouble is that man-smells don’t point the way it’s going, only where it’s coming from.”

Peter grunted: “Catch any woman-smell?”

“Just the usual whiff. Stale scent. She was here; she passed this way. But which way?”

“We can guess they made it away from the spaceport.

“Unless,” said the dog taking another sniff of the air, “they’re taking her back to some other spacecraft. Buregard looked up at Peter: “Do you catch anything?”

“Just the usual mingled fright and danger, frantic despair.

“Directional?”

Peter shook his head: “No,” he said. “The source is too close.”

“Let’s stroll up this street to the end and come back on the other side,” said the dog. “Quietly.”

In a saunter they went, alert and poised. A man and his dog from all appearances. But in Xanabar, the principal city of Xanabar the Empire they were huntsman and companion.

Like all cities of more than ten million souls, Xanabar had its glistening and lofty area and its slums—and what would have been a waterfront region in a seafaring city. The conditions were the same as they’d been everywhere for a few decades or thousands of years. Only the technology changes. Man’s cave is stainless steel and synthetic plastic; the cave man is swinging a better axe, and his hide is protected from the weather by stuff far more durable than his awn skin. But he’s the same man with the same hackles; they just rise for a few more thousand years than the hackles of his ancestors.

“Got it!” said Buregard, pointing a brief point at a closed door.

“Let’s go in!”

Buregard’s reply was half-snarl and half, “Look out!”

Peter whirled to catch a glimpse of a man upon him with pencil-rays coming to point. He faded down and toward the other, almost in a fall out of the path of the pencil-rays that flicked on and began a sweep upward and in. Peter caught his balance at the same time he clutched the wrist in his right hand. Then he went on down around and over, rising on his knees to flip the other man heel high in an arc that ended with a full-length spine-thudding body smash on the pavement. Buregard leaped in and slashed at the hand clutching the pencil-rays, snapped his head back and forth thrice and sent the weapon flying. Then with a savage growl he set a soft mouth against the other’s throat and let the man feel the pressure of his fangs.

“Easy,” said Peter.

Buregard backed away a few inches: "Easy nothing, he snapped: This man is the noble dog's worst enemy. He wanted your blood."

"Take it easy. I want this information."

The man looked up. "Barbarian Terrestrial!" he snarled.

Peter sneered: "And this is the capital city of the glorious civilization called Xanabar? Marble palaces with nobles of the blood, and stinking alleys with human rats. Where's she?"

The stranger spat.

"Buregard wants some red meat?"

"He'd make me upchuck. Only rodents eat their own kind?"

"Just a bite?"

"Do I have to swallow?"

"No. Just slash—"

"Wait, barbarian—"

"Barbarian Terrestrial, am I? You were maybe going to invite me for tea and cakes with that pencil-ray?"

"|—"

"Talk!" snapped Peter: "Where's she?"

"Who?"

"Buregard—?"

"Yes, boss. The throats of the other hand?"

"All right—for the good!" he do you. She's in there. Goon in—and we'll have two of you!"

Buregard growled; Three of us. And we might be hard to handle.

Peter stood up and hauled the stranger to his feet. His right hand dripped blood from the dog's teeth. Peter looked for, and found, the pencil-ray smashed against the stone front of the building. He cuffed the stranger across the face, turned him around and pointed him toward the far corner.

"I count three," he said. "If you're not out of sight by three—"

"It'll be a pleasure, Peter," said Buregarde.

The stranger loped away on a crazy run. As he turned the corner, he ran face on to one of the uniformed mercenaries of Xanabar. The mercenary collared the stranger and took a quick inventory of the slashed right hand, then ripped clothing and adding those to the frightened gallop, he came back with the stranger's left arm held in a backlock.

Haughtily he demanded, "What goes on in Xanabar?"

Peter eyed the mercenary sourly: "Kidnaping and attempted murder."

"Who says such lawlessness is rife in Xanabar?"

"I say so. Peter Hawley of the Extraterrestrial Service says so."

"You are mistaken, barbarian."

"I say so," said Buregarde.

"You're an animal!"

"I am—and so are you!"

"I'll not be insulted by an animal! I am—"

"Take it easy, Buregarde."

"Take it easy nothing. This mercenary foot-soldier forgets something—maybe he doesn't know about it."

"Don't call His Excellency Peacekeepers mercenaries," snapped the mercenary.

"Peacekeeper" chuckled at the dog. "We'll listen and become wise. Dog and man, man and dog, have been together for about a half-million years. Once dog helped man in war and peace and man gave dog food and shelter. Dog helped man rise above the level

of the savage and man has helped dog rise to the level of intelligence. But dog has one advantage. None of us has been intelligent enough to really believe that dog has a soul, and those of us who do believe that also know that dogs' souls is devoted to man. Do you know about dog, Xanabian—Peacekeeper?

“No—”

“Then don't force me to show you what kind of adversary intelligent dog can be. Mereman is a pushover!”

“Bah!”

Buregard eloped in a mad circle around the mercenary His Excellency Peacekeeper, turned to stay facing the dog but found himself turning his back on Peter. He stepped back and to one side and reached for his heavy-duty pencil—the dog gave a low growl of warning and crouched for a leap.

“He means it—Peacekeeper said Peter Hawley quietly: “Draw that pencil and he'll have your hand in ribbons before you can level it.”

The mercenary drew in his breath.

“Whistle for help and he'll have your throat:

“I shall not permit this high handed—”

“Then stop sounding off and listen to us!” snapped Peter: “I charge the Empire of Xanabar with the crime of being indifferent to the welfare of the stranger within her gate. I charge kidnapping and attempted murder and I charge the latter against the specimen you hold in your hand:

“An outlander!”

“Does she bring his own law to Xanabar? If he does, then so do I!”

“I arrest you all for breaking the Peace of Xanabar.

“Me, too?” asked Buregarde.

The mercenary ignored the dogs eagerly: “You are armed, Terrestrial.

“So was he?”

“So am I!” snarled Buregard, showing a fine set of white fangs in the most effective gesture.

“This must cease!” thundered the mercenary. “You cannot threaten His Excellency’s Peacekeepers!”

Buregard growled; “Slip the mercenary a crystal-cut boss. We’ve got a girl to find!”

“A girl? A Terrestrial girl?” asked the mercenary with his eyes opening.

“The daughter of our envoy to Lonaphite, Miss Vanessa Lewis. Last reported in her stateroom aboard the Terrestrial Spacecraft *Polaris* during a landing pattern at Xanabar Citadel Spaceport.

The mercenary said, “The work of outlanders—riff raff—has this!”

“Well,” snapped Peter Hawley, “do His Excellency’s Peacemakers condone such goings-on?”

“We keep the Peace of Xanabar. Your charge is your word, Terrestrial.

“Terrestrial Barbarianism, isn’t it?”

“I arrest you—”

“Oh, stop it. For five weight of crystal-cut, can you be bribed to haul that specimen off to jail and let me go about making my own Peace with Xanabar?”

“You accuse me of accepting bribes?”

“You’re a mercenary, aren’t you? Seven weight of crystal-cut.

“Ten?”

“Seven,” said Peter.

“Ten,” said the mercenary, and you have one more caper coming.

“Ten,” agreed Peter Hawley, and you look the other way when I take the lid off.”

“Still got it,” said Buregard, sniffing at the closed door but keeping one eye on

the disappearing mercenary and his prisoner.

“I’ve got it, too. Still fright and concern, fear of harm, concern over what happens next:

“Strong?”

“Definitely, said Peter closing his eyes and holding his breath.

“Nothing measurable?” asked the dog after a full minute.

“No. Too bad I was never introduced to her. I have no idea of her strength of mind—wait! Another minute went by in personal silence, Peter Hawley’s concentration far too deep to be disturbed by the sounds of the city’s spaceport, slumby night. The dog backed away from the door and took an alert position to guard Peter while the man was immersed in his own mind. Finally Peter alerted and shook his head sadly: “I thought for a moment that shed caught me. A fleeting thought of rescue or escape, concept of freedom, flight, safety. But wish-thinking. Not communication. Let’s go in.”

“Barge, or slink?” asked the dog.

“Slink?”

“Have it your way,” said Buregarde.

Outside the place looked closed. The door was solid, a plastic imitation of bronze through which neither light nor sound passed. The windows were dark. But once the door was cracked, the wave of sound came pouring out along the slit of light and filled the street with the chœ andre-echo.

“Slink, now,” said the dog.

“So everybody makes mistakes.

Inside a woman leaned over a low counter: “Check your weap... say! You can’t bring that animal in here!”

Buregarde said, “He isn’t bringing me. I’m here because I like it.”

The woman’s eyes bugged: “What... kind—?”

“I am man’s best friend—the noble dog of Barbarian Terra:

“Yes... but—”

“Oh,” said Peter airily, “we’re looking for a friend!”

“Friend? Who is he?”

“It’s a she and her name is Vanessa Lewis!”

“She ain’t here!”

“The dame’s a liar-ess, Peter! I scent her strong!”

“We’ll just take a look around,” said Peter to the check girl.

“You’ll have to check your weapons.”

“I’d rather go in naked. Sorry. Not today. Weapons happen to be my business today. Come on, Buregard!”

Man and dog started along the hallway warily. Buregard said, “Any touch?”

“Gotta faint impression of alarm, danger, call out the guards!”

“I scent violence,” said the dog. “And—”

The door at the end of the hallway opened and a big man stepped out. “What’s going on here?” he demanded flatly.

The check girl said, “He wouldn’t check..”

The big man reached for his hip pocket.

Peter said, “Take him high!” and they plunged.

Peter dove for the man’s knees, Buregard went in a three-stride hop like an accordion folding and unfolding and then arched in a long leap with his snarling fangs aimed at the man’s throat. Man and dog hit him low and high before he could open his mouth, before he could free the snub pencil-ray. There was a short scuffle that ended when Buregard lifted the man’s head and whammed it down hard against the floor.

Weakly, the check girl finished her statement, “... His weapons! and keeled over in a dead faint.”

Buregard shook himself violently and worked his jaws, licking blood from his chops. Peter looked through the open wall-door opposite the check counter; the racket had not been noticed by the roomful of spacemen and riffraff. The babble of a hundred tongues still went on amid the clink of glasses and the disturbing strains of Xanabian music. Smoke from a hundred semi-noxious seed-lays in strata across the room, and at a table in the far corner two women faced one another, their expressions a mixed pair. One held heavily begrudged admiration as he paid off five hundred weight of crystal-cut the legal tender of Xanaba to the other, whose expression was greedy self-confidence. One of His Excellency's Peacekeepers presided over the exchange. Coldly he extracted a fifty weight from the pile and folded it into the signed and completed wager-contract. For his own coffee he extracted a five weight and slipped it into his boot top.

Peter Hawley and Buregard passed on, went through the far door dragging their late adversary ignominiously by the heels. Amid the lessened publicity of the distant hall, Peter checked the man and shrugged. 'He may live,' he said coldly; 'if he doesn't bleed to death?'

"You're really ought to take 'em on the high side," said Buregard plaintively. "All I've got is my teeth to grab with. They don't bleed so bad from the ankle."

"They don't stay stopped that way either," said Peter harshly.

"You'd not be getting any praise from the Chief for that sort of brutality."

"If Xanaba weren't rotted to the core, we wouldn't be plowing through it in the first place. Now, let's get going."

"Shouldn't you call for the rest of the crew?"

"Not until I'm certain the girl's here. I'd hate to cut the city-wide search for cold evidence."

"She's here. I scented her."

"Maybe it's past tense, Buregard. Or maybe it's another woman."

"Could be. But on nothing it is definitely Terrestrial woman. The dogs sniffed again. "You get anything?"

"No more than before. It's close and they're the same set of impressions. Yet, any woman would be frantic with fear and concern."

“I ... *shhh!*” Buregarde’s sharp ears lifted instinctively at a distant sound not heard by the man. With a toss of his head, the dog folded one ear back, uncovering the inner shell. Like a sonic direction finder, Buregarde turned his head and listened.

“Man,” he said finally with a low growling voice. “Peter, there’ll be hell to pay around here directly. He’s stumbled over our recent conquest.”

“Let’s get cutting!”

Peter started trying doors and peering in; the dog raced on ahead of the man, sniffing deep at the bottom of each. It was the dog that found the room. He called, “Here!” and Peter raced forward just as the fellow on the stairs yelled something in his native tongue.

Peter hit the door with the heel of his foot and slammed it open by splintering the doorframe. The dog crouched low and poised; Peter slipped in and around feeling for a light-switch. From inside there was a voiceless whimper of fright and from outside and below there came the pounding of several sets of heavy feet. Peter found the switch and flooded the room with light. The girl—whether she was Miss Vanessa Lewis or someone else, and kidnap-wise it was still a Terrestrial girl—lay trussed on the bed, a patch of surgical tape over her mouth.

“Sorry,” said Peter in a voice that he hoped was soothing. He reached, freed a corner of the tape and ripped it off in a single swipe. The girl howled. Peter slapped her lightly. “Stop it!” he commanded sharply. “Vanessa Lewis?”

“Yes, but—”

“Call out the marines, Peter,” snarled the dog.

“No! Bo! Back!”

Reluctantly the dog backed into the room. He crouched low, poised to spring, with his nose just beyond the doorframe.

“Four of ‘em,” he whimpered pleadingly. “I can get two—”

“Well, I can’t get the other two unless I’m lucky,” snapped Peter. “Don’t be so eager to die for nothing, Buregarde.”

“All this calculation,” grumbled the dog sourly. “I don’t call it a loss if I get two for one.”

“I call it a loss if I don’t get four for nothing—or the whole damned Empire of Xanabar for nothing, for that matter. We’ve a job to do and it ain’t dying—until Miss Lewis is out of this glorious citadel.”

The girl looked from one to the other. They did not need any identification; they were their own bona fides. Only man—Terrestrial Man—had intelligent dogs to work beside him. Period, question closed. Buregarde snarled at the door warningly while Peter stripped surgical tape from wrists and ankles.

Outside, someone called, “Come out or we blast!”

Buregarde snarled, “Come in and we’ll cut you to bits!”

The quick flash of a pencil-ray flicked in a lance above the dog’s nose: Buregarde snapped back as the lancet of light cut downward, then snapped forward for a quick look outside as the little pencil of danger flickered dark.

“Careful, Bo!”

“You call the boys,” snapped the dog. “I’ll—”

Something came twisting forward to hit the doorframe, it dropped just inside the doorjamb. Buregarde leaped, snapped at the thing and caught it in midair, snapped his head in a vicious shake and sent it whirling back outside again before it could be identified. The dog sunfished and landed on all four. Then the thing went off with a dull *pouf!* outside. There was a gentle flash of quick light that was smothered by a billow of smoke. Buregarde leaped into the cloud and disappeared. There was a hoarse shriek and the mad scrabble of dog-claws on the hard floor, the sound of a heavy thud, and the angry snarl of a dog with its teeth fastened into something soft. Then there was the fast patter of dog-feet and Buregarde came around the door on a dead run, sliding side-wise to carom off the opened door into safety just as a pencil-ray flicked to follow him.

“Got him,” said the dog in a satisfied tone. “That’s one!”

He took his post by the doorframe again, the tip of his nose just

outside. There was a consultation out there in the hallway, at which Buregarde called, “Make a wild rush for us!”

Miss Lewis said, “What are we going to do?”

“Fight it out,” said Peter. “They can’t win so long as we’re alive now. I’ve got my crew on its way in a dead run, and if we make enough noise, some of His Excellency’s Peacemakers will step in and demand their cut of the finances.” He grinned. “How much are you worth, Miss Lewis?”

She shuddered. “I don’t know how much father would pay—”

“Hit ‘em low, Peter!” came Buregarde’s snarl.

Three of them came in a-slant, bounced shoulders against the opened door, caught their bearings and hell was out for noon. Buregarde caught the first with a slash at the throat; they went down in a mad whirl of dog and thug, paws, tail, arms, legs and a spurt of blood. The second flicked his pencil-ray at Peter, its capsule charge faded to a mere sting before it cut into him. The third aimed a kick at the struggling dog. Vanessa Lewis snatched a box from the bureau and hurled it at the second. Peter thumbed his pencil-ray and winged the third man in the biceps. Buregarde leaped for the second man’s gun hand and closed on it as the hurled box opened and scatter-shotted his face with bric-a-brac. The man with the bloody throat flailed out and caught Peter by the ankle. Peter stomped his face with his other heel. Miss Lewis picked up the table lamp and with a single motion turned off the light and finished felling the one with the ray-burned shoulder.

Buregarde dropped from the second man’s wrist and crouched to spring. The man cowered back, his good arm covering his throat and his other arm hanging limp. He mouthed fright-noises in some tongue native to some star a thousand light-years across the galaxy.

Coldly, Peter stepped forward and belted him in the plexus.

“Now,” he said calmly, “we shall vacate the premises!”

They went side by side, facing slightly outward, Buregarde between them and slightly ahead. “We’re coming out!” called the dog. “Three Barbarians from Terra!”

Down on the dark street, they met their mercenary again. He eyed them sourly. “I see you were, in a sense, successful.”

Peter Hawley faced the mercenary. “We were successful and would you like to make something of it?”

“I’m going to have to arrest you, you know.”

“You’ll lose an arm trying!” snapped the dog.

“There’s murder been committed tonight,” said His Excellency’s Peacemaker. “The Peace of Xanabar has been disturbed.”

“Why you chiseling crook, there’s been kidnaping tonight, and—”

“I’m afraid that I shall have to ask that the young lady produce her passport,” said the mercenary. “Otherwise she’s in Xanabar Citadel illegally.”

Buregarde said, “Hit him low, Peter. Here come the boys.”

“No!”

“Just once—for fun?”

“No. I want our money-grubbing Peacekeeper to carry a message to His Excellency. I want His Excellency to read some Terrestrial History. Once upon a time there was a place called the Byzantine Empire that laid across the trade routes. The upper crust of people used to serve the Presence of God in a golden throne whilst their underlings dealt in human slaves and procured comely concubines for the emperor; their policemen took bribes and human life was cheap. And when Byzantium fell, all the world was forced to seek a new trade route. So tell His Excellency that he’d better clean up his own foul mess, or some barbarians will clean it up for him.”

“And that,” said Buregarde, “goes for your dad-ratted cat!”

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* * * *

We were living, at the time, in Jackson Heights, an area that pleased us all because we were about a mile from the home of Willy and Olga Ley, the two Ley girls, two Persian cats, a long-haired dachshund named Waffle, and a cage of finches. And a wild tropical fish that Goofus, one of the Persians, used to drink from. The only tragedy of this was that their angel fish bit the poor cat on the tongue. The other cat, Albus, was, of course, white, and it seems that all white Persians are as deaf as a dead post, and he couldn't understand why everybody raised hell while he was romping all over Willy's piano. The cats, meanwhile, used to sit on top of the finch cage and let the birds pick fur for their nests in mating time.

It became time for the Chicago convention, to the best of my recollection the first of the big ones. With some careful eyeballing of the calendar, some trouble developed with some relays that a few of the Chicago manufacturing companies were making, and I had to go to Chicago to iron out the wrinkles. So Willy and I decided to share a room; I left on Wednesday morning; he was to join me on Saturday and, without standing in the line, meet me at the room.

Okay, so I got to Chicago on Wednesday, went to one of the relay fellows, got the main problem settled, and then registered, according to my reservation, at the Morrison Hotel, where the Chicago group had rented the Terrace Gardens for their meeting place.

This is about 8:00 in the evening. I'm registered. The bellhop grabs my bag, waves the key, starts across the lobby floor, and then pauses, looking at the key.

"Pardon me, Mr. Smith. I think there's a screw-up on this. Let me check."

He disappears, leaving me in the middle of the lobby with my bag. He returned a few minutes later, and explained that he had been right, the room I'd been assigned hadn't been vacated. But, says he, cheerfully, there is a nice room high up in the tower if I don't mind, hasn't been cleaned yet. But, he says with equal cheer, this inconvenience is small, and it's all caused by a big convention that starts on the weekend, and you'll be above all that noise and confusion.

Frankly, I wanted to be where the action was. But— well, the hotel had a sort of "back door" in which you could put things to be cleaned and have them back there in the morning. The bellhop is explaining this all to me in a loud voice when the door on the opposite side of the hall opened and a well-remembered voice said, "It sounds like George O. Smith, and that is George O. Smith." Behind Robert Bloch follows Bob Tucker, Bea Mahaffey, and a crowd

of other early arrivers.

It turned out that the bellhop was a science fiction fan, who had taken on the job as a bellhop to be with the convention, and he was seeing to it, when he could, to put all the things on the same floor.

One more incident about the Chicago convention. The “Little Men’s Chowder, Marching, and Science Fiction Society” was plumping for the next year’s convention and to show that they could do it, had hired the grand ballroom of the Morrison for the after-banquet masquerade ball, all by themselves. The banquet speaker was Hugo Gernsback, who was proud of explaining to all that he had invented everything that Edison hadn’t. Now, that’s a bit oddball; technically, the ancient Greeks invented radar because one of their theories about eyesight was that something in the eye sent out something that reflected the sights to be seen, and returned to the eye with the information. Now, that’s radar—omitting a few of the minor details and all of the major details.

So I left, and went to see what the Little Men were doing. They were working like mad, decorating the ballroom. As I walked in, one of them (and if I remembered his name on this late date, I’d mention him) came out and greeted me with the attitude of a returned long-lost relative. “Boy, George, am I glad to see you!”

“For what?”

“Well, you see, we don’t know how much alcohol to add to the pineapple juice to make a good punch.”

“Alcohol—? Pineapple juice—?”

He went into the kitchen and returns with a one-liter bomb, carefully sealed, of *Absolute Alcohol*. The label was scientific: “Ehtanol, Absolute,” it said in large capital letters, and below in smaller letters, “C₂H₅OH, 100%” and below that a list of impurities starting with sulphuric acid, silver nitrate, sodium chloride, and so on, all of them tabulated in the neighborhood of “0.00X%” and at the bottom, “Water: Trace.”

“Urn,” says I, “where did you get this stuff?”

“Oh, we liberated about fifteen liters of it from the university.”

Fifteen liters. For you who live in the past, that’s somewhat better than fifteen quills. Liberated. Then drove it across six or seven state lines and into Chicago, where they were going to serve it to their guests, in the grand ballroom of the Hotel Morrison in the Loop.

Now and then we hear of someone bragging that he could take the pure quill. Do not believe him. Absolute is 100% alcohol, equal to 200 proof. Alcohol can’t be distilled b

about 95%, or 190 proof; to get the rest remaining, the process takes a bit of chemistry which the water is dissolved with sulphuric acid, then the solute is treated to an insoluble salt, which is treated and filtered and so forth, which is why that list of “0.00X%” impurities. Even to claim drinking 190 proof is a wild brag; it would burn the tongue and throat and the whole intake system on the first swallow, and the chances of the victim taking the second swallow (of anything!) vary from unlikely to never. There are liquors in the eastern part of Europe that run to 140 proof (70%), and one can toss off a shot provided one smothered the fire with cold water as a chaser.

After some thinking, I replied, “Now, the better vodkas run 100 proof, so mix one part of the stuff with one liter of water and you have 100 proof Vodka. Drown it with five parts more of water, and you have a stiff vodka highball. Drown the 100 proof with about ten parts of juice and you’ll start a drinking party that will end up with all of us flat on the floor by midnight.”

Ultimately, they mixed it about twenty to 1; that would be forty parts of juice against one part of absolute, and everybody had a high old time.

I’ve often wondered what they did with what was left over. Fifteen liters would make 30 quarts of high test, and their mix of about 40 to 1 would have filled the grand ballroom to the ankles. Did they return their stuff, back across six or seven state lines and home in California?

* * * *

The foregoing tale of the after-banquet party shows how innocent folks can break the law when, really, all they want to do is to provide fun for a large number of their compatriots. In his own way, John Campbell was also a sucker for a story that ran on a collision course with some generally accepted idea. Of course, the “dianetic clear” was to have been a super-being, and John was claiming that “The next president will have to be a clear!” because, to understand, the clear will not lie or be lied to and there were nimble mutterings that it might be possible that the dianetic clear might either develop, or find that once clear, he would have telepathetic qualities. And, of course, the advent of telepathy would eliminate all evil-doings, skullduggery, espionage, and possibly things that might happen the night.

The question I asked myself when I sat down to write the next is, “How would one run a horse race in a world of telepaths, all ready to shout ‘Foul!’ at the first mental whisper of trickery?” Well—

Illustrated by Bernklau

THE BIG FIX

Anyone who holds that telepathy and psi powers would mean an end to crime quite obviously underestimates the ingenuity of the human race. Now consider a horserace that had to be fixed ...

IT WAS April, a couple of weeks before the Derby. We were playing poker, which is a game of skill that has nothing to do with the velocity of horse meat.

Phil Howland kept slipping open but he managed to close up before I could tell whether the combination of Three-Five-Two-Four was a full house of fives over fours or whether he was betting on an open-ended straight that he hadn't bothered to arrange in order as he held them. The Greek was impenetrable, he also blocked me from reading the deck so that I could estimate his hand from the cards that weren't dealt out. Chicago Charlie's mind was easy to read but no one could trust him. He was just as apt to think high to score someone out as he was to think low to suck the boys in. As for me, there was, good old Wally Wilson holding a pat straight flush from the eight to the queen of diamonds. I was thinking full house but I was betting like a weak three of a kind.

It was a terrific game. Between trying to read into these other guys' brains and keeping them from opening mine, and blocking the Greek's sly stunt of tipping over the poker chips as a distraction, I was also concerned about the eight thousand bucks that was in the pot. The trouble was that all four of us fully intended to rake it in. My straight flush would be good for the works in any normal game with wild cards, but the way this bunch was betting I couldn't be sure. Phil Howland didn't have much of a shield but he could really read, and if he read me—either my mind or my hand—he'd automatically radiate and that would be that.

I was about at the point of calling for the draw when the door opened without any knock. It was Tomboy Taylor. We'd been so engrossed with one another that none of us had caught her approach.

The Greek looked up at her and swore something that he hadn't read in Plato. "Showdown," he said, tossing in his hand.

I grunted and spread my five beauties.

Phil growled and shoved the pot in my direction, keeping both eyes on Tomboy Taylor.

She was something to keep eyes on, both figuratively and literally. The only thing that kept her from being a thionite dream was the Pittsburgh stogie that she insisted upon smoking and the only thing that kept her from being some man's companion in spite of the stogie was the fact that he'd have to keep his mouth shut or she'd steal his back teeth—if not for filling, then for practice.

“You, Wally Wilson,” she said around the cigar; “get these grifters out of here. I got words:

The Greek growled: Whosays?

“Barcelona says:

I do not have to explain who Barcelona is. All I have to say is that Phil Howland, The Greek, and Chicago Charlie arose without a word and filed out with their minds all held tight behind solid shields.

I said, “What does Barcelona want with me?”

Tomboy Taylor removed the stogie and said evenly; “Barcelona wants to see it Flying Heels, Moonbean, and Lady Grace next month.”

When I got done gulping, I said, “You mean Barcelona wants me to fix the Kentucky Derby?”

“Oh no,” she replied in a very throaty contralto that went with her figure and her thousand-dollar worth of simple skirt and blouse. “You needn't fix anything. Just be sure that it's Flying Heels, Moonbean, and Lady Grace in that order. One, two, three. Do I make Barcelona quite clear?”

I said, “Look, Tomboy, neither of them platers can even *run* that far, let alone running a head:

“Barcelona says they can. And will!” She leaned forward and stubbed out the Pittsburgh stogie and in the gesture she became wholly beautiful as well as beautifully wholesome. As she leaned down, she unfogged the lighters surface of her mind and let me dig the faintly-leaking concept that she considered the physically attractive. This did not offend me. To the contrary, it pleased me, any egomaniac until Tomboy Taylor deliberately let the

barrier down to let me read the visual impression—which included all of the implications contained in the old cliché: “... And don't he look nacheral?”

“How,” I asked on the recoil, “can I fix the Derby?”

“Barcelona says you know more about the horseracing business than any other big time operator in Chicago, she said smoothly. Barcelona says that he doesn't know anything about horseracing at all, but he has great faith in your ability. Barcelona says that if anybody can make it Flying Heels, Moonbeam, and Lady Grace, one, two, and three, Wally Wilson is the man who can do it. In fact, Barcelona will be terribly disappointed if you can't.”

I eyed her carefully. She was a composed and poised beauty who looked entirely incapable of uttering such words. I tried to peer into her mind, but it was like trying to read the fine print of a telephone directory through a knitted woolen shawl. She smiled at me, her shapely lips curving graciously.

I said, “Barcelona seems to have a lot of confidence in my ability to arrange things.”

With those delicate lips still curved sweetly, she said, “Barcelona is willing to bet money on your ability as a manager.”

At this point Tomboy Taylor fished another Pittsburgh stogie out of her hundred dollar handbag, bit off the end with a quick nibble of even pearly-white teeth, and stuffed the cigar in between the arched lips. She scratched a big kitchen match on the seat of her skirt after raising one shapely thigh to stretch the cloth. She puffed the stogie into light and became transformed from a beauty into a hag. My mind swore; it was like painting a mustache on the Mona Lisa.

Out of the corner of her mouth she replied to my unspoken question: “It helps to keep grippers like you at mind's length.”

Then she left me alone with my littered card table and the eight thousand buck final pot—and the unhappy recollection that Barcelona had gotten upset at something Harold Grimme had done, and he'd gone into Grimme's place and busted Grimme flat by starting with one lousy buck and letting it ride through eighteen straight passes. This feat of skill was performed under the mental hoses of about eight operators trained to exert their extrasensory talents toward the defeat of sharpshooters who tried to add paraphysics to the laws of chance.

Lieutenant Delancey of the Chicago police came in an hour later. He refused my offer of a drink, and a smoke, and then because he didn't wave him to a chair he crossed my living room briskly and eased himself into my favorite chair. I think I could have won the

waiting game but the prize wasn't good enough to interest me in playing. So I said, "O.K., lieutenant, what am I supposed to be guilty of?"

His smile was veiled: "You're not guilty of anything so far as I know."

"You're not here to pass the time of day?"

"No, I'm not. I want information."

"What kind of information?"

"One hears things," he said vaguely.

"Lieutenant, I said, "you've been watching one of those hallucinogenic whodunit dramas where everybody stands around making witty sayings composed of disconnected phrases. You'll next be saying 'Evil Lurks In The Minds Of Men', in a sepulchral intonation. Let's skip it, huh? What kind of things does one hear and from whom?"

"It starts with Gimpy Gordon."

"Whose mind meanders."

He shrugged. "Gimpy Gordon's meandering mind is well understood for what it is," he said. "But when it ceases to meander long enough to follow a single train of thought from beginning to logical end, then something is up."

"Such as what, for instance."

The lieutenant leaned back in my easy-chair and stared at the ceiling: "Wally," he said, "I was relaxing in the car with Sergeant Holliday driving. We passed a certain area on Michigan near Randolph and I caught the strong mental impression of someone who—in this day and age, mind you—had had the temerity to pickpocket a wallet containing twenty-seven dollars. The sum of twenty-seven dollars was connected with the fact that the rewards made the risk worth taking; there were distinct impressions of playing that twenty-seven bucks across the board on three very special nags at the Derby. The impression of the twenty-seven bucks changed to a mental vision of a hand holding a sack of peanuts. There was indecision: Should he take more risk and run up his available cash to make a larger killing, or would one Joseph Barcelona take a stand-offish attitude if some outsider were to lower the track odds by betting a bundle on Flying Heels, Moonbeam, and Lady Grace?"

I said, "Lieutenant, you've a pickpocket's jug. Horse betting's legal."

“Since wagering on the speed of a horse has been redefined as ‘The purchase of one corporate share to be valid for one transaction only and redeemable at a par value to be established by the outcome of this aforesaid single transaction, horse betting is legal. This makes you an ‘Investment Counselor, short-term transactions only, and removes from you the odious nomenclature of ‘Bookie’. However, permit me to point out that the buying and selling of shares of horse flesh does not grant a license to manipulate the outcome.

“You sound as though you’re accusing me of contemplating a fix?”

“Oh no. Not that.”

“Then what?”

“Wally, Flying Heels, Moonbeam and Lady Grace were refused by the National Association of Dog Food Canners because of their substandard health. If I’m not mistaken, the Derby Association should have to run the race early that Saturday afternoon.

“Early?”

“Uh-huh Early. You see, Wally, the blue laws of the blue grass state make it illegal to run horse races on Sunday, hence the start of the Derby must be early enough to let our three platers complete the race before midnight.

“Lieutenant, the rest still stands as a mathematical probability that—”

“That the rest of the field will catch the Martian Glanders as they lead our three dogs past the clubhouse turn?”

“Lieutenant, you are wronging me?”

“I haven’t said a thing.”

“Then why have you come here to bedevile me, lieutenant? If Barcelona has ideas of arranging a fix—”

“If Barcelona has such notions, Wally Wilson would know about it.”

“Everybody, I said, ‘entertains notions of cleaning up a bundle by having the hundred-to-one shot come in by a length. Even Barcelona must have wild dreams now and then—’”

“Come off it,” he snapped. “Something’s up and I want to know what’s cooking.”

“Lieutenant, you’re now asking me to describe to you how someone might rig the Kentucky Derby in a world full of expert telepaths and perceivers, and manipulators, a large number of which will be rather well-paid to lend their extrasensory power to the process of keeping the Derby pure?”

He eyed me sourly: “Remember Fireman O’Leary?”

“That’s an unfair allegation, I replied: The rumor that he started the Chicago Fire is absolutely unfounded.

“As I recall, Fireman O’Leary came by his nickname about one hundred years after the holocaust that started on De Kover Street in 1871. It seems that ‘Fireman O’Leary was most useful in helping the fillies home at Washington Park by assaulting them in the region of the bangtail with small bollops of pure incandescence. He was a pyrotic.”

“That is a false accusation”—

“It was never proved, admitted the lieutenant; because any one who accused anybody of making use of extrasensory faculties in 1971 would have been tossed into that establishment on Narragansett Avenue where the headshrinkers concealed their mystic trade?”

“Things are different now?”

“Indeed they are, Wally. Which is why I’m here. No one but a fumbling idiot would try anything as crude as speeding a dog over the line by pyrotics or by jolting the animals with a bolt of electrical energy.

“So—?”

“So considering the sad and sorry fact that humankind does not change very much despite the vast possibility for improvement, we must anticipate a fix that has been contrived and executed on a level that takes full cognizance of the widespread presence of psi-function.

“But again, why me?”

“Was not ‘Fireman O’Leary an ancestor of yours?”

“He was my maternal grandparent.

“And so you do indeed come from a long line of horse operators, don’t you?”

“I resent your invidious implications.”

“And wasn't ‘Wireless’ Wilson the paternal ancestor from whom the family name has come?”

“I fail to see... the allegation that my father's father employed telepathy to transmit track information faster than the wire service has never been proved.”

He smiled knowingly; Wally; he said slowly; “if you feel that allegations have somehow impugned the pure name of your family, you could apply for a review of their several appearances in court. It's possible that ‘Fireman O'Leary’ did *not* use his pyrotic talents to enhance the running speed of some tired old dogs?”

“But—”

“So I think we understand one another, Wally. There is also reason to believe that psi talent tends to run in families. You're a psi-mama, good one?”

“If I hear of anything—”

“You'll let me know,” he said flatly; “And if Flying Heels, Moonbeam, and-or Lady Grace even so much as succeed in staying on their feet for the whole race, I'll be back demanding to know how you—Wally Wilson—managed to hold them up!”

After which the good Lieutenant Delancey left me to my thoughts—which were most uncomfortable.

Barcelona had to be kept cheerful. But the dogs she'd picked could only come in first unassisted if they happened to be leading the field that started the next race, and even then the post time would have to be delayed to give them a longer headstart. That meant that if our three platers came awake, everybody would be looking for the fix.

Anybody who planned a caper would surely have to plan it well.

Barcelona hadn't planned the fix, he merely stated a firm desire and either Barcelona got what he wanted or I got what I didn't want, and I had to do it real good or Delancey would make it real hot for me.

I was not only being forced to enter a life of crime, I was also being forced to perform cleverly.

It wasn't fair for the law to gang up with the crooks against me.

And so with a mind feelings sort of like the famous sparrow who'd gotten trapped for three hours in a badminton game at Forest Hills, I built a strong highball and poured it down while my hallucinogenic set was warming up. I needed the highball as well as the relaxation because I knew that the "Drama" being presented was the hundred and empty-umpteenth make of "Tarzan of the Apes" and for ninety solid minutes I would be swinging through trees without benefit of alcohol. Tarzan you'll remember did not learn to smoke and drink until the second book.

The hallucinogenic did relax me and kept my mind from its worry even though the drama was cast for kids and therefore contained a maximum of tree-swinging and ape-gymnastics and a near dearth of Lady Jane's pleasant company. What was irritating was the traces of wrong aroma. If one should not associate the African jungle with the aroma of a cheap bar, one should be forgiven for objecting to Lady Jane with a strong flavor of tobacco and cheap booze on her breath.

And so I awoke with this irritating conflict in my senses to discover that I'd dropped out of my character as Tarzan and my surroundings of the jungle but I'd somehow brought the stench of cheap liquor and moist cigarettes with me.

There was an occupant in the chair next to mine. He needed a bath and he needed a shave but both would have been wasted if he couldn't change his clothing too. His name was Gimpy Gordon.

I said, "Get out!"

He whined; "Mr. Wilson you just gotta help me?"

"How?"

"Fer years; he said, "I been living on peanuts I been runnin errands for hard coins. I been—"

"Swiping the take of a Red Cross box; I snapped at him.

"Aw, Mr. Wilson, he whined; "I simply gotta make a stake. I'm a-goin to send it back when I win?"

"Are you going to win?"

"Cant I?"

For a moment toyed with the idea of being honest with the Gimp. Somehow, someone should tell the duffer that all horseplayers die broke, or that if he could make a living he'd be out of business.

Gimpy Gordon was one of Life's Unfortunates. If it were to rain gold coins, Gimpy would be out wearing boxing gloves. His mental processes meandered because of too much methyl. His unfortunate nickname did not come from the old-fashioned reason that he walked with a limp, but from the even more unfortunate reason that he *thought* with a limp. In his own unhealthy way he was—could we call it “Lucky” by any standard of honesty? In this world full of highly developed psi talent, the Gimp *could* pick a pocket and get away with it because he often literally could not remember where and how he'd acquired the wallet for longer than a half minute. And it was a sort of general unwritten rule that any citizen so utterly befogged as to permit his wealth to be lifted via light fingers should see it as a lesson!

But then it did indeed occur to me that maybe I could make use of the Gimp.

I said, “What can I do, Gimpy?”

“Mr. Wilson, he pleaded; is it true that you're working for Barcelona?”

“Now, you know I can't answer that.”

I could read his mind struggling with this concept. It was sort of like trying to read a deck of Chinese Fortune Cards being shuffled before they're placed in the machine at the Penny Arcade. As the drunk once said after reading the Telephone Directory: Not much plot, but *egad!* What a cast of characters! The gist of his mental maundering was a childlike desire to have everything sewed up tight. He wanted to win, to be told that he'd win, and to have all the rules altered ad hoc to assure his winning.

Just where he'd picked up the inside dope that Barcelona favored Flying Heels, Moonbeam, and Lady Grace in the Derby I could not dig out of him. Just how Gimpy had made the association between this clambake and me—good old Wally Wilson—could I not dig either. But here he was with his—by now—sixty-five bucks carefully heisted, lifted, pinched and fingered, and by the great Harry, Gimpy was not a-goin' to lay it across the board on those three rejects from a claiming race unless he had a cast-iron assurance that they'd come in across the board, one, two, and three.

I said slowly; *If* I were even thinking of working for Mr. Barcelona, I told him, “I would be very careful never, never to mention it, you know?”

This bundle of The Awful Truth hit him and began to sink in with the inexorable

absorption of water dropping down into a bucket of dry sand. It took some time for the process to climax. Once it reached Home Base it took another period of time for the information to be inspected, sorted but, identified, analyzed and in a very limited degree, understood.

He looked up at me. "I couldn't cuff a hundred, could I?"

I shook my head. I didn't have to veil my mind because I knew that Gimpy was about as talented a telepath as a tall candle. Frankly, between me and thee, dear reader, I do not put anybody's bet on the cuff. I do a fair-to-middling risk trade in booking bets placed and discussed by telepathy but the ones I accept and pay off on—if they're lucky—are those folks who've been sufficiently foresighted to lay it on the line with a retainer against which their losses can be assessed.

On the other hand I could see in Gimpy's mind the simple logic that told him that as a bookmaker I'd be disinclined to lend him money which he'd use to place with me against a sure-thing longshot. If I were to "Lend" him a century for an on-the-cuff bet on a 100:1 horse, especially one that I knew was sure to come in, I might better simply hand him one hundred times one hundred dollars as a gift. It would save a lot of messy bookkeeping.

So the fact that I wouldn't cuff a bet for Gimpy gave him his own proof that I was confirming the fix.

Then I buttered the process.

"Gimp, do you know another good bookmaker?"

"Sure. But you're the best."

"Know on that I'll take a bet from you—on that you don't like?"

"Sure, Mr. Wilson."

"Then," I said, hauling a thousand out of my wallet, "Put this on *our horses* for me?"

He eyed the grand. "But won't Mr. Barcelona be unhappy? Won't that run down the track odds?"

I laughed. The whole world knows the dogs as also-rans, I said. "Gimpy, they put long shots like those into races just to clip the suckers who think there is a real hundred-to-one chance that a 100:1 horse will outrun favorites."

“Well, if you say so, Mr. Wilson.

“I say so?”

“Thankst I’ll pay it back?”

He would not see to that.

Gimpy Gordons cuttled out of my bailiwick almost na deadrun. He was positively radiating merriment and joy and excitement. The note in his hand represented a sum greater than he had ever seen in one piece at any time of his life, and the concept of the riches he would know when they paid off on the Kentucky Derby was vague simply because Gimpy could not grasp the magnitude of such magnificence. Oddly, for some unexpected reason or from some unknown source hidden deep in his past, his mind pronounced it “Darby.”

I returned to my African jungle still bored with the lack of anything constructive. I returned at about the point where Tarzan and Jane were going through that silly, “Me Tarzan, You Jane” routine which was even more irritating because the program director or someone had muffed the perfume that the Lady Jane wore. Instead of the wholesome freshness of the free, open air, Jane was wearing a heady, spicy scent engineered to cut its way through the blocking barrier of stale cigars, smoke, whisky-laden second-hand air, and a waft of cooking aroma from the kitchen of the standard cosmopolitan bistro.

Worse it got worse instead of better. Where a clever effects-director might have started with the heavy sophisticated scent and switched to something lighter and airier as Jane was moved away from civilization, this one had done it backwards for some absolutely ridiculous reason. It finally got strong enough to distract me out of my characterization and I came back to reality to realize once more that reality had been strong enough to cut into the concentration of a hallucination. There was strong woman-presence in my room, and as I looked around found that Tomboy Taylor had come in—just as Gimpy Gordons had—and was sitting in the other hallucination chair. She was probably playing Lady Jane to my Tarzan.

Tomboy Taylor had changed to a short-skirted, low-necked cocktail dress, relaxed with her eyes closed in my hallucination chair she looked lovely. She looked as vulnerable as a soft kitten. Remembering that it’s the soft vulnerability that claws you if you touch, I refrained.

I went to my little bar and refilled my highball glass because swinging through the jungle makes one thirsty, and while I was pouring took a sly peek into Tomboy Taylor’s mind.

She was not hallucinating. She was watching me. And when I made contact with

her, she radiated a sort of overall aura of amusement-emotion covered up her conscious deliberation and blocked any probing by directing me mentally; Make it two, Wally.

I built her one, handed it to her, and then said, “Folks these days sure have forgotten how to use doorbells.

“If you don’t want people coming in, Wally, you should restrict your mindward a little. It’s set to admit anybody who does not approach the door with vigorous intent to commit grave physical harm. When the thing radiates ‘Come in and relax’ is a girl supposed to stand outside twiggling on the doorbell?”

I dropped the subject thinking that maybe I should not have brought it up in the first place. It’s one that can’t be answered by logic, whereas a firm emotional statement of like or dislike stops all counter-argument and I’d made the mistake of questioning my own judgment.

So I eyed her and said, “Tomboy, you did not come here to indulge in small talk?”

“No,” she admitted: “I’m here to keep track of you, Wally.”

“Oh?”

“Our great and good friend wants me to make notes on how clever you are at arranging things?”

“You mean Barcelona, aren’t you?”

“That’s about it.”

I looked at her askance: “And how long are you going to stay?”

She smiled: “Until Flying Heels, Moonbeam and Lady Grace come across the finish line One, Two, and Three at Churchill Downs on Derby Day?”

I grinned at her: “Considering the attrition of turtles, Tomboy, it may be for years and it may be forever.

She held up her glass in a sort of a toast: “Or,” she said, “‘Til death do us part?”

A little bitterly, she said, “One might think that Barcelona doesn’t trust me?”

She replied: “It isn’t a matter of trust. Barcelona holds you among his very closest friends. He is well aware of the fact that you would do anything for him, that you prize his

friendships so highly yourself that you would go to the most desperate lengths to keep it firm and true. Yet she realizes that the simple desire he has recently expressed does place you in a delicate mental attitude. You are likely to feel that he shouldn't have expressed this desire since you feel obligated to fulfill it. He feels that maybe this obligation to maintain a friendship at all costs may cause resentment. Since Barcelona does not want you to resent him, he sent me to be your companion in the hope that I might get some forewarning should your friendship for him begin to weaken.

Just why in this day and age she didn't just come out and say—o think—flatly that she was there to keep me in line, I don't know. But there she was, talking all around the main point and delivering the information by long-winded inference.

Even so, without her Pittsburgh bogie, Tomboy Taylor was a mighty attractive dish, and I knew that she could also be a bright and interesting conversationalist if she wanted to be. Under other circumstances I might have enjoyed the company, but it was no pleasure to know that every grain of her one hundred and fourteen pounds of void was Barcelona's Personal Property. At that moment I realized that I was not too much concerned with what Barcelona's reaction might be. Instead, I was wishing that things were different so that any activity between us would be for our own personal gain and pleasure rather than the order of the fight against one Joseph Barcelona. There was one consolation. Tomboy Taylor had not come equipped with a box of Pittsburgh bogies with which to make my appreciation of beauty throw up its lunch.

She said, sweetly; The better to ensnare you, my dear?

But as she spoke, for just a moment her thick woolly mind shield thinned out enough for me to catch a strange puzzled grasp for understanding. As if for the first time she had been showing how admiration for physical attractiveness could be both honest and good. That my repugnant attitude over her Pittsburgh bogies was not so much based upon the spoiling of beauty by the addition of ugliness, but the fact that the act itself cheapened her in my eyes.

Then she caught me peeking and clamped down a mind screen that made the old so-called Iron Curtain resemble a rusty sieve.

“I'm the one that's supposed to keep track of you, you remember, she said, once more covering up and leaping mentally to the attack.

“I'll remember, I said. “But will you tell me something?”

“Maybe, she said in a veiled attitude.

“Is your boyfriend really interested in cleaning up, or is he interested in watching me squirm out of a trap he set for me?”

“In the first place,” she said, “I may have been seen in Barcelona’s presence but please remember that my association with Mr. Joseph Barcelona has always been strictly on a financial plane. This eliminates the inference contained in the phrase Boy Friend. Check?”

“O.K., Tomboy, that’s the—”

“That’s not only the way I want it,” she said, “but that’s the way it always has been and always will be. Second, I have been getting tired of this nickname Tomboy. If we’re going to be racked this close together you’ll grate on my nerves unless you use my right name. It’s just plain Nora—but I’d like to hear it once in a while.”

I nodded soberly, held out a hand, but she put the empty highball glass in it instead of her own little paw. I shrugged and mixed and when I returned and handed it to her I said, “I’ll make you a deal. I’ll call you ‘Nora’ just so long as you maintain the manners and attitude of a female, feminine lady-type woman. I’ll treat you like a woman but you’ve got to earn it. Is that a deal?”

She looked at me, her expression shy and as defenseless as a bruiser-type caught reading sentimental poetry. I perceived that I had again touched a sensitive spot by demanding that she be more than physically spectacular. Her defenses went down and I saw that she really did not know the answer to my question. It had to do with something that only the achievement of a God-like state—of extreme old age—would change.

This time it was not so much the answer to why little boys walk high fences in front of little girls. It had much more to do with the result of what happens between little boys when the little girl hides her baseball bat and straightens the seams of her stockings when one certain little boy comes into sight. Joseph Barcelona did not admire my ability. He had, therefore, caused me to back myself into a corner where I’d be taken down a peg, shown up as a second-rater—with the little girl as a witness.

And why had Barcelona been so brash as to send the little girl into my company in order for her to witness my downfall?

Let me tell you about Joe Barcelona.

Normally honest citizens often complain that Barcelona is living high off the hog instead of slugging it out in residence at Stateville, Joliet, Illinois.

With their straight-line approach to simple logic, these citizens argue that the advent of telepathy should have rendered the falsehood impossible and that perception should enable anybody with half a talent to uncover hidden evidence. Then since Mr. Joseph Barcelona is obviously not languishing in jail, it is patent that the police are not making full use of their talented extrasensory operators, nor the evidence thus collected.

And then after having argued thus, our upstanding citizen will fire off a fast thought to his wife and ask her to invite the neighbors over that evening for a game of bridge.

None of these simple-type of logicians seem to be aware of the rules for bridge or poker that were in force prior to extrasensory training courses. Since no one recognized psionics, the rules did not take telepathy, perception, manipulation, into any consideration whatsoever. Psionics had not done away with anything including the old shell game. All psionics had done was to make the game of chance into a game of skill, and made the game of skill into a game of talent that required better control and longer training in order to gain full proficiency.

In Barcelona's case, he had achieved his own apparent immunity by surrounding himself with a number of hirelings who drew a handsome salary for sitting around thinking noisy thoughts. Noisy thoughts, jarring thoughts, stunts like the concentration-interrupter playing the first twenty notes of Brahms Lullaby in perfect pitch and timing and then playing the twenty-first note in staccato and a half-tone flat. Making mental contact with Barcelona was approximately the analogue of eavesdropping on the intimate cooing of a lover sweet-talking his lady in the middle of a sawmill working on an order three days late under a high priority and a penalty clause for delayed delivery.

People who wonder how Barcelona can think for himself with all of that terrific mental racket going on do not know that Barcelona is one of those very rare birds who can really concentrate to the whole exclusion of any distractions short of a vigorous threat to his physical well-being.

And so his trick of sending Nora Taylor served a threefold purpose. It indicated his contempt for me. It removed Nora from his zone of interference so that she could really witness firsthand my mental squirming as I watched my own come up and bearing down on me. It also gave him double the telepathic contact with me and my counter-plans—*ah*.

In the latter, you see, Barcelona's way of collecting outside information was to order a temporary cease-fire of the mental noise barrage and then he'd sally forth like a one-man mental commando to make a fast grab for what he wanted. Since the best of telepaths cannot read a man's opinion of prunes when he's thinking of peanuts, it is necessary for someone to be thinking of the subject he wants when he makes his raid. Having two in the know and interested doubled his chance for success.

There was also the possibility that Barcelona might consider his deliberate 'Leak'

to Gimpy Gordon ineffective. Most sensible folks are disinclined to treat Gimpys delusions of grandeur seriously despite the truth of the cliché that states that a one-to-one correspondence does indeed exist between the perception of smoke and the existence of pyrotic activity. Nora Taylor would add some certification to the rumor. One thing simply had to be: There must be no mistake about placing information in Lieutenant Delancey's hands so as to create the other jaw of the pincer that I was going to be forced to close upon myself.

I tried a gentle poke in the general direction of Barcelona and found that the mental noise was too much to stand. I withdrew just a bit and closed down the opening until the racket was no more than a mental rumor and I waited. I hunched that Barcelona would be curious to know how his contact-guy was making out, and might be holding a cease-fire early in this phase of the operation. I was right.

The noise diminished with the suddenness of turning off a mental switch and as it stopped I went in and practically popped Barcelona on the noodle with:

“How-de-do, Joseph.”

He recoiled at the unexpected thrust, but came back with: “Wally Wilson! Gotta minute?”

I looked at the calendar, counted off the days to Derby Day in my mind and told him that I had that long—at the very least and probably much, much longer.

“Thanks you?”

“Me thinks, I replied.

“Wally boy,” he returned; you aren't playing his very smart.

“Suppose you tell me how you'd be playing it,” I bounced back at him. “Tellyou how I have erred?”

He went vague on me. “If I were of a suspicious nature, I would begin to wonder about certain connective events. For instance, let's hypothecate. Let's say that a certain prominent bookmaker had been suspected of planning to put a fix on a certain important horserace, but of course nothing could be proved. Now from another source we suddenly discover strong evidence to suggest that this bookmaker is not accepting a wager on the horse he is backing but conversely is busy laying a wager on the same nag through the help of a rather inept go-between.

I grunted aloud which caused Nora Taylor to look up in surprise. I was tempted to

say it aloud but I did not. I thought:

“In simple terms, Joseph you are miffed because I will not cover your bets?”

“I thought nothing of the sort?”

“Let’s hedge? I love you too, Joseph?”

“Well, are you or aren’t you?”

“Are I what? Going to top the frosting by financing your little scheme to put the pin on me?”

“Now, Wally—”

“Can it, Joseph? We’re both big boys now and we both know what the score is. You know and I know that the first time I or one of my boys takes a bet on any one of the three turtles you like, the guy who laid the bet is going to slip the word to one of your outside men. And you’re going to leap to the strange conclusion that if Wally Wilson is accepting bets against his own fix, he must know something exceedingly interesting.”

“Now, who’s been saying anything about a fix, Wally?”

“The people, I thought bluntly; who have most recently been associated with your clever kind of operator.”

“That isn’t very nice, Wally.”

If it had been a telephone conversation, I’d have slammed the telephone on him. The meaty mouthed soul and his hypocritical jab was making me mad—and I knew that he was making me mad simply to make me lose control of my blanket. I couldn’t stop it, so I let my anger out by thinking:

“You think you are clever because you’re slipping through the little loopholes, Joseph? I’m going to show you how neat it is to get everything you want including your grudging admission of defeat by the process of making use of the laws and rules that work in my favor?”

“You’re a wiseguy?” he hurled back at me.

“I’m real clever, Barcelona. And I’m big enough to face you, even though Phil Howland, The Greek, and Chicago Charlie make like cold clams at the mention of your

name?

“Why, you punk—?”

“Go away, Barcelona. Go away before I make up my mind to make you eat it.”

I turned to Nora Taylor and regarded her charms and attractions, both physical and mental, with open and glowing admiration. I had the precalculated result and it would not have been a whit different if I'd filed a declaration of intent and forced her to read it first.

It eventually satisfied my ambient curiosity about what a telepathic grinding of the teeth in frustration anger would transmit. And when it managed to occur to an unemployed thought-center of my brain that the lines of battle were soft and sweetly curved indeed, Joseph Barcelona could not stand it anymore. He just gave a mental sigh and signaled for the noisemaker to shut him off from contact.

Derby Day, the First Saturday in May, dawned warm and clear with a fast, dry track forecast for posttime. The doorbell woke me up and I dredged my apartment to identify Nora fiddling in my two-bikitchen with ham and eggs. Outside it was Lieutenant Delancey practicing kinematics by pressing the button with a levitated pencil. Instead of shoving on the thing directly (I'd changed the combination on the mindwarder at Nora's suggestion.)

As I struggled out of bed, Nora flashed; “You get it, Wally,” at me. She was busy manipulating the ham slicer and the coffee percolator and floating more eggs from the refrigerator. The invitation and the acceptance for and of breakfast was still floating in the mental atmosphere heavy enough to smell the coffee.

I replied to both of them; “If he can't get in, let him go hungry.”

Lieutenant Delancey manipulated the door after I'd reset the mindwarder for him. He came in with a loud verbal greeting that Nora answered by a call from the kitchen. I could not hear them because I was in the shower by that time. However, I did ask, “What gives, lieutenant?”

“It's Derby Day.”

“Yeah. So what?”

“Going to watch it from here? he thought incredulously.

“Why not? Be a big jam down there.”

“I’ve a box,” he said.

“No... how—?”

“Both the Derby Association and the Chicago Police Force have assigned me to protect you from the evil doings of sinners,” he said with a chuckle. “And I suggested that the best way of keeping an official by you was to visit you at the scene of the alleged intended crime and to serve that end they provided me with a box where we can all be together.

I tossed; “And if we do not elect to go to Kentucky?”

He chuckled again. “Then I shall have to arrest you.”

“For what?”

“There is an old law in the City Statute that declares something called Massive Cohabitation to be illegal. You have been naughty, Wally.”

Nora exploded. “We havenot!” she cried.

Lieutenant Delancey laughed like a stage villain. “The law I mention, he said after a bit of belly-laughing, was passed long ago before telepathy and perception were available to provide the truth. At that time the law took the stand that any unmarried couple living together would take advantage of their unchaperoned freedom and if this state of cohabitation went on for a considerable length of time—called Massive but don’t ask me to justify the term—the probability of their taking pleasure in one another’s company approached one hundred percent positive probability.

“Now this law was never amended by the Review Act. Hence the fact that you have been chastely occupying separate chambers has nothing to do with the letter of the law that says simply that it is not lawful for an unmarried couple to live under the same unchaperoned roof?”

I came out of the shower towel-drying myself and manipulating selection of clean clothing out of the closet in my bedroom.

“The law,” I observed, “is administered by the *Intent* of the Law, and not by the Letter, isn’t it?”

“Oh, sure,” he said. “But I’m not qualified to interpret the law. I’ll arrest you and bring you to trial and then it’s up to some judge to rule upon your purity and innocence of criminal intent and freedom from moral taint or turpitude. Maybe take weeks, you know?”

“And what’s the alternative?” I grunted.

“Flight,” he said in a sinister tone as I came out of my bedroom putting the last finishes on my necktie: “Flight away from the jurisdiction of the law that proposes to warp the meaning of the law to accomplish its own ends.”

“And you?”

“My duty,” he grinned, “is to pursue you.”

“In which case,” observed Nora Taylor, “we might as well fly together and save both time and money.”

“That is why I have my personal sky-buggy all ready to go instead of requisitioning an official vehicle,” he said. He scooped a forkful of eggs and said, “You’re a fool, Wally. The lady can cook.”

I chuckled. “And what would happen if I hauled off and married her?”

“You mean right there and now?”

“Yes?”

“Sorry. I’d have to restrain you. You see, you couldn’t get a legal license nor go through any of the other legal activities ergo there would be a prima facie illegality about some part of the ceremony. Without being definite as to which phase I would find it my duty to restrain you from indulging in any act the consummation of which would be illegal!”

Nora said in pseudo-petulance, “I’ve been damned with very faint praise.”

“How so?”

“Wally Wilson has just said that he’d rather marry me than go to the Kentucky Derby with you.”

Lieutenant Delancey said, “I urge you both to come along. You see, my box is also being occupied by an old friend of yours. I managed to talk him into joining us, and with reluctance he consented.”

“I’m a mindreader,” I said. “Our friend’s name is Joseph Barcelona?”

“As they say on the space radio, ‘Aye-firm over and out!’”

Barcelona was there with two of his boys. Watching them were four ununiformed officers Nora and I and the lieutenant were joined later by Gimpy Gordon who might have been radiating childlike wonder and a circus-air of excitement at actually being at the Derby. He might have been. No one could cut through the constant maddening mental blah-blah-blah that was being churned out by Barcelona's noisemakers.

He greeted me curtly, eyed Nora hungrily. He said: "You look pretty confident, Wilson?"

"I can't lose," I said.

"No? Frankly I don't see how you can win?"

I smiled: "Without mentioning any names, Joseph, I feel confident that the final outcome of this racing contest will be just as you want it to be. I shall ask that no credit be given me, although I shall be greatly admired by our mutual friend Miss Nora Taylor who will think that I am truly wonderful for making you happy. And it is more than likely that she may marry me once I have shown you, and she, *and* Lieutenant Delancey, that I am a law-abiding citizen as well as a man who values friendship enough to do as his old pal Joe Barcelona desires."

"It's going to be one of the neatest tricks of the week," he said.

"It will be done by the proper application of laws," I said modestly.

Behind us, Gimpy Gordon, light-fingered, had half a dollar out of Delancey's pocket and was attracting the attention of a hot dog peddler by waving his program. Some folks nearby were eyeing Barcelona's noisemakers angrily but making very little visible protest since they identified him. Nora was reading her program and underlining some horses. The whole place began to grow into a strange excited silence as the track board began to go up. It was to be a nine-horse race, and at the top of the list were three—count them—three odds-on favorites:

- | | |
|--------------------|-----|
| 1. Murdock's Hoard | 1:2 |
| 2. Mew's Jet | 3:5 |
| 3. Johnny Brack | 5:7 |
| 4. Pipers Son | 8:5 |
| 5. Daymare | 3:1 |
| 6. Helen Ooy | 8:1 |

And then, of course, there were our three mud turtles which must have been

entered by someone who thought that the Kentucky Derby was a claiming race and who hoped that the LePages Glue people would make a bid for the three mounds of thoroughbred horse flesh that dropped dead in the backstretch:

- 7. Flying Heels 100:1
- 8. Moonbeam 250:1
- 9. Lady Grace 500:1

The rack hadn't hit the top of the slide before there was a sort of mass-movement toward the mutuel windows. The ones who didn't go in person tried to hurl betting-thoughts in the hope of getting there early and failing; this they arose and followed the crowd. Slowly the odds began to change; the figures on our three placers began to rise. There was very little activity on the other six horses. Slow-thinking Gimpy Gordon started to get up but I put out a hand to stop him.

"But the odds are dropping, he complained.

"Gimpy," I said, "they pay on the final listing anyway. But would you like a tip?"

"Sure," he said nervously.

"My tip is to keep your cash in your pocket. Put it on the nose of some horse and it's likely to get blown away by a high wind."

The odds were changing rapidly. What with psionic information receivers and trend predictors and estimated anticipators, the mutuel computers kept up with the physical transfer of funds, figured out the latest odds, and flipped the figures as fast as the machinery could work the dials. In no more than a few minutes the odds on the three placers looked more like the odds on horses that stood a chance of winning.

Barcelona looked at me: "What did you do, wise guy?"

"Who... me? Why, I didn't do anything that you did not start—except that maybe I was a little more generous.

"*Spiel!*" he snarled.

"Why, shucks, Joseph. All I did was to slip good old Gimpy Gordon a tip."

"How much?"

"Just a lousy little thousand dollar bill."

“A grand For what, wise guy?”

“Why just for telling me what horses you picked for the Derby?”

Barcelona looked at the odds on his horses Flying Heel had passed even money and was heading for a one-to-two odds-on. The other platers were following accordingly.

“And what did you tell Gimpy Wilson?”

“You tell him, Gimp; I said.

“Why, Wilson just said that we should ride along with you, Mr. Barcelona, because you are such a nice guy that everybody works awfully hard to see that you get what you want.”

“There’s more!” roared Barcelona.

“Only that I shouldn’t mention it to anybody and that I shouldn’t place my bet until the mutual windows open because if I did it would use up the odds and make you unhappy.” Gimpy looked at Barcelona’s stormy face and he grew frightened: “Honest, Mr. Barcelona, I didn’t say a word to nobody. Not a word! He turned to me and whined plaintively; You tell him, Mr. Wilson, I didn’t say a word!”

I soothed him: “We know you didn’t, Gimpy.”

Barcelona exploded: “Ye Gods! he howled: They used that gimmick on me when I lost my first baby tooth: ‘Don’t put your tongue in the vacant place,’ they said, ‘and don’t think of the words *Gold Tooth* and it’ll grow in natural gold!’”

As he spoke the odds on Flying Heel changed from a staggering One-to-Eight to an even more staggering One-to-Ten. That meant that anybody holding less than a ten-dollar bet on such a winner would only get his own money back because the track does not insult its clients by weighing them down with coins in the form of small change. They keep the change and call it “Breakage for any amount over an even-dollar money.”

Delancey said to Barcelona: “You have had it, Joseph.”

Barcelona snarled: “Put the big arm on Wilson here. He’s the fast man with the big fix.”

“Wilson didn’t fix any race, Joseph. He just parlayed some of the laws of human nature into a win for himself and a loss for you.”

“Now see here—what is this guff about human nature?”

“Well, there’s the human desire to ride with a winner and the human frailty that hopes to get something for nothing. To say nothing of the great human desire to be ‘On the Inside track or ‘In the Know’ so that they can bet on the ‘Sure Thing. And so,” said Delancey; “we’ve about twenty thousand human beings full of human nature holding tickets on your three dogs, Joseph. They bet their money because the ‘Inside Dope’ said that the big fix was in. And I can tell you that what twenty thousand people are going to do to this ‘Inside Dope’ when their nags run last is going to make Torquemada ask permission to return to life for a Second Inquisition this time with extra sensory tortures. He turned to me as Barcelona went pale. “Wally,” he asked; “want to bet that someone doesn’t remember that old question of whether it is possible to break every bone in a man’s body without killing him?”

“I’d be a fool to cover that one,” I said. “But I’ll play ever money and on either side of whether Joseph dies or lives through the process.”

“Stop it!” screamed Barcelona. He grabbed me by the arm. “Wilson,” he pleaded; “Can you? Stop it, I mean? Can you fix it?”

“Sure,” I said.

“Legally?”

“Yep. But it’ll cost you.”

“Just money?”

“Just money—admitting that you lost, Joseph!”

“I lose,” he said. “Go ahead!”

“O.K., Joseph. Now, let’s be real honest. Those three long shore turtles belong to you, don’t they?”

“Yes.”

“And right now you wouldn’t even want to see them run, would you? In fact, you really want that they shouldn’t run?”

“Yes.”

“All right, Joseph Callof you moise makers and to the Head Steward a thought. Tell him you are scratching your entries.”

“But that won't stop the people from losing their money.”

“Natch. So next you broadcast a thought that because of this terrible, grievous error you are refunding their money out of your own pockets since the Track Association will not be obliged to do.”

He turned to his pair of rattleheads and snarled, “All right. Shut up!”

A mental silence fell that was like the peace of rest after a busy day. As Barcelona was tossing his cancellation at the Steward and preparing to make a full and plausible explanation to the gambling instinct of the Kentucky Derby crowd, I considered the matter carefully:

“Let's see,” I thought. “He wants em not to run and so he can't complain to me if they do not. I didn't fix the race, so Lieutenant Delancey can't accuse me of that. That makes everybody happy and I win!”

A small hand stole into mine: “How about me, Wally?” Nora asked sweetly.

I looked down at a thionite dream come true by the glow in her eyes that admired no one else but me. “You're mine,” I reminded her, “until Flying Heels, Moonbeam and Lady Grace win One, Two, and Three at the Kentucky Derby.”

“Or,” she said mischievously, “till death do us part!”

I was instructing her how to respond to a kiss as a lady should respond when about two hundred thousand noisy, exuberant humanatures yelled and radiated and thought: “They're Off!”

But they didn't mean us. They were watching a bunch of long-faced dayburners chasing one another around a dusty track.

Humanature ain't changed a bit. It's just more complicated in an extrasensory sort of way.

THE END

<<Contents>>

* * * *

Next came another change. Emerson vacated their offices in New York, and moved to a factory in Jersey City, and there I was traipsing from Jackson Heights, through Manhattan and into the north end of New Jersey. We began to look around. The word came back that Inga and Fletcher Pratt had space vacant down in their weekend place in Highlands, on the Jersey shore, on a hill that overlooked the Shrewsbury. There was a place, the “old” had been the first place, built about 1820, separated from the “new part” added to it at the Civil War.

Living there was fine. In fact, so fine that it took all my writing down the hatch. For I went on a commuting trip that left Highlands about 7:30, and didn’t return until about two hours later.

And the weekends? Fletcher and Inga, with a longtime friend named St. Leger Lawrence, used to arrive late Friday night, and by noon on Saturday, their weekend guests would begin to arrive. That took care of weekends, the whole bunch would leave following late luncheon.

Then, with space available and the summer approaching, it became expedient for the Campbell girls to stay more than one day; when they had time, they could stay for a week. With more communication with John when they brought the girls down, and when he returned them after the visit.

The Pratt place on the shore had been known for some time as “The Ipsey Wipsey Institute,” for an amusing reason. It started during the war, before they owned the place. It follows:

As a test—don’t ask me for what, or why—the military wanted to check-test the immediate memory of the testee. This gave them a problem; there were several various tricks and routines that serve to heighten one’s immediate memory, and the military wanted to find out the un-heightened memory. That is, to separate one with quick immediate memory from those who used some stunt.

Someone devised a routine in which the memory-filing stunts went askew because the thing was gummed up with sense and nonsense, and adjectives that didn’t apply, and nouns that did not all make literary sense. The tester would start with the first line, and the testee would repeat it. Then the tester would state the second line, but the testee had to go back to the beginning and run through the whole, adding that last line at the end. The r

of errors went down as the score—and I have only known one, a young fellow, who went through it without once pausing or losing his way:

“One duck.”

“Two hens.”

“Three squawking geese.”

“Four corpulent porpoises.”

“Five Limerick oysters.”

“Six pairs of Don Alphonso tweezers.”

“Seven hundred Macedonian warriors in full battle array.”

“Eight golden crowns for the ancient, sacred crypts of Egypt.”

“Nine lymphatic, asthmatic, peripatetic old men on crutches.”

“Ten revolving heliotropes from the Ipsey Wipsy Institute.”

(I may have slightly misquoted it, because it's been twenty years. But any misquotation is honestly slight.)

Fletcher and Inga moved to the Ipsey in the spring of 1955, and that took more of my free time. Somehow I did manage to write a bit, especially during the winter, since one hardly goes a-boating on the Shrewsbury. George Washington could stand up in a boat, pushing large ice cubes aside, but not George O. About once a month, I'd stay in New York to meet Fletcher, to attend one of the dinner meetings of the “Trap Door Spiders.”

It began just after the war. Fletcher fancied himself a gourmet cook, and managed to do fairly well except that he had the great fear that one of his roasts might get within a short distance toward “medium rare.” With a bunch turning up for weekend dinner, Fletcher went to visit a butcher in New York who specialized on rarities; for example, the whole buffalo roast. These were frozen; the call for such is low so that keeping the buffalo unfrozen would have been ridiculous. Fletcher used to put it in the oven still frozen, and many of us we've eaten buffalo roast so nicely done red and rare that there were ice crystals in the center.

In any event, the original idea of the Trap Door Spiders was to create, first, a dinner-meeting society in which each member, in taking his turn, provided a table different than usual, and preferably symbolic. This may be difficult to understand, but one of W

Ley's meetings presented the customary dinner that a German burgomeister might give to welcome a citizen to become a personal friend. Second, the Trap Door Spiders had been created to provide a masculine society. Not that we all weren't cheerfully married and enjoyed the company of women, except one who wasn't cheerfully married, and whose woman none of the rest of us enjoyed. It was to get him out of the house once in a while where we could talk without interruption.

At this moment, Isaac Asimov's series about the "Black Widowers" that turn up in *Ellery Queen's Mystery Magazine* are based on characters from the Trap Door Spiders. I won't tell you who's for who, but we know, don't we, Ike?

But I will tell you one incident. Part of the gimmick was to have the *oberspinnenführer* provide a guest whom we questioned by starting to ask him to "justify his existence." One fellow, after long questioning, admitted that he was the adoptive father of a hippopotamus. Seems that he'd given one as a gift to some zoo in the midwest. I was hailed because (aside from the boss who helped me, and who is now long dead) I claimed to be the only one who has ever had the opportunity and the chance to throw a standard upright piano out of a fourth-floor building onto a concrete courtyard. (The *Chord!*)

This time I was off on a business trip, and arrived at the Pratt apartment just in time to see the whole bunch call it off and head for home. In the course of events, Doc Clark had gone to sleep on one of the sofas. It was, say, midnight. I'd flown and taken an airplane and I wanted some conversation and a drink. Fletcher agreed that he wasn't tired either, so we went pub crawling through what Fletcher used to call the "Hitchcock Circuit."

We returned about 2:00, to find that Doc was not only still asleep, but that he'd removed his shoes and his trousers. Now, Fletcher and Inga had moved, but they were maintaining the apartment, thus we were there without Inga, who frequently used her services when one of the fashion outfits wanted a quick study for an ad. So Fletcher and I filled Doc Clark's shoes with cooking sherry and, because Inga had taken her personal belongings down to the Ipsey, we found an oil-paint tube of vermilion, and decorated the trousers.

Then we hit the sack—and locked the door with a chair under the knob, in case Doc should break the lock. Well, he didn't, but he sure tried.

* * * *

Over in the other alley, Fred Pohl and Lester del Rey were living in Red Bank, not very far from Highlands. They were always invited to the weekend dinners, and on one of those evenings one of the houses across the Shrewsbury (in Sea Bright) caught on fire and went up in a blaze.

We watched from the Ipsey, with fire department pumpers arriving from here and there to back up the Sea Bright department. Each pumper arrived with a pumper-hose which they tossed into the river as the source of water.

Fred said to me, “George, shouldn’t you think that by now, after a couple of thousand years of simply pumping water on a fire, that there ought to be a better way?”

I agree. There ought to be a better way, and if there were, it would have been invented well before now. As I pointed out to a critic who objected to some doodad in my stories because “it wouldn’t work,” that I hadn’t been inventing the doodad, for if it *would* work, I’d hardly be scribbling science fiction about it. Since there hasn’t been a better way to control a gone-off fire—oh, yes, those fire foam tankers they use at airports work fine, but the problem isn’t just killing a strong local blaze, part of it is soaking down the neighborhood to prevent the blaze from taking off—the best I could do is to write a story about fire-fighting in the future.

Which I sold to Fred Pohl, then edited in ~~the~~ *Galaxy* magazines. It’s called—

Fire, 2016!

I

The scene was eerie, as ugly as fire at night in a dwelling has always been and always be. The searchlights of the fire department gave no feeling of comfort; rather, they added the conflict between man and the element of fire. The dancing flames threw their yellow flickerings on the firemen, as they raced back and forth arranging things, making observations, calculating how this fire was to be stopped.

It was not done in silence!

“Get that hose line in there!”

“Get me a three-inch wye!”

“Water ready.”

“Pumper running!”

“Steady, now. Steady! Got her set?”

“Right!”

“Okay, give her the works!”

The hose bucked as the high-pressure water hit the nozzle. It roared forth, arched toward the blaze, and crashed through a window. The color of the smoke began to change immediately, as the dancing flames within the house fought their losing battle. No more minutes later, the stream of water was cut. The firemen went into the house with hand extinguishers to kill the few remaining sparks and to quench smouldering embers. Now there was left was the dirty clean-up job, and the task of packing the fire equipment and returning to the station.

Fire Chief Mooney looked at the rookie beside him. “Still want to be a fireman?” asked.

“More than ever,” said the rookie, whose name was Bill Lansing.

“Did this one give you enough to write your thesis?” asked the chief, pointing at the ruined home with his thumb.

“I’m not certain. Could be,” replied Bill.

“Well, if you’ve an idea, let me know. If it’s good, I can tell you to go ahead. If it isn’t, it can save you the trouble of trying something foolish,” said Fire Chief Mooney.

“Chief, the process of adding something significant to the field of fire-fighting isn’t very easy. On the other hand, it isn’t necessary to know the answer before you can point out that a problem does exist, or that there is room for improvement.”

“This is true; of course, if you do a thesis on those lines, it will get you your appointment if it’s good enough. But it’s not the best way, nor the surest way.”

“I know. But what can be added to the field of fire fighting in the year of twenty-sixteen?”

“You’ll have to add something, or you won’t be appointed.”

“I know. I didn’t mean that nothing could possibly be added, chief. What I meant was that a rookie can’t very well increase the scope of knowledge. Not when experienced, dedicated men have been working to advance the science. But I can point out one rather

odd area, Chief.”

“Go on.”

“Chief, do you realize that here in twenty-sixteen, we’re still fighting fire in the same way that they did in the day of Julius Caesar? We pour water on it. All that’s changed is more efficient ways of delivering the water.”

* * * *

The fire chief smiled. “Not quite. Back in the day of Julius Caesar, they had private fire-fighting concerns, run as a business. If you were a customer of the Mooney Fire Company, and your neighbor’s house caught fire, we wouldn’t touch it unless he were a customer, too. We’d go out all right, just to keep the fire from spreading to your house; we’d let your neighbor’s house burn to the ground. And if your neighbor’s fire company happened to be a bitter rival of ours, we might even start a street fight.”

“That’s not a matter of fire-fighting,” objected Bill. “It’s just organization.”

“Of course. But I did want you to understand that things are not exactly the same as they were a couple of thousand years ago.”

“Other things have changed, too,” said the rookie thoughtfully. “They used to race through the streets carrying buckets, because they hadn’t invented the pump. The gizmo Archimedes invented wasn’t much of a pump, sir. It was more of a water lifter. I grant that a mobile steam engine, with its pump, was a vast improvement over the hand pump... which was superior to the bucket brigade. Then the gasoline engine replaced the horses, and a high-pressure rotary pump was driven by the same engine when the vehicle got to the scene. But the same argument still stands, Chief. For all of our modern science, we still pour water on the fire.”

“I can point out one other item that’s changed.”

“Yes?”

“The nature of the fireman, Bill.”

“Yes?”

“A long time ago; in fact, it was a long, long time ago, your fireman was not of an admirable, civic-minded character. The work was rough, and largely physical, and its nature was such that it attracted the kind of man who did not mind sitting on his duff playing checkers for days on end, waiting for the alarm to ring.”

“That must have been a long time ago.”

“It was. Then came a breed of a better cut. These men held jobs and public office and instead of a man joining the fire department because the job was easy, a man was accepted by his local fire department in about the same way that a candidate was accepted for a lodge or a freshman to a fraternity. This was the beginning. Fire-fighting operations took a sudden upswing; the men took pride in their equipment and in their work. It was honor, and they accepted it as such. They were not paid.

“But the standard was set, and the results were visible. And so now we have the present system of rewarding deserving citizens by appointing them to the fire department and paying them an honorarium. This makes it possible for a truly talented man to be an artist or a writer, or to study for advanced degrees, or to devote himself to civic betterment.”

“This much I know.”

“Then you also know that the mere proclamation that you propose to be a deserving citizen isn’t going to make you a scholar.”

“I do.”

“And I’m also afraid that your criticism isn’t going to get you very far. I doubt that merely pointing out that we’re still dousing a fire with water despite our vaunted science is going to do it, Bill. The criticism may be valid, but in this case, I think someone is going to pose the question, ‘If, in two thousand and more years, no one has discovered anything more efficient, isn’t it just barely possible that there isn’t anything more efficient?’”

“Thomas Edison had a slogan,” said Bill. “There’s a better way to do it—find it!”

“Edison wasn’t always right,” objected the chief. “And he could have made a vast improvement on his slogan by starting it with the words, ‘There’s a better way to do it—find it!’”

* * * *

||

Bill Lansing’s thesis was thorough, but its scientific excellence was marred by a strong element of emotion. His theme, that the basic improvements in fire fighting were only to deliver a larger volume of water in a shorter time, concluded by suggesting that other substances and processes were ignored simply because water was so cheap and so plentiful that it had to be paid a man to rack his brains to improve upon it. It was, he said, plain laziness.

Fire Commissioner Frank T. Edwards arose at the end of Bill Lansing's treatise and asked, "I presume that you are aware of the fundamental principle of extinguishing a fire with a young man?"

"Of course."

"Not 'of course.' You haven't proved that you know it at all."

With a labored, overly patient tone of voice, Bill Lansing replied, "Water is the top product of combustion; it can't be oxidized any further. Technically, it is the ultimate as such, it smothers the blaze by keeping out the oxygen of the atmosphere. Second, the specific heat of water—that is, the number of calories required to raise the temperature of one cubic centimeter of water by one degree centigrade—is exceeded only by hydrogen. The on-pour of water therefore reduces the temperature of the burning stuff until the latter is below the kindling point."

"Then you will grant that insofar as its smothering and cooling properties are concerned, there is nothing better?"

"This I concede," smiled Bill. "Since the substance with the highest specific heat is hydrogen, second-best water indeed becomes first-best."

"Then what is your point?" demanded the commissioner. "If water is the best, what better can you want?"

"My father," said Bill, "was a fire claim adjuster. I learned some things from him—for example, that the damage caused by water generally exceeds the damage caused by fire, a fact for many hundreds of years."

"Your father was hardly fool enough to suggest that we avoid the water damage by letting the fire run on," snapped Commissioner Edwards. "What's your point? Do you want someone to invent or discover some substance that will do a better job?"

"I am no chemist," said Bill. "But I do know that specific heat is not the entire answer to the problem of heat absorption. There's the heat of conversion, for example. When the temperature variation in the definition of specific heat happens to span the freezing point, the amount of heat required to thaw a gram of ice into a gram of water—or boil water into steam—is considerably higher than the specific heat—maybe a thousand times greater."

"And you propose to use this sort of thing?"

"It's already in use," said Bill. "When the water hits a hot fire, the first cooling is caused by the steam that is produced."

when the heat boils the water into steam.”

“And so we’re right back to the same argument. We use water, just as they did in Rome, because it is the best.”

Lansing shook his head. “There are many substances with a higher heat of conversion.”

“Yes,” sneered the commissioner, “and I’ll bet that when you look them up, you’ll find that they are corrosive as the devil, or that their fine high heat of conversion takes place either at minus two hundred, or at plus fifteen hundred. But let’s abandon that for a moment. Just why are you so all-fired interested in becoming a fireman?”

“I thought we were here to evaluate my thesis,” objected Lansing.

“Young man, you want an appointment to the Academy of Fire Fighters. You’ve received your proper degrees in the humanities and the sciences, and you’ve produced a thesis of dubious worth. I—”

“Of dubious worth?” exploded Bill Lansing.

“Yes,” said the commissioner calmly. “I’d have said totally worthless if I were as objective of my facts as I am of my opinion. This is just a simple admission that I do not know all there is to know about everything. Therefore it may be possible that your thesis has a trace of merit; now drop it, and let’s examine your motives.”

“You can’t!”

“Yes, I can: I have that prerogative as fire commissioner. I said ‘examine,’ not ‘question.’ If your motives are about reproach, a strong mark will be made in your favor.”

“All right. Go ahead.”

“Isn’t it true that all you want is the honor and glory of having been appointed?”

“The honor exists, sure. But there’s more. I am ambitious. I believe that I can go on to become a member of the Academy of Fire Fighters.”

“And, maybe, a little ambitious for Gloria Mooney’s favor?”

Lansing tensed, then controlled himself and said easily, “Sir, a rather staggering proportion of all male effort is undertaken to make an impression on a girl.”

“All right, I grant your argument. Ambition is by no means wrong.”

Commissioner Edwards paused, then said to the assembly, “Gentlemen, I move we do not accept this thesis, on the grounds that it offers nothing constructive. However, in recognition of his honesty in telling of his ambition instead of mouthing some platitude about service and civic consciousness, I move that Bill Lansing be retained as a rookie and that he be urged to attack his appointment thesis from another angle.”

* * * *

While fire fighting was still a matter of flooding the blaze with water, as it had been for several thousands of years, the city of twenty-sixteen and its component parts were quite different than the city of nineteen-sixty.

For example, the word “dwelling” was still used; but it did not define a single-family structure situated on a plot of vacant ground. In even the least crowded areas of the megalopolis that stretched from Boston to Washington, the dwellings were low structures seldom more than three stories high. They were constructed with an economy of building materials by the clever process of using a single wall between the adjoining structures instead of the wastefulness of erecting separate walls for each building.

In the more densely populated areas, the tight cores of the original cities, dwellings were veritable cliffs. The walls of the apartment buildings rose sheer from the edge of the sidewalk, and each rectangular city block carried its own. Above the city, there was a thrumming noisy population of helicopters. And below, the only reason traffic moved at all through the streets was because only essential vehicles were permitted in the dense knots.

Had the Sleeper of H. G. Wells awakened, he would have found at least two things missing from his story. First, moving sidewalks did not hurl pedestrian traffic along a series of belts running at different speeds. There were no moving sidewalks. Below the city, in the subways, there were moving cars that closed tight, bumper-to-bumper, as they crawled along the station platform, then stretched out into headlong flight to the next station. It was not a case of the quick or the dead, because he who lost his footing was merely thrust aside—or, if he fell, elbow, knee or anatomy was mildly abraded as he was moved to the side. Second, the clever little advertising gimmick of projecting names and slogans on the sidewalk couldn’t be done... because the sidewalks were elbow-to-elbow, cheek-to-jaw and nose-to-spine with those people who did not take to the subways.

Within the individual dwelling units, things had not changed greatly, but enough to make a difference. Wooden furniture was still present, but mostly in the form of a solid plastic or foundation for fabrications with a simulated wood-grain surface. Natural fabrics were plentiful, but the synthetics were so numerous that a story was told about using an alphanumeric computer to compose fetching names for them.

One thing had hardly changed at all: the people.

Oh, the faces and the figures of twenty-sixteen were not those of nineteen-sixty- by a factor of seventy-six years. But three generations isn't enough to detect a trend in evolution.

Boys, for example, still called on girls—especially when they had come to a turning point in their careers...

So Lansing said, "I failed, Gloria."

"But they kept you on as a rookie, didn't they?"

Bill Lansing looked gloomy. "Sure, but that's sort of like handing out praise by writing it in Sanskrit and sealing it in the cornerstone of a granite building."

"I still say you've got another chance."

"Gloria, how often do they have fires these days?"

"Why, I don't really know."

"I've been a rookie for two years. I've been to one fire. Things simply do not go *Whoosh!* at the touch of a spark any more."

"But doesn't that give you loads of time to study?"

"Sure," he replied gloomily. "But study doesn't solve the problem. I've read the detailed account of every fire in the entire megalopolis for the past fifteen years. It's not enough. Nothing gives you firsthand knowledge like being on the actual scene of a fire where you can watch them work, see how they go about it, and observe the results. So where does this leave me?"

"Well, outside of being disappointed, Bill, just where do you think it leaves you?"

"I know where it leaves me," he said. "I'm the son of a fire claim adjuster."

"Is that so bad?"

"Bad enough so that your father gave me a rough time until I made the rookie grade and was on my way toward being a real fireman. Now one false step and I'll be the son of a fire claim adjuster again. And believe me, Gloria, you know as well as I do that the only thing worse than being the son of a fire claim adjuster is to be the adjuster himself."

"Oh, now, it isn't that bad."

“Isn’t it? Does your father know I’m here?”

“He didn’t say anything about not seeing you, if that’s what you mean.”

“Gloria, if you want to find out the degree of my welcome as a failed-to-make-it candidate for the Academy of Fire Fighters, let’s you and I go and announce that we’re about to go dancing, or to a show, or something similar.”

“All right. Let’s,” said Gloria.

* * * *



They found Gloria’s father in the family recreation room watching a comedy show. Here at home there was nothing to set him off as a fireman except for the traditional red suspenders which were, like a uniform, the insignia of his position; the silver buckles indicated that he was an official of the Academy, and the four tiny shields embossed on the buckles denoted his rank as fire chief.

He looked up and blinked as they entered hand in hand. A fleeting frown crossed his face, but it came and went so fast that no one, not even Bill Lansing, could be certain that the frown was not caused by the change in eye-focus from the bright viewing screen to the couple walking through the diminished light.

Gloria said, “Bill and I are going dancing, Dad.”

“Dancing?”

“Yes. The gang’s throwing an impromptu at the Silver Garden.”

“Oh. The gang.”

“Yes.”

“All right. You sounded as though you intended to go alone.”

Bill Lansing bristled slightly. Gloria caught it first and squeezed his hand. He subsided without saying anything, and Gloria said gently, “Why, Dad, we’re all big enough to be out alone. Even after dark.”

Fire Chief Mooney looked at them and nodded slowly. “That isn’t exactly what I meant,” he said. “Jim Potter said last night that he was getting an idea for his thesis that

was going to work out in model form. And he said that if he finished it, he'd be over to it to us this evening. But if the gang is going to be at the Silver Garden, he will too. Tell I'm quite interested in his model, Gloria. Jim has a real head on his shoulders. Like fat like son, I always say."

"Yes," said Gloria simply.

Gloria's father looked at Bill. "And how is your program, Bill? Got any new ideas?"

"Nothing clear yet. I've a couple of ideas that need some study before they're even presentable as possible ideas."

"Good. Come around any time you have something to offer."

Outside, on the crowded sidewalk, they were part of the surrounded-alones that make up the population of any city. Had they stood on that same location fifty years earlier they would have been truly alone, in the middle of a tract of land too rough for farming and not yet needed for dwelling space. Then they could have counted the dabs of sky-glow marked the location of the larger towns hidden by the slightly rolling hills that someone dubbed the Watchung Mountains of New Jersey.

But they were not fifty years earlier. Two generations of dwelling construction had changed the face of the Earth. The first had cleared out the thin forestation and dotted the landscape with a polka-pattern of rubber-stamp houses built by the production-line process. The first crew dug for the foundation, the second crew poured it. A third removed the dirt and installed them forward of the line, while the next crew began to put up stringers and studs. When they moved along, the sheathing came, the plumbers and the electricians installed their hardware, the flooring was laid, and the walls were plastered, and the roof slapped on. A coat of paint went next, followed by the real estate salesmen and their clients.

And while the foremost was still digging holes for more foundations, miles behind them the sheriff was serving foreclosure notices on those whose payments were delinquent.

The second generation of building pushed the Watchung Mountains around until the terrain was level, and then erected row upon row of the two- and three-story dwellings, out in a closed formation of rectangles. This was the low-density population of the central megalopolis.

* * * *

Gloria and Bill were part of the surrounded-alones. When the density of population forced man to breathe his neighbor's exhalation, aloofness takes the place of privacy. It becomes a studied thing to not-observe; let some outrage take place, and the people who stop to look are from a distant part of the city, while the folks next door pass by with the talent of a v

who can walk through a crowded restaurant without letting anyone catch his eye or atte

And so Gloria and Bill could talk as if they were alone, and he said, "Well, that's about it, isn't it?"

"Now what do you mean by that?"

"There's no gang dance tonight. And that Potter creep isn't going—"

"Now, don't you go calling Jim Potter a creep. He isn't."

"I suppose he's a fine fellow with grace, charm, money, an interesting mind, sex appeal—and has the right to wear his father's red suspenders."

"Don't be bitter, Bill."

"What else can I be?" he demanded. "Jim has a real head on his shoulders. Like father, like son, I always say. Come around ~~you~~ ~~have~~ something to offer."

"Now. Bill!"

"That isn't all, Gloria. He back-watered fast after that glum 'You sounded as if you were going out alone' line of his, but what is he going to say when his favorite, Jim Potter turns up and declares there's no impromptu dance tonight? He's going to accuse the us of lying so that we could go out and canoodle somewhere."

"Don't worry, Bill. There are ways of coping with that."

"For example?"

"By proving that I'm not playing favorites."

"In other words, you're going out with Jim Potter."

"Now you see here, Bill Lansing! I've got every right to go out with whom I choose. You have no more right to object to Jim Potter than he has a right to object to you, and neither of you has a right to object to anybody else. Now, that's not only clear, but it's a logical and sensible—"

Bill put out a hand and caught her elbow, just as she was about to step off the curb to cross the street.

The traffic light had flashed red, and the cross-traffic fought its way into the intersection without waiting for the last of the running traffic to clear. Bumper to bumper

curb to curb, everything came to a halt. Then came a crescendo of horns. The horns of the intersection cleared. There was a flurry in the vehicular pattern as one driver tried to make his way from the middle lane to make a turn; he didn't make it, but with luck, perseverance, and the unlikely possibility of meeting a polite driver who would give way, he might manage to turn in the next couple of blocks.

"Okay," said Bill, disconsolately replying to her argument. "But right now what do we do? There's no dance at the Silver Garden."

"So we'll walk there, find that it isn't open, and then turn over on March Street and see if we can get tickets for *Sister Love*." She hugged his arm. "It isn't a big event, but a girl can paste theater tickets in her diary, can't she?"

"I guess."

"So we were disappointed about being mistaken about the dance, but it worked out even better because we saw that big new hit."

"If we can get tickets."

"We'll get tickets," she promised. "They wouldn't dare refuse the daughter of Fire Chief Mooney."

* * * *

IV

There was a murmur of voices when Bill opened the door with Gloria's key. Gloria said, "Maybe you'd best not come in, Bill. That father of mine—he's still up."

"The other is Jim Potter. He's still here. Look," he said hoarsely. "I'm not going to leave with Jim Potter in the house waiting to get you alone!"

The hallway door before them opened to display Fire Chief Mooney, with Jim Potter in the background. Gloria's father used the voice that he'd found helpful in making himself heard over the crackle of open flames, the shouts of hard-working firemen, and the roar of newly arriving fire equipment. "And how was the dance at the club that's closed? Find the floor crowded? So just what have you been doing, you two?"

Gloria replied, "Now father, don't take that tone—"

"I'll take any tone I want to in my own home! What have you two been up to?"

"We got tickets ~~But~~ *Butter Love*, playing at the Orpheum," said Bill, waving the ticket stubs.

"Did you stay to watch the show, or are you using the tickets as an alibi?" demanded Gloria's father.

"Now, sir, that's no way to talk. Don't you trust your daughter?"

"Yes, I trust her, you young schemer. But I don't trust you not to make a fool of her."

"But I—"

"You, Lansing, might have spent your time better if you'd honestly tried to advance the science of fire fighting instead of thinking of clever schemes to marry into it. Hah! you wailing about water, and how things haven't changed for two thousand years. Well, while you were carping about water and lack of progress, Jim Potter ~~the king~~ *the king* His idea will get him appointed *cum laude*, possibly *summa*, and maybe even *magna*."

"But, sir—"

"Lansing, I think you are a thrill-seeker. While you were complaining about lack of progress, and wailing that you couldn't really study a fire and the methods we use without really watching one, Jim Potter did what you couldn't do. He has made a very sensible

"Congratulations," said Lansing in a flat tone. "And may I ask what it is?"

"I'm proud to be the one to tell you," said Fire Chief Mooney. "Assume you are called to a fire in a dwelling, Lansing. It is yours to fight, to plan against, to lay out your campaign to extinguish the blaze in the shortest time with the minimum damage. Understand?"

"That is the job of the fire boss, the ranking official present."

"Pre-cisely! Now, Lansing, suppose that you could make an instantaneous determination of the amount and placement of all flammable material in the dwelling, the chemistry and physical characteristics of these burnables, and the possible interaction between the various products of combustion."

"That would be a help," Lansing said thoughtfully. "It would be as great a help to him as it helps a general who knows the strength and deployment of the entire enemy force against him."

"Exactly! Well, Lansing, young Jim Potter proposes that every citizen post a layout of his dwelling, and the contents, and the material of which the articles are made! This information will go into a rapid cross-access file, so that the full information will be available

as soon as the fire alarm delivers the identification of the dwelling.”

* * * *

Bill Lansing shook his head slowly. “I suppose you’d want penalties for falsification of records?”

“Naturally. False information might be quite deadly.”

“And sooner or later you’d issue licenses to purchase furniture and household goods to make certain that your records were accurate?”

“Now that’s the first good suggestion that I have ever heard you make, Lansing. he said to Potter, “I know you’ll give full credit for this suggestion when you present your thesis.”

“Most certainly, sir,” said Potter, scribbling. Lansing raised his hands.

“Chief Mooney, sir?”

“Now what, Lansing?”

“Before you continue along this line of reasoning, I think you had better consult an attorney for advice.”

“Why?”

“Because I believe that any such requirement is a violation of the citizen’s right to be free of unwarranted search. At any rate, it is a violation of his privacy.”

“It’s for his own protection, confound it!” Mooney shook his head violently. “What do you know about law?”

“Very little. That’s why I suggested that you consult someone who does. I think your plan would require a constitutional amendment, a Supreme Court ruling, and a special department formed to enforce the requirements. It’s a grand, blue-sky scheme, and too impractical.”

“Lansing, have you ever heard of the N.I.H. attitude?”

“No, sir. What does N. I. H. stand for?”

“ ‘Not Invented Here.’ It refers to those people who go nit-picking and raising objections to anything they did not think of themselves. I withdraw my congratulations to

excellent suggestion because, it seems, it was meant as sarcasm. But to show you that at least, do not have the N. I. H. attitude, we'll still use your suggestion. It's a good one—regardless of its intent.”

“It won't work,” said Lansing doggedly. “You'll hear a yell about 'police state' go loud that no one will touch the idea.”

“Now, don't accuse me of advocating anything antidemocratic.”

“I didn't.”

“Yes, you did! And if you and your kind would only offer positive suggestions instead of throwing stumbling blocks in the way of progress, we would all be better off. You think enough when you're objecting to someone else's idea, or when you're scheming a plot to squirrel my daughter out from under my eyes. Why don't you bend that fine brain to something constructive?”

“Mr. Mooney, I—”

“Lansing, you're nothing but an inept social climber who is playing in the wrong league. Why don't you leave quietly, you son of a fire claim adjuster?”

“Now see here—”

“*You* see here, Lansing. Get out!”

“Father, Bill Lansing is a guest, and I—”

“You go to your room, and stay there, young missy! Bill Lansing is a guest, past tense. No progress, just water? Well, fathers have been pouring cold water over hot romances for a couple of thousand years, too. So get!”

* * * *

Bill Lansing's return to his station was a doleful journey.

It was late at night; or, more accurately, it was very early in the morning. Crammed and jostling were the night people of the city. Some were tired, some were bored. Not a few were dozing in their subway seats. There were many couples engrossed with their own business, to the point where they cared little for their surroundings. But if there was one person who could be as unhappy and frustrated with helpless rage and utter futility as Bill Lansing, it could not be known. For Lansing had no one to tell, no sympathetic ear to listen.

But if Bill Lansing thought that he had been kicked as low as any man could be

kicked, he found that he had one more bitter blow awaiting him at the station. He was h
just inside of the door by Fire Commissioner Edwards.

“Lansing, I have a complaint against you.”

“A complaint, sir?”

“Yes. Did you, or did you not imply that you were taking Gloria Lansing to a dance
that in reality was non-existent?”

Lansing gulped. It was a loaded question. In reality, the plan had simply been to
Fire Chief Mooney’s reaction to Gloria going out on a late date with her. It had been G
spur-of-the-moment picking, not his, that chose the dance. Bill could no more tell the
commissioner that they were testing Mooney’s reaction than he could permit himself to
place the blame on Gloria. Neither was the act of a gentleman and a fire fighter; further
he was at fault, anyway, because the code of the fire fighter demanded that he correct
erroneous impression that Gloria might have given.

But Bill Lansing had no doubt at all that the commissioner knew the entire story a
close as Mooney could repeat it. For the commissioner’s word had been “imply,” and
meant that Gloria’s statement had been undersigned, or in this case, underspoken, by
Lansing.

“Yes,” he said.

“This has been an unfortunate experience for all of us, Lansing. I hope it’s over. I
know the penalty of the Academy of Fire Fighters for permitting an implied untruth to s

“Yes.”

“While you are relieved of all duty and responsibility, you may not leave your station
until the Board of Fire Regents accepts your resignation officially.”

“And if there is a fire in the interim, sir?”

“While every hand is needed at a fire, Lansing, our code is our protection. It is cl
No one who has not the full confidence of the Academy of Fire Fighters may have the
of joining us in our chosen profession.”

“But, sir—”

The commissioner eyed Lansing coldly, and in a sepulchral intonation, he said, “
have been weighed in the balance, and found wanting.”

It was the traditional phrase of cold dismissal from the Academy. The phrase was indeed, a translation of the handwriting on the wall.

* * * *

V

With absolutely nothing to do but eat, sleep, and kill the waking hours, because those surround you will not speak nor admit they heard you, time hangs heavy indeed.

It was worse when your cell cannot be left. It is even worse than that when you, a they, and everybody knows that the process of separating you from your tomb could be expedited in ten minutes if anybody gave a tinkle. But the Academy of Fire Fighters was thoroughly finished with Mr. Bill Lansing; so completely finished with him that its members wouldn't lift a finger to get rid of him. To them, he had ceased to exist. To place action before the treadmill brought his card to the top was to recognize that such a person has rights.

And it might have gone that way, right on out until Bill Lansing's life turned a corner and became part of another world of activity.

But a new world was not to be for Bill Lansing. Clotho, the Fate who weaves the destinies of men, discovered the bowline, the knot that makes the closed loop which will not slip. This she tied into her web.

Call it fate. Call it coincidence. Call it anything you care to; but accept, even though reluctantly, the fire that flared up in the cellar of Fire Chief Mooney's home at one o'clock the morning.

The alarm clangored through the station, alerting the firemen, the rookies, and the nearly-ex-rookie Bill Lansing.

Next came the stentorian voice:

"Now hear this! The address is one seven nine, three nine six four Rushman Avenue in the Watchung area, near the metropolitan shopping area of Mountainside. The weather is clear. Temperature seventy-one, humidity fifty-three, wind from the southwest at ten. The time is one zero seven hours."

Near him, Lansing heard someone mutter, "And the New York theater crowd will be getting home, too!"

In answer, the fire sub-chief said, "Right, Al. Look, you and Pete are temporarily detached. Get out there right now and plant traffic stoppers. Go now; we'll bring your fire

gear in the equipment wagon.”

“Right, Chief. But won’t that leave you short-handed?”

“We’ll make out.”

Lansing said, “I volunteer.”

For the first time in three weeks, Lansing got a reply. “We don’t accept outsiders” was the cold response.

“Might as well use me,” said Lansing. “I’m going anyway.”

“Not in any fire wagon this station uses!”

From the roof of the station came the rising drone of a siren. It went up and up in a scream, undulated between shrill and ear-splitting, and then began to slide down the sky as the motor coasted to its well-balanced and near-frictionless stop. A banging scattered cold motors came next; they settled down into a muted, vibrant roar.

* * * *

Stop him from going, they could, but stop him from watching them leave, they could not. They followed them to the equipment, then stood on the edge of the roof, leaning into the blades of the big choppers of the heavy equipment. They wasted no time clawing for altitude. In a moment they lurched forward off the roof, and arrowed straight across the city, no more than a hundred feet above the forest of television antennas that reached up for them.

It was a thrilling and a noisy spectacle, but once it was over, all that Lansing could do was to go back below and wait. This was a world which had rejected him. A world which was not permitted to join.

He sprawled on his narrow bunk and listened to the radio. It was spilling orders and counter-orders, acknowledgements, direction data, and other information. To anyone not used to the patter, it would have been a hopeless mess of gabble. But to the ex-rookie, it was part of his nostalgia. He had the knowledge and the skill to build a radio receiver for any frequency (they could not be purchased), but once away from this station he would see no use in it. To maintain even the least of them would be more hurtful than not.

One thing he could not envision was the spectacle of the Mooney dwelling in flames. That was a murky, flickering thing. But the approach of the sub-chiefs’ hopper he could see without difficulty, for he knew that it would dip and circle the fire; the sub-chief would be collecting preliminary information so that he could plan his counter-attack. Then the radio became more orderly:

“Redman, get the pyrometer over here.”

“Right, Chief.”

“Harrington, get one of your spectrographs aimed at that picture window in front of the second looking about ten feet above that tiled roof over on the side, and the third in back. High, I’d say.”

“Right.”

“Now, Where’s the XXX!!!XXX! hosewagon?”

Bill Lansing grinned. The fire radio band was speech-scrambled within weeks after it had first been used. Language that would offend the delicate ear was denied to that extent because the government realized that it was easier to conceal the bad language of men working under danger and stress than it was to train them to use, “Oh my goodness!” as a verbal indication of dismay.

The sub-chief got his reply: “Layin’ hose, Chief!”

“From where, for XXX!!!X sake?”

“The Bound Brook Reservoir.”

“What the XX!!’s the matter with the standpipes?”

“They ain’t been used in seven years, Chief. Besides, we’ve got time to run a clear line before swoosh-second, and it’s better that way.”

“Okay. Now—”

“Who’s in charge here?” This was a new voice.

“I am. Sub-Chief Walter Lang. From the Newark district station.”

“Where is Fire Chief Mooney?”

“We haven’t been able to contact him.”

“Commissioner Edwards?”

“Probably on his way. And who are you—sir?”

"Sub-Secretary of Public Safety, James Moriarity. You mean that neither Mooney Edwards are present?"

"No, sir. I—"

"I'm here, X#% %X## it," came the unmistakable voice of Fire Chief Mooney. "A get me out!"

"Trapped?"

"Second floor rear."

"How long can you hold out?"

"Not too long. It's hot, and it stinks of blowup."

"Do you want to take cognizance, Chief?" asked Lang.

"From within?" The sound of disbelief was unmistakable.

"Well, someone has got to give the orders." Lang turned to Moriarity. "Shall we go and get him, sir?"

"How do you figure the fire, Mr. Lang?"

"One mo. Redman, what do the pyros say?"

"Hotspots running up to three hundred, bits and flares to five-fifty. Average is reasonable but going up."

"Harrigan, what does spectro say?"

"The usual clutch of standard volatiles. You know. Polyesters, acrylics, acetates, eurenthanes, plus a mixture of ordinary smokes, wood distillates and monoxides."

"How bad?"

"The mixture is deadly in concentration, you know. Right now it will give a man an awful headache if he breathes it very long—say a half-hour or more. But the temperatures recorded by Redman say that the mix isn't to the whoosh point yet."

"Then I can't take the emergency chance, nor justify it," said Moriarity. "Where's the fire claim adjuster?"

“He hasn’t shown yet. He should have been here.”

“My God! Is there anyone who can work pro tem?”

“Of course not. There never is when they’re needed.”

* * * *

Mooney’s voice broke in, “Is Gloria safe?”

“Isn’t she with you?”

“No. She has her own apartment on the top floor of this building.”

“Front or rear?”

“Front.”

“And your wife?”

“With me. But about Gloria—?”

“Redman! Top floor front?”

“About the same as below, maybe a bit cooler in the hot spots. Less total variation.”

“Harrigan?”

“Rough, chief. The whole, standard list of hot, flammable volatiles are thick, plus traces of phosgene, hydrogen chloride and some nitrides. By comparison, Gloria’s folks are breathing pure mountain air.”

“That’s an emergency, Chief! Can we go in?”

“General call! Isn’t there anybody who can certify this spot as an emergency? Anybody?”

Bill Lansing could stand it no more. He got up from his bunk and snapped the press-to-talk switch on his radio. He said, “Sub-Secretary Moriarity from Bill Lansing. I am an ex-rookie fireman, and therefore disqualified to talk, act, or participate on that basis. However, I am also the son of James Lansing, a journeyman and fellow of the College of Fire Claim Underwriters, through whom I was granted my certificate of competence in evaluation.”

“How fast can you get here?”

“A matter of minutes if I can commandeer the hopper on the roof.”

Mooney’s voice broke in, “Make him a present of it, but get us the \$ out of here!”

Lansing headed for the roof on a dead run. Meanwhile, a new voice came in, thin and wavering, on the edge of radio contact. “Am I within range yet? Do you hear me? This is Commissioner Edwards. Respond, please, over and out.”

“We hear you now, Commissioner. Go ahead.”

“How does it stand?”

“It apparently started below, point and cause of origin unknown. The dwelling is a special, belonging to Fire Chief Mooney, You know the place, Commissioner.”

“Yes. Well, the elder Mooney dwelling, I do. But their daughter has a separate on the third floor that I haven’t been in.”

“And the fire conditions?”

“Top-floor apartment, front side, isn’t as separate as if the place were truly unconnected. Therefore a lot of the volatile stuff has been seeping up through the stairs and halls. It’s been collecting in Gloria’s apartment.”

“Any sign of the girl?”

“None. Harrigan?”

“No trace of animal charcoal nor hydrocarbon vapor. She may be suffocated, but she isn’t burned.”

“Stop talking like that,” yelled Mooney. “Get me out of here and I’ll go up there myself!”

“Is that an order, Chief?”

“Yes, #%& &#%% it!”

Moriarity said, “Commissioner, the only fire claim adjuster on the spot is ex-rook Lansing. You know him?”

“Yes, I know him,” said Commissioner Edwards wearily. “Lansing? Will you authorize a breach of Mooney’s section?”

“Does Fire Chief Mooney waive his insurance?”

“Now, see here! This is no time to—”

“If you’re going to accuse me of vindictiveness, don’t. Spectro and pyro give the Mooneys a good fifty-five minutes before the whoosh point, and threaten them with no more than a headache. I’m mindful of their lives and of their comfort, but I have the property to protect. Furthermore, the real danger is to the girl in the top floor front.”

“Shall we go in there?”

“Without seeing it, I shouldn’t grant permission. But the reports say—yes, go in. Start the clear-out, grab, and re-containment process, but be fast.”

“Pyro, what’s the draft-coefficient?”

“Fairly slow. But once that roof is open, you’ll have a furnace condition in the whole place in a matter of minutes. All it takes is one tongue of flame to lick through a firebreast and—”

“Yes, yes, we know. Sky crew? Go in!”

* * * *

VI

Lansing’s hopper crossed the ring of billowing red flares that barred all surface traffic entering the area. Then he saw the stricken dwelling. Fire apparatus hung in the sky on helicopter blades, hovering about the scene. As for the fire itself, there was not much to indicate how dangerous it was. Only a flicker and a flash of yellow flame showed at the windows. And, of course, the inevitable group of civilians huddled together in night clothes, the dwellers on either side and to the back of the Mooney place that fronted on the next street.

As Lansing approached, the sky crew went into action. The first ‘copter lowered carefully down onto the flat roof. On the bottom a six-foot, circular object began to rotate—the well-known but seldom seen sawing circle. When the cylindrical saw-teeth cut through the material of the roof, the crunching noise could be heard above the racket of the many engines. It ground and it sawed, and the backlash from its effort made the pilot fight hard to maintain hoverage.

Then, with a final crash, three things happened in so close a serial order that they appeared to have taken place at once.

A slow-motion picture would have shown first that the thrust of the sawing circle and its helicopter drove the equipment down when the final resistance ceased; second that the pilot fought the thrust deftly by revving the engine and throwing the bite of the rotor blades to full life; and third that when the plug of the roof was lifted free, the gout of hot volatiles belched forth to carry the helicopter high, precariously pitching in the turbulence.

“Where’s the sky hook?”

“Coming in, with hot papa in the iron claw.”

“Ready with the flush tank?”

“Ready!”

“Toss it!”

From one of the helicopters, a small, glistening object arched out. With computer accuracy it curved through the air to plunge into the newly made opening in the roof. There was no sound, but all at once the final billow of dirty smoke gushed forth, and there was more.

“Snappy, now!”

Hot papa, in his glistening fire-reflecting suit, was lowered through the opening. The iron claw line went slack; the pilot of the helicopter hovered and fought his stick, for deflating the smoke out of the apartment with a tank of clear helium, the air above the scene was turbulent. Indeed, the helium did no more than to provide visibility. It was non-poisonous but just as deadly for the human lungs.

“Got baby!” came the cry. The iron claw line went taut again.

“How is she?”

“Alive and wrapped in baby’s bunting, double-folded with cold feet.”

“All right! No re-contain!”

* * * *

The sawing circle lowered again, hovered, turned, and fitted the roof-plug back in place. Some battens were slapped over the circular cut, and then there came a rapid-fire series

sharp detonations as anchor-fasteners were driven home with cartridge guns. The saw circle rose, followed by the first of a thin trickle of smoke that began to seep through the

Mooney asked, "My daughter?"

Someone replied, "She's being treated for smoke and vapor inhalation, some poisoning, and a mild anoxia. No burns."

"Thanks."

"Now let's take care of the Mooneys," said Commissioner Edwards.

"Shall we go in?"

"Lansing?" asked Edwards.

"Look," interjected Mooney, "if pyro and spectro say we're in no imminent danger, we'll play it by the rules."

"Yes, but as fire chief you should be here. Lansing?"

"Mr. Commissioner, will the Academy of Fire Fighters undertake Fire Chief Mooney's insurance? I can't underwrite it and accept the additional losses just to place it in his rightful command."

"Now I think you are being vindictive."

"Put yourself in my shoes, Commissioner, and take a look from a long way outside. If I go in too soon, someone is going to accuse me of trying to curry favor with the very combination of fire chief and father of the girl I love. Aren't they?"

"You'll find, young Mister Lansing, that no matter what you do, someone will criticize."

"Then the best way is to do what I think right, isn't it?"

"Um—"

"All right! Now get off the air, Commissioner, and let your data gang go to work."

Sub-Chief Walter Lang took over. "Data gang?"

"Pyro here," said Redman. "General room ambient is about four-sixteen, with hot spots to seven-fifty."

“Spectro,” said Harrigan, “nothing new to report. The same crosssection of gases from burning or decomposed plastic fabrics, artificial leathers, and so forth.”

“All right, plug your data directly into the computer.”

The voices on the fire-radio band ceased. In their place there came a tuneless, apparently pattenless, mixture of short pulses in many frequencies from low to high p was digital data covering the composition of the flammable gases within the confined dwelling, the temperatures found at a number of places within each room, and the rate which each factor was changing. From the computer there spilled lengths of tape, carrying their own computer code in punched holes. These would be used for analysis later; the information they contained was already used and coded by the computer. From the collectable evidence, estimates and a computer-grade reconstruction were made of the conditions that existed in parts of the dwelling that could not be seen from the outside

* * * *

Within minutes, the information was complete and the counter-attack planned with complete accuracy.

“Can we get the Mooneys, Lansing? Haven’t you stalled long enough? What’ll happen if we open that lower bedroom now?”

“The computer says it is a little early,” said Bill Lansing. “And the book says that it’s frequently better to let it burn a bit longer and tend to smother itself. We’ve come a long way from the day when the first act was to chop a hole in the roof to vent the explosive gases. Now we can afford to wait until they get threatening before starting the inevitable fire-d through the house. But my experience,” he went on, “isn’t extensive enough to furnish a considered opinion, other than to believe that there is a reasonable period during which a computer could tell the difference. So I’ll say go in and get them.”

“Thanks,” said Commissioner Edwards. “Mooney? We’re coming in!”

“I hear you. We’re ready.”

There was a quick roar of engines as the twin rotors of the flying bridge fired up. The flying bridge, parked in the street and poised for the operation, took no spare time in rising to window height and plunging forward to thrust its covered outrigger through the bedroom window behind which the Mooneys were waiting. Smoke burst forth around the bridge, and a gout of flame followed as the hot volatiles belched forth, rose, and created an out-d

The fire fighter in the hot papa suit aboard the flying bridge did not make it all the way to the end of the covered runway. The Mooneys, she first and he second, were already aboard and running toward the body of the vehicle.

“Baby’s aboard,” yelled hot papa, “and cryin’ for cool air!”

The flying bridge backed, turned and dropped to the street. Fire Chief Mooney crouched out the exit door, steadying his wife by a hand at her elbow.

Commissioner Edwards said, “Want to take over?”

Mooney shook his head. “No. The headache they promised me is here, all right. I can’t think straight.”

“You better get some treatment, Chief.”

“After this thing is out. Let Lang go on. He’s done a fine job so far.”

Walter Lang said, “Thanks, Chief.” Then he asked, “Lansing? When is whoosh second?”

Lansing looked at the last tape from the computer. “We’ve still a large margin of safety before it goes whoosh,” said Lansing. “But I don’t think we’ll gain much by waiting, especially now that the bedroom window is gone. Hit it when you’re ready, Lang.”

Then, with the precision of computer programming, Pumper One hurled 1,750 liters of water through the smashed bedroom window; Pumper Two delivered 2,500 liters through a second-floor window; and a hose line rigged to the sawing circle dropped 500 liters through the re-opened hole in the roof.

The smoke billowed briefly through the shattered windows, then made its characteristic change from dirty brown to the steamy white that comes when water fights fire.

There was only one re-burst. Just as the mop-up squad was about to enter with their absorbent machines, a flare was seen in the living room. Pumper Two responded with an additional 500 liters, a quantity determined by human estimate and not by the computer. As a result, the mop-up squad found puddles on the floor when they entered ten minutes after they finish off the job.

* * * *

Voices died around the table as Fire Commissioner Edwards arose; there was one tinny clink as one of the Board of Regents put down his coffee cup. The Regents of the Academy of Fire Fighters were present in their full red-suspended regalia. But they were all uncomfortably aware of the stranger in their midst.

For he, too, was in full regalia. There was the shiny blue-serge suit and the hard

hat of the fire claim adjuster, and he carried the small, leather-covered attaché case which contained the decimal computer used during on-the-spot estimates of fire, smoke, and water damage.

Commissioner Edwards said, "I am in the very uncomfortable position of having to offer an honor upon a man who has already received what he may well believe to be a higher one. In retrospect, I regret that Mr. Lansing did not make a material contribution to the science of fire fighting. He did not invent some new process of extinguishing the blaze by eliminating the smoke, nor did he discover some fabulous new chemical that would kill fleas without drowning the dog. In fact, Mr. Lansing did not even prove his own contention that fire fighting was unchanged from the day when our remote ancestors discovered that water was the master of fire, provided you poured enough of it on the blaze."

"Indeed, gentlemen, I can only apologize for being impatient. I take the responsibility for having urged the premature action that required a second charge of water, hastily estimated instead of carefully computed, to be hurled into the Mooney dwelling."

"But in the act of acquiescing to our premature pleas, Mr. Bill Lansing, recently appointed Adjuster First Class, and a member of the College of Fire Claim Adjusters, revealed a part of his human nature seldom displayed by other members of his college. Humanely and humanly, Mr. Lansing understood that our nature ~~is not to be killed~~ ^{is not to be killed} at all cost and at once.

"And to continue this understanding, and to hope that it becomes mutual, I am conferring upon him the highest office that a non-member can hold, the unglorious, undignified, unrewarding post of Associate Member. By appointment."

"And I," added Fire Chief Mooney, "find myself appointing him to the post of son-in-law, first class. By marriage."

To his bride-to-be, Bill Lansing whispered, "I still say there's a better way to do it

"Than marriage?"

"No. A better way to put out a fire."

"There is," she chuckled. "And I'll show you the way after the ceremony."

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* * * *

In the spring of 1957, Emerson took on a new look in radio and electronic manufacturing. My boss had quit. The new management disbanded the components engineering department. I was a department manager without a department to manage, and anyone with sense would conclude that this is a delicate position to be in.

Meanwhile, Fletcher had died, and life at the Ipsey Wipsy had lost its get-up-and-go attitude; Inga did not have the diabolical mind that let Fletcher fill the weekend with guests who had some opinions that made the after-dinner talk stimulating. Those who came were either old friends of all of us who came to visit, or a few who were arguing that Inga should give up the Ipsey and move into New York.

The handwriting on the wall was thin, but beginning to show. The business prospects were bad. So with less to do, since the weekends weren't so busy, and eyeballing the future with a dim view, I began to write.

Of course, knowing that John Campbell was a dog person, and that he enjoyed "History Repeats," it hit me that the process of communication between a dog and a man requires something that is not quite available. For example, if the fiendish doctor in Ed Rice Burroughs' *Mastermind of Mars* had put a human brain in the dog's skull, the human brain couldn't talk through the dog's noise-making and control system.

So I wrote "Understanding" and sent it off. But—

Let's let it sit for a moment. I'm quite aware that "Understanding" was printed in *Galaxy* instead of *Analog-Astounding*, but that's another story that must be related at the right moment.

Late in 1957, Emerson and I came to the end. Business was bad, and every plan was cutting right to the bone. I caught it on the bone when my boss pointed out that every department was ordered to cut the payroll by fifteen percent, and that it took quite a number of stenogs and pencil pushers, file clerks and print room operators to make up the loss of one department manager who had no department to manage. He wasn't going to fire me, but he certainly would look upon my resignation as the easier way out for everyone.

It was in this period, quite early in 1958, that I'd adapted "Meddler's Moon" for radio and I'd sold a novel to Ballantine, which has an oddball background.

someone there who had experience in both technical engineering and writing.

So if someone really wants to know why I didn't turn up much in the period from to a fairly recent date, let me point out that eight hours a day removing state-of-the-art clichés and off-the-shelf redundancies created by those ~~who have something~~ instead of using it, gets a writer a bit tired of writing. Besides, it is much more fun to get the boat and take a ride when one has free time.

So as I was saying earlier, in the midst of this, during one of the winter weeks when boating isn't much indicated, it occurred to me that John was a dog lover, and that he had liked "History Repeats," which centers around the intelligent dog, Beauregarde.

It came to mind that if the evil surgeon in Edgar Rice ~~Blyden's~~ *Mars* had put a man's brain into the skull of a dog, the man-dog might communicate by pointing his nose or a foot at letters painted on the wall, possibly quite well at such a scheme, but he could not talk. The entire noise-making operation of the dog is wholly un-adapted to forming words. The dog can make understandable sounds, and a few could have been taught to make noises that sound like words, but these are simple and can be made without the agile tongue and lips of the speaking human.

So I wrote "Understanding," and sent it off to John. Now, there was a three-way understanding between John, my agent, Mr. Lurton Blassingame, and I that we'd save postage if I sent my stuff right to John, but when there was a reply, yes or no, it went back to my agent.

John did not like the ending. He sent (returned) the story to Mr. Blassingame with a brief note of objection—but he took off on one of his nine-page letters to me. The gist of the letter was that the villains of the piece were clever conspirators, high in the ranks of the Galactic Empire of Xanabar, who would fight to the death to preserve the superiority of the empire over its neighbors. He might like it if I were to finish the piece with the same clever conspiratorial tone and do the evil villains in by cleverness.

Meanwhile, Mr. Blassingame, having a rejected manuscript on his hands, sent it to *Galaxy*, where Fred Pohl was editor.

Great minds run in the same channel. Fred bought the story, but wrote me that he didn't like the ending, and would I please—

Sure, I would. I re-wrote the ending, but it got lost in ~~the file~~ *Galaxy*, and the story was published with the old ending—

Understanding

I

Scholar's Cluster is a globular aggregation of about a quarter of a million stars, so you cluster that it has no visible sign of dispersion. Its stars are heavy with the metals created earlier novae, and the stellar population is high with the middle-sequence suns centered around Types F, G, and K.

More important, Scholar's Cluster got its name from its own mysterious environment. Studying there will not make a scholar of a dolt, nor a genius of a straight-A student, but studying there will guarantee that each will be educated to his maximum ability to absorb knowledge. Once this end is reached, there is no point in remaining—for exactly the same reason that one stops pouring when the gallon measure has taken on four quarts. Scholar's Cluster was a going operation when Earth attained the stars and took her place among galactic cultures; and Earth, like the myriad of other galactic cultures, sends her brightest to her educational colony on one of the pleasanter planets that revolves about a G-3 star much different than Sol.

While this is not an account of Scholar's Cluster, Scholar's Cluster is important to the adventures of young Terence Lincoln, for Scholar's Cluster lies toward the center of the galaxy, a few thousand light-years to the inward side of the sprawling empire of Xanabar.

It is the existence of Scholar's Cluster that placed young Terence Lincoln on the map in Xanabar. Otherwise, he would hardly have been so far from home....

* * * *

Terry Lincoln skylarked through the streets of Coleban, one of the capital cities of Xanabar, with a babble of his classmates.

They were stopping over in Xanabar on their way home to Mother Earth. They all were in fine grades from primary school and were all looking forward to the three-month vacation before returning to enter secondary school: neither success, nor freedom, nor the city of Coleban itself did anything to dampen their exuberance.

Lincoln and his classmates bracketed age fifteen.

So all of them were on the verge of, but none of them had yet crossed, the big line between adolescence and maturity. That is, none of them had gained Understanding.

Without Understanding, the gold and the glitter of Coleban was pure crystal-cut and proof perfect, and the stopover was simply a matter of imperfect spaceline scheduling. With Understanding, they would have labeled Coleban as a tourist trap and realized that the stopover was a condition for interstellar license through Xanabar, so that those who passed through could be parted from a measure of their wealth.

Still, those who disdainfully label Coleban tinsel, and damn the whole of Xanabar as hardly fair.

For the shops of Coleban displayed to their very best the most attractive wares from a thousand worlds. The universal diamond, sapphire, and emerald are commonplace; second-rate to the star-drop of Manark, the frauland of Selira that shines of its own interstellar light, or the glorious oyster-pearl of Earth, that is said to lose its luster if it does not lie in the throat of a woman in love. There were fabrics so delicate that they could be worn but once, and others so durable that they would outlast their makers. There were tools to the hands of a thousand worlds, knives that could split the hair or cleave plate armor with ease and facility; instruments with gleaming dial and engraved calibration.

And there were animated displays.

These caught young Terry Lincoln's eye. He was a gamesman. The displays were programmed by master artisans to show the finer points and the flashy parts, and done with an ease that convinced the onlooker that he, too, could gain such skill with a little practice. Time and again, Terry found himself rapt as his companions moved onward.

And each time he had to make his way through a bedlam of humanity to regain his companions.

Humanity came in an assortment of sizes, from a small meter and a half to a stalwart two meters plus, and in a bracket of weights to match the skinny and the gross in each height class. Humanity's color varied from peppermint white to deep chocolate, with subtle flavors of saffron, tints of lemon, and the reds from pale pink to ruddy. There were the superficial differences in the makeup of the hands, and some startling facial arrangements, but they were all of Humanity—and they all had two things in common:

They were all oxygen-breathing, water-based, hydrocarbon life with red blood and omnivorous appetites—and they all had Understanding, for Understanding is the mature way of life for those whose culture has attained the stars.

That Terry Lincoln and his classmates lacked this important common denominator mattered not. His was a people who had attained Understanding, and he and his companions were on the verge.

* * * *

Without Understanding, the babble of tongues about him was babble indeed. This did not bother him. One day he, too, would attain it, and all would become clear. For this moment of celebration, all babble was noise; and Lincoln could not have cared less whether the humanity about him was echoing in their own way his own appreciation of the glitter of Coleban or talking about him as an object of interest.

Lincoln paused to watch a display of a game that combined the intricacy and plausibility of chess with the speed and precision of hockey played on ice. It was a demonstration skillfully programmed so that even the youths without Understanding could follow the play.

Rapt, young Terry watched until the game, again by skillful program, came to a brilliant climax of high-speed master moves that ended with one player downed in ignominious defeat. The close of this action was followed by a sales pitch in the tongue of Xanabar, which, of course, anyone with Understanding could follow. To Terry, it was beyond him and so he turned to say—

“That was quite a—”

—only to find that his companions had left him, and were now turning the corner far along the street.

Terry turned to follow. As he turned, the sales pitch stopped, and a new demonstration began with appropriate announcements. His move to leave was blocked by a strong centripetal movement toward the exhibition. While he bucked this inward movement, his classmates turned the corner and were gone from sight.

This bothered Terry very lightly; he knew he could make his way through this crowd and rejoin his companions. But the crowd that thronged the streets of Coleban had one more human attribute: they were egocentric. They blocked his path and barked at him with tongues of the galaxy. They did not step aside or help, or seem to care that he was trying to make haste for a very good reason.

Indeed, there seemed a perverse delight in their operations, as if they found it pleasant to block this rash youth who lacked Understanding. Openings closed as he approached. Strangers paused to speak to one another in the narrowest of ways. Pedestrian traffic, supposed to walk on the left by the law of Xanabar, filled the right-hand pedestrian lanes in the wrong direction. That others, trying to make their way in Terry's direction, were also blocked and frustrated did not make Terry's lot any easier.

Then came the inevitable incident. Terry espied an opening between two walkers and started through, only to plunge headlong into a saffron-colored man of gross proportions who had filled the gap. Terry hit and bounced backward, to land with a jarring thud on the

base of his spine.

The saffron-colored one laughed harshly, displaying a mouth full of disgustingly rotten teeth. To finish this picture, the saffron-colored one had covered his visibly unbathed head with one of the gaudiest costumes to walk the streets of Coleban.

Angered, Terry Lincoln arose and hit the line with a plunge that had gained him many yards on the playing fields of Scholar's Cluster—and once more bounced. This time the saffron-colored one kicked Terry in the ribs as he stepped over the lad to disappear in the crowd.

This was the last straw. It was time to forget that politeness was a gentlemanly trait and time to get where he was going.

* * * *

Starting with a brisk walk, and slowly accelerating into a dogtrot, Terry Lincoln zigged and zagged and darted, making long end runs around phalanxes of people, and driving him between others that showed no more than half enough space. Soon he was in a semi-gallop, making wide swings here and taking a shortcut through an open alleyway.

He lost his sense of direction and, being young, forgot the name of the game he was out to win because there was a more frantic game at hand. Terry became turned around and continued to plunge through the crowd in the direction away from his local home base, spaceport and its wall of hotels, conveniently provided by Coleban for the enforced lay-overs.

He did not notice that the high polish was no longer about him, nor that the crowd was less dense. He had passed the unmarked boundary of the center city, and was now plunging through the borderland, that ring that lies between the polish and the blight.

Then came the second incident. Once more, Terry tried to plunge between two people who walked a bit apart, and once more he hit gross weight and bounced.

Once more the same saffron face with its mouth full of rotting teeth laughed at him, but this time the ugly one made a grab for Terry, bear-hugged the youth and smothered Terry's mouth in the foul-smelling gaudy garment. Terry flailed, kicked the other's shin, and broke free. Blindly, Terry swung and missed. Then his training rose to the surface, and he squared away. He led with his left and came forward with a right cross that should have made its mark, but failed to connect. Saffron-face countered with an open-handed chop that Terry blocked with his forearm. It stunned all feeling from lower arm and hand.

Once more saffron-face made his grab, but this time Terry wasn't having any. He managed to connect one shoulder-driven right jab that smashed the saffron mouth, breaking

a few jagged stumps of the rotten teeth, and brought a quick flow of blood to the strained mouth.

Terry turned and ran, then made a wide curve that outdistanced the saffron one's attempt to catch him. Terry proceeded once more in the direction his faulty sense said toward home base: the spaceport and its hotels. Behind him in full chase came the grayer one, surprisingly limber for that much visible flab.

Ultimately, youth outdistanced the man, and Terry paused for breath.

About him was slumland. Trash littered the sidewalks, and filth filled the gutter. Windows were nearly all cracked to some degree, many were broken and stuffed with cloth, others were completely out and covered from within with some sort of reclaimed sheeting or discarded building material.

The air smelled of rancid grease, vegetables that had been cooked far too long, the unclean smell of the blight area. Dusk had begun, and the streetlights had come on to cast a wholly incompetent, wan glow. Under one were street urchins playing at some game of dice. Two girls in too-tight and very sleazy dresses passed Terry and spoke to him as brashly; he did not need Understanding to know what they had in mind. His silence was greeted by more vulgarities, which attracted the attention of the dice-players. Two, obvious winners, deserted the game for the girls.

Still, Terry plodded on, for he recalled that the transit had passed overhead of some grubby-looking areas on its way from spaceport to center city.

And so he continued, confident that beyond this barrier of blight lay the spaceport he sought.

* * * *

||

His name was Homburg. On the wall before him was an illuminated map of the city, with moving lights to show what action was taking place. Below the map were a series of small videoscreens, with scenes of the city taken from marked vantage points.

The special-colored starred cross that marked the position of Terry Lincoln, and a thin dot-dash line that marked his path, showed him almost diametrically opposite the spaceport and moving away.

Homburg pressed a button on his desk. On the small screen above the instrument a saffron-colored face appeared. Homburg said, "That was well executed, Bod Zimmer

Zimmer said, “Zer Homburg, am I relieved? I wish very much to get out of this filthy disguise.”

“You are relieved, Bod Zimmer. You will be rewarded.”

A snap, and Zimmer’s face disappeared.

Homburg eyed the map and noted that the mark which represented Terry was still moving away from center city and the spaceport on the far side. Satisfied, he arose from his desk and went down the hallway outside to another office. He merely nodded to the secretary in the outer office as he stepped briskly across the room to the closed door. He was with visible deference that he rapped on the inner door, waited perceptibly, and only after there was no objection turned the knob and entered.

To the man behind the desk, Homburg said, “Zer Martell, phase one is complete.”

Martell looked up. “Successfully, Bod Homburg?”

“Quite,” replied Homburg, concealing his disappointment. He’d hoped that this success would move his superior to drop ~~the title~~ ^{the title} which one used on an inferior. Had this been done, Homburg would no longer be required to address his superior by the title *zer*, and could address him without title as an equal.

* * * *

“Very well,” said Martell.

“Now, whether you sleep tonight at all, you will remain on duty until the call comes from the Terrestrial spacecraft that one of their number is missing.”

“Yes, Zer Martell.”

“It will be routed to your office. Take the call just as if your assignment was to take such calls and act upon them. They need not know—indeed, they must not know that you are dealing with a member of the personal staff of the Master Peacekeeper of Xanabara.”

“Yes, Zer Martell.”

“And then, Bod Homburg, see that this incident is properly and promptly reported to the Terrestrial Agency at once.”

“This will place the agent Peter Hawley and the dog Beauregarde in the operation,” said Zer Martell.

“Precisely.”

“I fail to see—”

“Bod Homburg, that pair have a mutual Understanding that surpasses any that I have ever seen. I hope that we may gain some insight into this superior Understanding by separating them. Once the Terrestrial agent is notified, and the operators move into action you will give the signal to execute phase two. Understood?”

“I will give the signal as you order, but I fail to understand why all of this is necessary.”

“Were we to separate them by force, there would be repercussions. To slay one of them would only serve to have the slain one replaced by another whose way of operation would be unfamiliar to us, and it would infuriate the remaining one to a degree that only an irate Terrestrial can achieve. Now, Bod Homburg, were you able to understand the reason for this complicated operation, you would be sitting in this office instead of me.”

“Zer Martell! I would never think of replacing you.”

“You never will,” said Martell coldly. “The day you enter this office will be the day I appoint you to it, for then I shall sit where Zer Doktor sits today, and I shall still be your superior. So now begone, and prepare for the next phase.”

* * * *

In Terrestrial terms, it would have been between two-thirty and three o'clock in the morning. The streets of Coleban were deserted, save for some cleaning women and porters and a very few others. Of the masses of humanity who had come seeking their own particular brand of happiness, some had found it and others had not; in either case they were elsewhere.

The “others” included a sight seldom seen this far from Mother Earth, for no other planet has anything that resembles the Terrestrial canine.

Beauregarde led, his nose close to the ground and his plume waving cheerfully, he plied one of his talents. He was tracking the scent of young Terry Lincoln.

Beauregarde is hard to describe, because he does not resemble any of the star breeds. Dog, short-haired, brown with darker lines around the eyes, well muscled, seventy-eighty pounds. In short, Beauregarde the dog looked like a dog because his parents were dogs, but here the association *canis vulgaris* ceases.

For Beauregarde had the dog's version of Understanding. He was of a long line of dogs bred for Understanding and for the latent intelligence of the canine, instead of si-

shape or something equally superficial. Understanding has been a canine trait ever since man and dog shared the campfire and divided the day's kill. As a consequence, it is hardly surprising that Beauregarde's measure of Understanding was greater in any area where Peter Hawley was concerned.

Peter followed the dog at a little distance. He, too, is hard to describe because he is like Beauregarde, is pure mongrel. Still, Peter Hawley carried himself with a jaunty air as he owned the sidewalk where he trod: a lithe and slender thirtyish, with plenty of bounce in his step and a smile on his face. The smile was either cheerful rogue or downright insolence, depending upon which side the observer took with regard to Peter. His hair was dark sandy, and his eyes were blue. His complexion was a healthy wind-burned tan, but mostly artificially induced, since Peter's assigned task was to pursue and apprehend villains, and villainy is mostly done in the dark.

The dog paused, circled tightly, resniffed, and said, "Young Lincoln stood here for quite a while, shuffling back and forth, as if he were watching something."

The dog's voice was far from Oxford. It was a well-controlled whine and whinny, with chest sounds adding bass with a well-modulated growl or a low rumble. The lips and tongue were sufficiently mobile to give fair articulation. Understanding supplied the remainder of Beauregarde's communication system.

Peter looked around. "The kid's school file said that he was a bit of a gamesman. Maybe that one caught him." Peter indicated the game that Lincoln had stopped to watch. It was dormant now that there were no potential customers, but Peter knew of the game and how it was displayed. "Anything else?" he asked Beauregarde.

"Well, the rest didn't wait up for him."

Peter nodded. "I don't suppose that educated sniffer of yours will tell us whether this is where they got separated?"

"No. But I wouldn't be against this as the place," said Beauregarde. "I think I see a few repeaters."

* * * *

"Repeaters? Well, now, that makes it a grabbing, instead of a little boy lost, and that makes more sense except for the big puzzler of why."

"Why?" repeated the dog. "Isn't half of our job retrieving either Terrestrial loot or Terrestrials themselves that have been grabbed by the citizens of Xanabar?"

"Yes," grinned Peter. "But it's usually toothsome young females that they grab, not

fifteen-year-old males, which are a drug on any flesh market.”

“How so?”

“Beauregarde, a youth of fifteen is one hundred and thirty-odd pounds of misdirected energy, walking on two left feet in an uncertain gait in the wrong direction. Its path is marked by a two-year trail of broken glass, dirty shoes, unfinished projects, unread books, and undone homework. He is as cooperative as a mule when anything constructive is needed and filled with burning ambition when what must be done is completely beyond his capability. And—”

“—in other words, who’d want one?”

“That’s about it.”

“Well, there must be some reason. Even the citizens of Xanabar do not grab for the simple sake of grabbing.”

“You’re thinking of ransom?”

“Well?” asked the dog.

Peter shook his head. “Whilst you were getting your snoot full of Lincoln’s scent, I was going through the folder from the kid’s school record. There simply isn’t anything negative in Lincoln’s background. His folks have neither money nor position that would make a kidnapping like this worthwhile. Oh, young Lincoln is bright enough to earn a sponsored ticket to the Scholar’s Cluster, but the citizens of Xanabar aren’t swiping adolescent brains with half the education and no Understanding.”

“Not without some reason,” insisted Beauregarde.

“You’re a bloody pragmatist,” said Peter. “And you’re so right. That’s what bothers me.”

“That I’m right?”

“No. What bothers me is not that you’re right, but that this operation smells highly suspicious, something complicated, with the bait concealed. Jinks, if they wanted to grab him, they’ve got enough characters in this play to fold up the pavement around him and cart him off. Instead—they play games. I don’t get it; what I don’t like is being too dense to see.”

“So?”

“So we walk very carefully, carrying our dish extremely level, making neither wave

surface ripple until we get to the bottom of this mess.”

Beauregarde gave a short bark; in human it would have been a snort.

“Peter,” said the dog, “I lack the imagination to visualize the scene in which Peter Hawley handles the delicate situation with velvet gloves, whilst Beauregarde lies with one paw on fore-paws and watches through heavy-lidded eyes.”

* * * *

They went on—and on—and on until Beauregarde snorted and dog-sneezed. “Oof,” he said. “Your opinion of overaged fish is pleasantly aromatic compared to this.”

“What goes?”

“Something—someone—who stinks. Reeks. Awful.”

“Humph. Well, Beau, the caper makes a pattern, but the prize is still hidden.”

“You mean this smelly character makes sense?”

“I’ll bet a nice well-hung raw steak against one charcoal-singed on the outside that this smelly party was also clad in a costume that couldn’t be forgotten in a lifetime.”

“But why?”

“Well, observe that we are nearing the edge of the fancy part of Coleban. Here we have an incident that marks one of the opposition in the young man’s mind. Not long from now, there will be another, with the same offensive party. This will convince Lincoln that he is not a mere victim of circumstance, but the central figure in a plot. He will therefore take a dead gallop. Subtly, the opposition will change their tactics and start to block his way in the direction they want him to go, leaving their cover loose so that he thinks he is gaining ground while all the time he is going in the direction they want him to go. Catch?”

“Yes, but why?”

“Well, Beau, take a look. We’re about to leave the area of polished metal, reflection-free glass, and marked-up prices. We’re on the edge of the honky-tonk, the vurguzz-mill and the joint with the fifty beautiful hostesses, fifty. Unless the target is not distracted, he will observe this distressing side of City Coleban, and take sensible measures. Distracted, he will plunge on and on, deeper and deeper into enemy territory.”

“That is a lot to deduce from a few dog-scents,” said Beauregarde.

“Sure it is. But I’ve been in Xanabar long enough to figure out most of their operations. In fact, the only thing that bothers me is this one. With the crew they have on board, simply grabbing a kid should be as easy as—er—”

“—Scratching your ear with your hind foot?” asked Beauregarde.

“Yeah...” said Peter absently. “And even without your talented sniffer, I smell the unmistakable smell of Peacekeeper, about to arrive in a cloud of indignation.”

Beauregarde made a gesture of sniffing at the air. “I agree,” he said. “And now, Peter, take your own advice. Treat this delicate situation delicately. The velvet gloves, remember? The level dish and the careful walk? I shall observe through heavy-lidded eyes with jaw on poised forepaws, the picture of contentment.”

“Oh, shut up!” snapped Peter.

“Ah, how quickly passes the moment of passive acceptance. Peter, your adrenaline count is rising admirably to this occasion. But please, don’t make me bite him. I detest the taste of raw Peacekeeper.”

* * * *



In full, colorful regalia, the Peacekeeper of Xanabar approached with the customary haughty air. “What goes on in Xanabar?”

“Nothing of interest to you, Peacekeeper.”

“You are Peter Hawley, and this is the dog, Beauregarde.”

“That is a brilliant deduction, since we both are quite well known. And since we are both equally well known as lawful folk, we will continue on our way.”

“You are a troublemaker, with the reputation of disturbing the peace of Xanabar. Now, exactly what business brings you to the center of Coleban at this unreasonable hour of the morning?”

“I am walking my dog.”

“Do not be insolent!”

“Then do not make noises like an imbecile. You know damned well that a Terresian youth, Terence Lincoln, dropped out of touch in this region not too many hours ago.”

“The Peacekeepers of Xanabar have the situation well in hand. We need no intervention from outsiders.”

“The Peacekeepers of Xanabar have the situation loused up as usual,” said Peter testily. “Any outfit that can’t find a fifteen-year-old male Terrestrial without Understanding needs some outside help.”

“Finding the missing youth is Peacekeeper business.”

“Business seems to be failing. Now go fly your kite.”

“You will not be permitted to meddle in the affairs of Xanabar.”

“We’re not meddling,” snapped Peter. “We’re merely doing what your whole outfit can’t do. So now get out of my way.”

“You may not order me around.”

“Want to bet?”

“Peter,” said Beauregarde quietly, “remember your own advice. Be kind to our web-footed friend.”

“Ah, yes,” said Peter. “I’m being impulsive. We need not walk roughshod over the Peacekeepers of Xanabar, need we? So, since he will not stand aside and let us on at our business, we will go around. Right, Beau?”

“Right,” said Beauregarde. The dog started to circle the Peacekeeper to one side while Peter circled the Peacekeeper to the other. He in the middle tried to keep his eyes both, which resulted in a back-and-forth snap of the head as the encirclement increased. Finally the patience of the Peacekeeper blew sky high.

“Stop this!” he shouted, reaching for his sidearm.

Beauregarde stopped circling. He faced the Peacekeeper and dropped low into an alert crouch. The strong muscles stood out as he hunched himself for a spring; the scoundrel stood high and stiff, and from the deep throat came the growl of the Terrestrial dog in a last-ditch warning.

The growl disturbed the Peacekeeper.

Peter said, “He means that. You touch the pea-shooter, and Beauregarde will have your forearm in bloody shreds before it clears the holster.”

“You dare not threaten me!” bellowed the Peacekeeper.

“I’m not threatening you,” said Peter calmly. “I’m merely telling you what will happen if you start playing with hardware.”

“Peter,” asked Beauregarde, “can’t we arbitrate this? I’m not really hungry, and the last Peacekeeper I ate was stringy.”

“Now see here—”

Peter waved a hand. In it was a banknote, a pleasantly sized denomination in crystal-cut, the currency of Xanabar. “This, Peacekeeper, is not a bribe, for I know better than to bribe the Peacekeepers of Xanabar. Instead, it is payment for a fine in advance. From long experience, I know what it costs to cut a caper in Xanabar; this is payment in advance for a bit of disturbed peace, possibly a cracked skull or two, and the usual treatment for numerous scars, mars, abrasions, shock, and dogbite. I further offer you good advice. Find some overparked automobiles to ticket on the next block over, and get out of harm’s way—”

In a normal flap in Xanabar, Peter might well have gotten away with it. He had been warned. But this Peacekeeper had his orders, and his script had been prepared by Zer Upstairs.

* * * *

The mobile riot squad converged upon them like a swarm of locusts. They arrived in a squeal of tires and brakes, in the thunder of copter blades, the nerve-racking hiss of jets and the horizon-wide clangor of bells and whistles, the howl of two-toned hee-haw horns and the wail of sirens. With them came the blinding glare of searchlight and parachute

Peter and the Peacekeeper were caught in the glare. In Peter’s upheld hand showed the unmistakable rectangles of green and gold, the crystal-cut of Xanabar. The tableaus hardly have been improved as it was, but the Peacekeeper capped this climax. He struck Peter’s hand in visible indignation and shouted righteously, “You cannot bribe the Peacekeeper of Xanabar!”

He drew back and reached for his sidearm.

Beauregarde growled warningly and crouched once more. But Peter Hawley said, “Play it cool, Beau. You track Terry Lincoln, find him, keep him safe, and bring him home alive. I’ll deal with this native uprising.”

Beauregarde said, “I hear you, Peter. I’ll bring him home alive, unharmed, and probably with Understanding.”

At which point the dog turned swiftly and pranced away. His first leap was a sudden spring that barely grazed the Peacekeeper. He landed on his forepaws and then folded an arch that brought the hind feet between and before the front; then he unwound into an arrowing bound forward. Like an accordion, Beauregarde alternately folded and unfolded he raced with four-footed agility through the dazzled members of the converging force. There was a flurry of flashguns, the hiss of needle beams, the throbbing grunt of stunners, and the pulsating shaft of nerve shockers, but the Peacekeepers of Xanabar were hardly in position, especially in taking snap shots at any target that moved *casus terrestrials* in a hurry. Beauregarde made the corner untouched, and turned it in a flurry of scrabbling on the hard pavement. Then he was gone.

Beauregarde was not touched, but the innocent bystanders had not fared well. Four of the Peacekeepers were writhing and moaning on the hard pavement; two were clutched in the burnholes from needlers; and the assortment of stun-guns and nerve shockers had taken their toll, from a full freeze which left the victim in the awkward configuration of an ill-coordinated statue toppled to earth, to lesser attacks which immobilized arm, leg, pelvis, or other major joints.

Ignoring the mess his fellows had made of themselves by their marksmanship, the uniformed Peacekeeper advanced upon Peter Hawley. "Will you come quietly?" he asked in a voice that clearly indicated that he hoped that Peter might resist—ever so little—so that he could chill the Terrestrial agent and have him hauled in stiff.

Peter chuckled jauntily. "Sure," he said, in a tone and manner that he knew to make the average Peacekeeper long for the return of the knout, the scourge, and the rack. "Yes," he repeated. "Your office is better than mine to call—because at yours I can register a formal complaint. May I walk—or must you show your mastery of the situation by freezing me stiff and clamping me in manacles to boot?"

"Just come quietly," said the Peacekeeper, almost able to conceal the seething anger that threatened to erupt.

* * * *

Homburg reported, "Zer Martell, phase two is now complete.

"As planned?"

"Almost precisely. Very few deviations."

Martel eyed his subordinate carefully. "And how many were told?"

"Peacekeeper Veckten, of necessity. He was essential to the operation. And ma

marksmen Randor and Wotane.”

“That is all?”

“That is all, Zer Martell.”

“That was well done, Bod Homburg.”

“Zer—?”

“Yes?”

“Zer Martell, would it not be proper to reward—somehow— those who had to be dropped by Randor and Wotane lest they harm the dog Beauregarde? It strikes me th

“You are not thinking well, Bod Homburg. Those who know must be rewarded—unobtrusively—for their performance. To reward those whose zealous def of the Peace of Xanabar might have defeated our program would only cause puzzlem Despite the odium of having some of our citizens think that we Peacekeepers are so p marksmanship that we hit our own instead of that devil-dog Beauregarde, the fewer in know the better. Oh, well, just see—unobtrusively—that the victims are warmly reward first time that they do something to warrant attention.”

“I understand everything you have said so far.”

“Good. Now, attend to phase three. Beauregarde and young Lincoln are to be harassed and isolated, but not harmed. I must have a detailed report on their operation here in Coleban.”

“Zer?”

“Yes?”

“Zer Martell, you speak as if it were a foregone conclusion that the dog Beaureg will track the youth Lincoln through the streets of Coleban, meet him, and join forces.”

“You are quite correct,” said Martell. “The idea is fantastic— until the record is examined. Peter Hawley and Beauregarde have an awesome record of trailing those missing persons whose lithe young bodies are coveted by some of our unruly citizens told that this is done by following the scent left by the person, but I’d as soon profess believe in free-running telepathy. But fact is fact, and the record stands.”

“And you believe that Beauregarde will meet Lincoln.”

“I may have hazarded my position and my future upon that premise, Bod Hombu, but believe me, I seldom gamble for high stakes. I may play for them, but I do not gamble. You understand the difference in meaning.”

* * * *

IV

Terence Lincoln, with the full, misplaced confidence that he was on the right trail, walked deeper and deeper into the slumland of Coleban, fully convinced that not far beyond the squalor was the spaceport. His watch, set to the local chronology at the spaceport as his comrades debarked, told him that his spacecraft had taken off. That bothered him. His was the confidence of the brash youth whose experience is not extensive enough to convince him that there are things of which he damned well might be afraid.

So he walked onward, with a fair sense of direction, now that he was no longer heckled—this fair sense of direction keeping him on the proper course, albeit in the wrong direction.

He had, as he saw it, two alternatives. He could either continue until he made it a way to the spaceport, or he could meet up with one of the gaudily uniformed Peacekeepers of Xanabar. In either case, it would be no more than a mere explanation of his plight, a check to check the veracity of his tale of woe, and then a quick return to his former status—on two ships of passage behind and a fine story to embellish in the retelling.

Even in the slumland of Coleban, one cannot wander on forever without encountering a Peacekeeper, even though the Peacekeepers of Xanabar generally stay where the action is.

And so young Terry espied one of the gold-braided Keepers of Xanabar’s Peacekeepers and took heart. For Terry had been taught that policemen were as dedicated to the business of helping those in need as they were to the game of pursuing the ungodly. That he lacked understanding was a point in his favor, for the Peacekeeper should realize that he was an outlander who needed help.

With the ingrained ability of the public servant to turn in the wrong direction, the Peacekeeper rounded a corner instead of turning and coming toward Terry. The lad broke into a run, lest he lose sight of the public protector. He rounded the corner at a dead run, caught sight of the uniform and raced onward until he almost skidded into the backside of the Peacekeeper.

The Peacekeeper turned at the sound of the running feet. He turned to face the oncoming Terry, and he smiled.

And Terry Lincoln came to a sliding halt, reversed his direction adroitly, and then proceeded to use his best high-speed energy.

For the Peacekeeper, in the full regalia of a middlearchy of Xanabar's force, was none other than saffron-face. He had been relieved of his odious role and restored to but there was no change in his face, his attitude, or his demeanor.

* * * *

As Terry raced away, the Peacekeeper's hand-whistle shrilled, and the shout he delivered did not need any Understanding to decipher.

Once more, Terry eluded a group that swarmed down to encircle him. He raced through the slumland of Coleban with an ease that carried him out of their hands, but as he went, he realized the very uncomfortable but obvious truth: someone was after him.

He was Target For Tonight.

When he was again free of pursuit, he paused to think. What they wanted of him he could not imagine, but the fact remained. It occurred to him that he could not appeal to authority, since authority in the uniform of the Peacekeepers seemed to be an active part of this ploy. His nature was to rail against them, to label the operation a senseless, stupid game. But a glimmering of reason entered, at least long enough to let him understand that a large organization does not play senseless, stupid games. They had something to gain, else they would not play.

It came as a blow to him to realize that he could not in confidence call upon the protection of the Peacekeepers of Xanabar. It cut fifty per cent of his future; he had left the process of continuing on and on and on through this wilderness of broken window and rotten timber and decayed brick until he reached the spaceport that lies some Terrestrial kilometers beyond the outskirts of the city.

He found a sidewalk stair with an under-part ungraciously upholstered with ragged mattress and tattered blanket. Their dirt was offensive, but with the natural philosophy that the altitude of fastidiousness depends inversely upon the need, Terry Lincoln hit the very smelly hay.

His occupancy of a favorite assignation spot for the local juveniles of slumland Coleban was not as disliked as it might have been. Most of the would-be users had been homeless themselves, and sympathized with the unknown who slept where they would. They found other accommodations, and felt superior because they, now, were better off than he.

* * * *

Young Lincoln awoke with the coming of true light; that is, shortly after dawn. Strangely, the fact of his plight was secondary to a long-established ritual now unavailable.

First, of course, was the absence of clean clothing, to say nothing of the absence of clean underclothing. Further, he'd slept in his clothing, and this made them even more odious. He could have cheerfully skipped the morning bath at home or at school, especially when something interesting was up, but now that he was absolutely denied any opportunity to bathe, his body felt dusty, his skin crawled with imagined vermin, and he was certain he reeked of unwashed human flesh and stale perspiration. Second—but this quickly moved ahead and became foremost—his tongue and teeth felt furry and coated. Deep inside, Terry felt a vague unease; he knew academically that his teeth would hardly fall out after missing one brushing, but his training refuted the facts. So at this part of his awakening, Terry would have accepted the ration of water to brush his teeth instead of washing his body...

Then came thirst. And the ration of water would have been poured down his gullet. For he had traveled far, through dusty city streets; and he had slept in quite unpleasant quarters in an atmosphere that reeked of rot and filth and decay.

Finally, he was hungry. He'd missed dinner the night before; and whereas he'd have been happy to forgo dinner to partake of something interesting, the fact that he was denied it made his hunger grow as he thought about the prospects. He could have missed a meal or several, without any adverse effect other than the psychology involved in being denied.

With but minor complaint he endured the discomfort of not having a comb. The lack of a urinal bothered him only long enough to espy a drain-grille in the concrete flooring below-stairs hideaway and long enough to make sure no one was about to catch him in the act.

And then came the realization that, hungry or no, bath or not, he had distance to cover. He realized then, for the first time in his life, that he was surely on his own, and that he would most likely be on his own until he, himself, managed to make his way from where he was to where he wanted to be. That the comforts of life were his to attain—once he gained them.

He had one advantage over his operation of yesterday. Today, having slept in his soiled clothing and having been denied his morning ablutions, Terry Lincoln looked more like a youth of tenement slumland.

With no backward glance, Terry left his hideaway and, with a wary eye peeled to catch the gaudy uniform of the Peacekeeper of Xanabar, he began once more to make his way through squalor and filth toward the spaceport. He aimed as he believed to be right, and his aim was good, for he was on the same course as he'd been the night before.

But Martell and Homburg had turned him about neatly. They watched as reports came in, and as their clerks posted colored pinpoints on the illuminated maps and added lengths of illuminated line to mark Terry's course.

With deep interest—separated by the protocol into their own offices—Martell and Homburg watched the progress of the Terrestrial dog Beauregarde, as he followed the trail. That the dog's highly trained nose could separate the scent of a fellow Terrestrial was improbable. They laid this feat to a superior form of Understanding; an affinity toward a fellow Terrestrial that might well fail if Beauregarde were asked to track say, a Crespian.

* * * *

V

The first missed meal—like the first hundred years—is the hardest. If missing a meal sharpens the wits, it is the wit to petty larceny which is sharpened, for the hungry cons finds little to reproach for a swiped breakfast.

Two things worked in Lincoln's favor. First, he was in a district where the food merchant expected to lose a fair slice of his wares—and hoped sincerely that those who stole were truly in need. And second, his fumbling, inept attempts at comestible kleptomania were happily covered over by an outburst of customer indignation over some overcharge, underservice or soft spots in the hard cheese. With clerk, manager, and customer in a full-throated round of hand-waving billingsgate and threats to call upon the Peacekeepers from either side of the mangle, Terry Lincoln found it easy to grab a handful of fruit, some slices of cheese, and a few other odds and ends that were taken simply because they were available.

It was hardly a balanced diet, but Terry was a fifteen-year-old human and, as Humanity knows from the Galactic Center to the oscillating clusters, this has the appetite of a bottomless pit, the metabolism of a blast furnace.

And so he staved off starvation—and fairly well, for the lack of the formal breakfast still remained in his mind, while at the same time he was running a continuous snack-trail as the opportunity came.

Twenty miles a day is a fair trek for the seasoned traveler through wilderness. Lincoln hardly had to hack his way through jungle with a machete, but the pitfalls of running alone took their own toll. For example, he knew that breaking out into a dead run would bring trouble. And so by nightfall on the second eve, Lincoln was still making his way in the wrong direction.

* * * *

By nightfall, Terry had passed beyond the ring of filth and squalor that was characteristic of the blight area. His surroundings were now quieter, sedate, with a nostalgic touch of decadence that had been, but now long gone, glory. It was an area in its dotage, remembering the past all alone, for it had no future but to fall into the widening circle of blight. Its present was not better than the dull state of transition from an active and fruitful past to a deadly, sordid loss of value.

Finding a place to sleep was a problem here. This was no neighborhood where gangs of delinquents roamed to meet and choose up sides to find their pleasure when it was to be found. The neighborhood was old, but it was clean, and it looked clean, and it smelled clean. Just as there was no trash in the gutter, there was no crypt below the stairs, and the floor was upholstered with cast-off blanket and mattress.

The lack of a ready-made pad did not bother Terry as much as it might have. He did not, of course, analyze his feelings about the matter. But the behaviorist would have used the situation to demonstrate the value of experience. Last night, in sheer fatigue, Terry had found lodging when he needed it. Call it, if you must, luck. Today, he had survived a hostile environment; he had eaten, and he had maintained his freedom and, although his sense of direction was wrong, he felt that he had made progress.

Terry Lincoln, for the first time tossed out on his own, had passed his first twenty-four hours in the jungle. And it has been said that a human, physically weak compared to his animal contemporaries, and poorly endowed with tooth, nail, claw, and grown-on fur coat, can be dropped anywhere that life exists and emerge as master so long as he can survive the first diurnal period.

Terry had never heard this statement. But in his mind tomorrow was a new day, and since he'd survived this one, he would survive tomorrow.

The hours of the night passed along, and with them went some of Terry's self-confidence. Again, without his realizing it, he was almost desperate; he was forced to take his chance with what was available. He had no choice. He was forced by his circumstance to make do.

Making do was chancy. Without a ready-made, under-the-stairs assignation-pad preempt throughout the entire district, Terry was forced to seek an alternative. There were many, none of them truly safe. The district was old in the years of the city; it sported the houses of elder grandeur now on their way to seed or to be broken into half-sized rooming mass dwelling. These relics of olden graciousness were equipped with the wide veranda with the broad swing, the chaise, glider, patio lounge, or sofa provided for the afternoon or evening relaxation.

It was a vagrant's choice. Terry could either go on, on, on and on until he dropped

he could take the chance of being found by a late homecomer or an early riser. The w was still not his to run.

So that night he slept on a chaise that was at least a generation older than he. Bu was comfortable and clean.

* * * *

Terry's awakening was not at the hands of an irate householder, but of his own. As dav grayed the sky, his internal alarm clock, set early to avoid the early morning discovery, fast through subconscious anxiety. It rang long before there was any real danger of be discovered by the normal citizen of the area.

He had been discovered by another. On the floor beside the chaise lay Beaureg

Beauregarde was a tired dog. He had been at his tracking without sleep since P Hawley had shouted the order to find Terry, bring the kid to Understanding and return h whole. Beauregarde was a loyal dog, and his master's order was dog's law. Then, hav trailed the youth to this pad, Beauregarde used sensible logic to conclude that part tw the order could wait until both of them were awake. Having found Terry, Beauregarde t time for sleep; it had been a long day for him, too.

But as young Lincoln began to stir, Beauregarde came wide awake. He yawned a splendid display of dog teeth, stretched fore and hind quarters, passed a forepaw o nose, and sat on his haunches, looking at Terry Lincoln. In fair imitation of Peter Hawle frequent sally when finding one of Earth's misplaced, he asked, "Terence Lincoln, I presume?"

Terry recognized Beauregarde for what he was: Terrestrial dog, and undoubtedly here on Coleban as part of the Terrestrial Office. His own name, in the dog's modulate whine and controlled growl, was quite recognizable to the youth, but the rest was wholl even though the dog used a Terrestrial dialect quite close to Lincoln's own.

It was, of course, one thing to know that such as the intelligent dog existed and th intelligent dog was a great help to his master. It was something again to meet one fac face. A bit puzzled how to begin, Terry nodded and said, "I'm Terry Lincoln, and some I'm lost."

The dog waved his plume and replied, "I am Beauregarde. I belong to Peter Haw the chief troublemaker in Coleban."

"Beauregarde—Peter Hawley—the what—?"

"Sorry. You have not Understanding," said Beauregarde, speaking as slowly and

clearly as he could. "I'm Beauregarde. Peter Hawley is my master. Peter Hawley is the Terrestrial agent here in Coleban. We work together. I—er—let's get out of here!"

The simple phrases got through, and the urgency of the last one was quite clear. Without asking why, Terry followed the dog out of the place onto the sidewalk; he found out why a moment later when a man appeared on the spot they'd left.

* * * *

"How did you know?" asked Terry.

"Scent," said the dog. "He smelled of trouble."

"I didn't hear you...."

"I—smelled—him—coming," said Beauregarde, as slowly and as clearly as he could. To add communication, the dog lifted his nose high and sniffed audibly. The combination of sound and pantomime got through to Terry, who nodded.

It became evident to Terry that theirs was a one-way communication link. The dog had Understanding. He had not. Therefore the dog could understand him, but he could not completely understand the dog. Since the dog could understand him, he said, "Let's go."

They reached the corner, and Terry turned to continue in the direction he thought would be toward the spaceport. "It can't be far," he said.

"What—can't—be—far?"

"The spaceport."

"It's on the other side of Coleban," said Beauregarde.

"Er—huh, please?"

"Sorry. Spaceport—is—on—other side of city."

"But it should be right out here—?"

"No. You—got turned—around."

"Okay," said Terry resolutely. "Let's go."

He about faced and began to walk toward the center of Coleban. The dog puzzled for a moment and then said, "Stop!"

Terry stopped, puzzlement in his face. “Look, Beauregarde, I want to get back to spaceport.”

“Right—smack—through Coleban?”

“Why not?”

“Won’t make it.”

“Why not?”

“Coleban—won’t let you. Us.”

Beauregarde sat on his haunches. Like his master, he was big for action and little for the pussy-foot operation. Diplomacy was the show of fang and the sound of the deep-throated snarl and the canine willingness to tackle anything organic enough to bite when bitten. Dimly, to the dog’s ability to think in terms of intrigue, came the hard-to-follow logic that the Peacekeepers of Xanabar had some unknown reason for herding the kids of town and isolating him. Certainly the youth’s present freedom did not represent the inability of a planetful of trained operators to put the arm on an outlander who lacked Understanding.

With little hope of reaching the meaning or the reason, Beauregarde came to the conclusion that they were fairly safe from the clutches of the Peacekeepers so long as he did not attempt to beat their way through the city to the spaceport.

With extreme patience, the dog said, “Terry, try to understand me. We must make our way to the spaceport by the roundabout way.”

“But can’t you help me?”

“I can help,” said Beauregarde quite clearly. “I can see that you are not molested or harmed. I cannot slip you into an inside pocket and smuggle you through the lines of the ungodly.”

“I don’t understand.”

* * * *

Beauregarde took in a deep breath and let it out in a dog-sigh. “That’s the problem,” he said. “You haven’t yet got Understanding. If you had, this would make sense to you—probably more sense than it does to me.”

Of this, Terry grasped little more than the obvious statement that he lacked Understanding.

“Well,” said Beauregarde, eyeing the youth, “Peter said that I’d have to bring you Understanding before we would beat our way through this mess.”

“Understanding?” asked Terry.

“You—need—Understanding.”

“And you can bring it to me?”

“No.—I cannot. But I—can—bring you to Understand.”

The difference was lost on Terry. He had never heard of either Mahomet or the mountain, and so whither went thither was neither an issue nor a puzzlement. It simply not exist.

To Terry, the acquisition of Understanding was to follow something like a comprehensive final test, or passing a stipulated age... or something he did not understand. It was, in fact, the last. It is impossible to explain Understanding to he who has it not and quite unnecessary to mention it to he who has it.

“Look,” said Terry, “Why don’t we barge in and throw our weight around?”

Beauregarde looked at Terry. The kid was speaking the language known best to both Beauregarde and Peter Hawley, but the process of tying into a platoon of the Peacekeepers required more than Understanding. It required the like of Peter Hawley quarterback the operation, for Peter had the timing, the play, the gimmick, and the right of voice to cut this kind of mustard.

Without Understanding, Terry was not going to be of any help. With it, Terry and Beauregarde could communicate; and although there could be but one Peter Hawley in Beauregarde’s life and admiration, Terry with Understanding could be a big help to Beauregarde and his grasp of the way Peter Hawley might have operated in the same circumstance.

The dog faced Terry and said, “I can—help you. But you—will find me—a responsibility. First—I must be fed.”

This Terry managed to follow. The concept of a predatory carnivore taking his food where he caught it was for the dictionary, the encyclopedia, and the course in paleontology and primitive life that he might be forced to take at Scholar’s Cluster next semester. Domestic animals were fed.

He said, "If you're hungry, we'll have to steal food, you know."

"Yes," said Beauregarde. "But how?"

"Yes—but—what?"

"How—are we—going to steal—this food?"

Terry Lincoln looked at Beauregarde. He saw a short-haired animal of about eighty-odd pounds, in his own estimation, standing a bit more than a half-meter at the shoulder. One thing occurred to him: this Terrestrial dog was harder and faster than he. The fast footwork belonged to the dog. So he said, "I'll make some sort of a fuss, and they are looking at me, you grab something to eat."

"Good boy," said Beauregarde.

* * * *

VI

They approached the market from opposite sides. The boy was inconspicuous except for his disheveled appearance, which was out of place in this district. The dog was as conspicuous as a billboard, for Xanabar had no such four-footed animal, but Beauregarde kept his identity concealed by animal tactics until the action began.

The operation backfired.

The unkempt youth was obviously one of Xanabar's great underprivileged. His actions also indicated that he was not quite bright. So if this benighted youth was forced to steal his food, common decency required that he be fed, and neither merchant nor customer felt moved to raise an outcry. Instead, they treated Terry's fumbling attempts at shoplifting as the backside observation. Those who could not turn their backs managed, somehow, to be looking over there; anywhere but at the youth who hoped to create a stir.

However, the stir was created by Beauregarde.

The dog was by no means unknown to the people of Coleban, although less than one out of a thousand had ever seen him in the flesh. The only dog in this part of the galaxy that Beauregarde had appeared in picture and video as a member of the Terrestrial Office

But as Terry had realized, knowing that such a thing as Terrestrial dog existed and that meeting the animal were two different items on the agenda.

Beauregarde swooped in with his headlong gallop, hindpaws scissoring in front of the forepaws for the spring, then the stretch for distance. It was a magnificent sight, a spectacle of animal in full flight. Unfortunately for any plan made by Terry Lincoln, the members of Coleban bent their attention to the dog. There were “oohs!” and “ahs!” as the dog raced through, but not one of them moved aside or made the expected opening.

Beauregarde was barricaded from the counter by spectators.

It remained to Terry Lincoln to remember what they were there for. Since things had gone in reverse—including the eyes of the onlookers, Terry found it easy to latch onto and grab of edibles.

And he remembered. Beauregarde was the hungry one. So Terry loaded up on that which looked as though it would satisfy the dog’s appetite.

“A fine haul,” said Beauregarde, “but did you remember to snatch a can opener with you? Well?”

The words were lost on Terry, but the facts were quite plain. Much of the fodder he had grabbed was brilliantly labeled in seven-color stereograms that made the mouth water. These tidbits were encased in a container carefully designed to withstand any invasion of force that was not equipped with the special device furnished by the company that sold the food. Animal tooth and nail were ineffective; and whereas a mechanic might breach one of the containers, Terry was totally without tools.

So Terry shared his own food with the dog, mentally kicking himself for being so thoughtless.

Beauregarde, on the other hand, let Terry divide his food. Beauregarde was quite capable of foraging for his own, and he was far from lazy, but the main task was to bring the youth to Understanding, and this was one way to do it.

* * * *

With this simple act, their roles reversed—or more properly, were rightfully established.

Terry saw in Beauregarde an end to his problem of being lost, strayed or stolen. Indeed, he might have remained so, ultimately gaining Understanding in the gutters of Coleban, as many of the Xanabarian youth did. But with the arrival of Beauregarde, he was no longer alone. He was part of a “they” relationship, or companionship.

But if Terry expected Beauregarde to lead him through Coleban, either boldly through the serried lines of the Peacekeepers or stealthily through the shadows of night, he was mistaken.

Beauregarde was not a ministering angel. Beauregarde was a weapon; a trained dog of war. When he walked the streets of Coleban or any other city in the sprawling galactic empire of Xanabar, some feared him and some admired him; but all of them knew that this was dog, Terrestrial dog, intelligent Terrestrial dog. And any person who traveled with Terrestrial dog was himself a Terrestrial, of Earth, Sol III. And like any weapon, Beauregarde served two purposes. Calm and unruffled, he was a potent force, but not useful in the unviolent run of life. Aroused, he was an unsheathed menace, and the strange thing was to see that Beauregarde was not angered, that his master was not angered. It was well known that Terrestrial dog would not hesitate to charge into completely unreasonable odds at the order of his master.

As a traveling companion, Beauregarde was tops. But as an asset to Terry Lincoln's hope of being returned immediately to home and fireside, Beauregarde became a first-class responsibility.

Beauregarde could not manipulate the handle on a water-bubble. Beauregarde could not open doors. Beauregarde could not walk unnoticed along the sidewalks of Coleban, although Terry could so long as no one accosted him. Even before Beauregarde arrived, Terry had learned that the way to walk unnoticed through a city full of strangers is to walk quietly and utter not a sound. Open the yap and utter a word, and all around you know what you are: an outlander.

* * * *

The days passed. Beauregarde was not the total loss he said he would be; the dog knew his way around, and he had the dog's Understanding. Beauregarde also had a fine sense of direction, and he knew City Coleban. So Beauregarde did the navigating, and Terry followed the dog's directions and suggestions. Slowly they were circling the central city, making their way through the roughly annular transition area that sprawled between the blight-that-was and the blight-to-be.

Their days and nights were copies of one another. They awoke in the morning and found water for drinking and a meager washing. They stole food in a process that became more and more refined as they gained practice. They walked, Terry openly along busy streets; Beauregarde racing through alleyways and gangways and backways so he would not call attention to the youth by his very presence.

Terry once suggested that they travel by night. At this, Beauregarde snowed the youth with a flurry of objections, none of which Terry could wholly understand—other than the fundamental concept that they were objections complete with valid argument to support them. The basic idea, Terry managed to grasp, was that he could easily mingle with the people of Coleban by day, whereas by night there would always be the unexpected watchman who would find it interesting for fair or foul reasons to note that a youth alone was walking

through the neighborhood in the middle of the night.

So they traveled by day, with Terry walking from checkpoint to checkpoint located by Beauregarde, who operated as a scout.

* * * *

Their progress was marked in fine detail by pinpoint lights and glowing stripline on the illuminated map of City Coleban. Their progress would have gratified Peter Hawley, but it was far from satisfactory to the watchers of City Coleban.

“When will the youth gain Understanding?” groaned Homburg.

“They seem to have worked out a routine that makes it unnecessary,” said Martell. “Not even Doktor gave a thought to the possibility that Beauregarde, the dog, could lead young Terence Lincoln through the streets of City Coleban without first bringing the youth to Understanding.”

“May I offer a suggestion, Zer Martell?”

“A solution?”

“No, Zer. Just a possible explanation.”

“Go ahead, Bod Homburg.”

“Zer, possibly the dog, Beauregarde, is too capable for our purpose. He does not need a youth with Understanding to act for him.”

“An acceptable explanation,” nodded Martell. “No doubt a lesser dog might have turned the trick. But—” and Martell twisted his face in a sour smile—“Beauregarde is the only dog in all of Xanabar.” He thought deeply for a full minute. Finally he took a deep breath and said, “Bod Homburg, their way must be made more difficult. You know what to do.”

“I do indeed, Zer Martell.”

* * * *

VII

Morning came as usual, and Beauregarde and Terry came awake shortly after dawn. They drank at a bubbly fountain, and washed in the water of a small lagoon in a tiny park that retained some of the long-gone elegance of the day when this district was strictly for the ruling class of Coleban.

The pair killed time until the customary store-opening hour by sauntering through the merchandising district and casing the stores and supermarkets for a likely source of food.

When the stores began to fill with customers, they made their usual play. It was, now, a well rehearsed program. They entered from opposite sides, and, as usual, the presence of Beauregarde created excitement. Some of the citizens were petrified with fear at the proximity of the animal, others were fascinated, still others wanted to move in close so they could tell their friends about the incident. With all attention distracted, Terry made his haul from the open shelves—

Or rather, he began to.

He was in the midst of filling a small sack with choice groceries when one of Xanabar's Peacekeepers in the full glittering regalia appeared behind him and laid a heavy hand on his shoulder. Terry whirled, twisting his shoulder out of the Peacekeeper's grip and ducking his head under the Peacekeeper's arm, and plunging away at an angle.

"Halt! Halt in the name of Xanabar!" To back up his order, the Peacekeeper's handgun slid toward the stunner in its holster.

And at the same moment, Beauregarde came around the corner of the counter on a dead run. The dog slid to a crouching stop beside the Peacekeeper and emitted an ugly-sounding snarl. "Stop right there, Peacekeeper," growled the dog. "Draw that thing and you'll lose your hand at the wrist."

Terry stopped at the sound of Beauregarde's first deep-throated snarl; he turned to face them. The Peacekeeper whirled to face the dog. "You are the Terrestrial dog, Beauregarde."

"You are so right. I am."

"You may not threaten the peace of Xanabar."

"If you were capable of keeping it, which both I and my master doubt—or willing to risk it, which we question—neither I nor my master would be required in Xanabar."

"You may not criticize—"

"Stop it, Peacekeeper," said the dog. "The very fact that I am here is proof enough that someone in your upper office is playing games. Otherwise young Terence Lincoln would have been found and returned to the spaceport, instead of being harried and chased and herded from one slum to another and forced to steal."

“There are no slums in Xanabar.”

“Call them ‘Points of historic interest,’ then,” said Beauregarde.

“This is the missing Terrestrial youth, Terence Lincoln?”

“You call it ‘missing,’ but we call it something else.”

“This is the missing person. He is also a thief. He must answer to the Justice of Xanabar.”

“That’s what you think,” said Beauregarde with a snarl. “Terry has had enough of so-called Justice of Xanabar to last him a lifetime. Now if your justice were real and honest you would escort us to the spaceport and make certain that this youth is properly restored to those who will see him home to Mother Earth.”

“You cannot conceal his thieving under a cloak of false righteousness! Nor may you impute that Xanabar renders false justice when we take a thief to jail instead of releasing him to fly free and clear. He must answer to—”

* * * *

“Oh, knock it off,” snapped Beauregarde. “Terry and I will go out of here in one piece on our feet, whether you live to tell your family about it or not. Now stand aside, and don’t touch that hand on that stunner—or we’ll find out how fast we are, you and I.”

“You cannot threaten—”

“I already have. Now, if you want to try your skill against my speed, start reaching ahead, draw it. Start now. I’ll have plenty of time to take you after you start. Make your move first—”

“Look out!” shouted Terry. With a single, whirling motion, the youth turned, scooped up a container of something handy in size and shape and hardness, and hurled it in a bullet-throw over the dog’s back into the face of what looked like an ordinary citizen of Coleban.

But the ordinary citizen was far from ordinary, for truly ordinary citizens do not carry minibeamers in the breast pocket ordinarily reserved for pens and pencils.

The hard canister caught the citizen across the bridge of the nose. The rim bit down as bone splintered. No will of iron was ever strong enough to prevent the reaction; pain and shock removed all plan for action from the man’s mind. By reaction, his hand opened and the minibeamer dropped as he raised the hand to his face in the instinctive gesture.

Beauregarde leaped, caught the falling minibeam in his mouth, and with a sharp snap of his powerful neck, he hurled it against the face of the counter beside him. It hit with a thump! and a blinding flash of light as its bottled power went radiant.

In the excitement, the Peacekeeper managed to draw his stunner and was bringing to bear on Beauregarde.

“Hit him low!” barked the dog as he leaped for the Peacekeeper’s throat.

Terry plunged forward in a football tackle, hitting the Peacekeeper several inches lower than any referee would have allowed. But this was no game, and neither was it time to behave like a gentleman.

The Peacekeeper went over in a tangle, his legs cut out from under him by the football tackle, and his topside completely overwhelmed by the mass of the dog, who hit him at the throat. There was little bloodshed. Beauregarde merely nicked the soft flesh, but he kept the throat between his fangs until the Peacekeeper had time to realize just what the dog could have done.

Then with a gesture calculated to live in the humility of the Peacekeeper for the rest of his life, Beauregarde slurped the man from the chin to hairline with a large, soggy, rough-surfaced tongue-of-dog. “You’re dead,” he said. “Lie down and be counted.”

Then the dog looked at Terry. “I think we’ve stirred us up a Donnybrook in the good old Peter Hawley tradition,” he said. “Let’s cut out and slope for home.”

* * * *

Terry scrambled to his feet, pocketing the Peacekeeper’s stunner because it seemed a good idea at the time. He looked around at the people of Coleban; some were frozen in place, some were leaving, and a fair number were converging warily. “Beau,” he replied, “I read you a solid five by five.”

Side by side, the Terrestrial youth and his dog headed for the nearest door. The crowd melted before them, opening a way; those who were the professionals in this game beat a parallel course outside the immediate crowd and began to converge on the door. Slowly; they would bring up behind and surround the pair with the aid of those outside.

A large figure loomed in the door, blocking it almost completely.

“Beau! It’s old saffron-face. Hit ‘im high; I owe him one!”

They hit old saffron-face one-and-two. Beauregarde caught the throat with the soft-trained mouth of a retriever, and the dog's mass bent old saffron-face backward, thrusting the barrel stomach forward on an arched spine. Terry connected with this mass facade in a shoulder block that caught the plexus and the pit of the stomach with a paralyzing blow.

Saffron-face did not go down. He went back and back and back, off-balance on the rounds of his stumbling heels, his trained body struggling to regain footing. The mass of flesh, which he'd used as a barrier at the doorway, became the main point of a one-booby flying wedge which battered its way backward through his own men and created an avenue through which Terry and Beauregarde went before the opening could close behind the human battering ram. At the curb, the stumbling heels found no means of support, and saffron-face went over on his back, walloping the back of his head on the pavement.

He was out stone cold in the gutter when Terry and Beauregarde used him as a gangplank toward freedom.

* * * *

Once free of immediate hands, both of them turned left and ran along the center of the street. They outdistanced the local gathering with ease, since the locals were still trying to figure out what had happened. By a zigzag course, they managed to get themselves out of sight.

"And now which way?" asked the dog.

"The shortest and quickest," said Terry immediately.

"That may lead us through some trouble," said Beauregarde, after looking around to locate himself with respect to the rest of City Coleban.

"That may be," replied Terry, "but there's two things wrong with trying to make it out the sly."

"Two?"

"Two. First, I've suspected all along that this was a planned operation. Now I know it is. So the sooner we can get out of it the better—it'll give us less time to get trapped. The reason I know it is a planned operation is because I now know why they want me and with Understanding. You see, Beau, I am a courier."

"A courier?"

"Beau, I could hardly understand you before, even though you were speaking and

thinking in my own native tongue. Now even this mess they gabble around here makes sense to me. I understand the tongue of Xanabar. Now, how could you send a secret message through enemy territory in a universe where Understanding is the way of life?

Beauregarde said, "I wouldn't know. My world is not filled with intrigue and secret messages."

"Well, one of the first things about secret messages is to conceal the fact that a message is being sent. In this universe of Understanding, the only way is to send the message by some courier who does not yet have Understanding—neither he nor anyone he meets will be aware of the fact. Second, of course, no one could simply carry a letter. To carry the information, I was given posthypnotic orders to forget what I'd been told until I got back home on Earth. Unfortunately, I gained Understanding while here in Xanabar. And when they get their clutches on me, they can extract the information because, with Understanding, they can call up information from my subconscious."

"And you know what this message is?"

"Sure—and so does whoever runs the Peacekeepers of Xanabar. So it's no secret. Professor Marquart discovered the secret of Scholar's Cluster and planted it in my mind to carry back home."

"Whoof!" said Beauregarde. He looked up into the sky. "My eyes are not as sharp as my nose, and I can neither see nor smell a hovercar at twenty thousand feet. Terry, do you see anything up there?"

"Clouds. Oh, there's a flash, a speck. Can't make anything out."

"That will be an observer in a hovercar. Probably with a rifle-microphone which lets him listen to every word we say."

"So we cannot go by stealth," said Terry. "Then we will go boldly and defy them at their worst. Come on," he said, "which way toward the spaceport?"

Beauregarde pointed, then, as Terry started walking in that direction with a determined stride, Beauregarde aligned himself at the lad's side.

* * * *

VIII

Once more there came a change in the environment. A subtle change; not one of cracked windows, peeling paint, nor of lost elegance or a standard of living. It was a change in traffic, both vehicle and human. It was not a change in the pattern, but in the density; a

some computer had extrapolated the natural city pattern of shaded randomness along asymptote toward zero. It looked exactly like one of those periods in the life of any community in which, in certain hours, everyone in the area is busy inside.

And, being so natural-looking, it went unnoticed by Terry and Beauregarde.

The total area was roughly elliptical, with the major axis aligned with their general course. Being further geometric, Terry and Beauregarde were approximately at one focus point of the ellipse, the behind point, so that the other focus was always ahead of them as they walked toward the spaceport—still far across the city—the citizens of Xanabar were being ordered aside and away, to clear the area; they remained aside and out of sight as the Terrestrial pair passed, and were then permitted to resume their daily lives.

It was an operation that could only have been carried out with the resources of a large, despotic organization which was driven by the prospect of great gain or loss.

From the site, the operation was not possible to grasp, but it was clearly visible to Martell and Homburg.

These Xanabarians had abandoned their offices and the huge illuminated map of cramped quarters in a huge tractor-trailer van, fitted inside as temporary field offices. In place of the citywide map was a sectional area to the same approximate scale and detail showing the neighborhood. Tiny colored pointlets of light labeled and identified all vehicular and pedestrian traffic so that citizen could be told from Peacekeeper, with Terry and Beauregarde especially coded.

* * * *

They were not alone, citizen, Peacekeeper, and the two targets. Peter Hawley was present too. Peter did not have the advantage of the high-flying hovercars, with their rifle microphones and the super tele video lenses, and the computer that maintained surveillance over the neighborhood by following the moving traffic and maintaining the code once the object was identified.

But Peter Hawley was not without his own sources of information. Earth's recognition of the silliness of trying to operate under cover in a universe full of Understanding had another facet. By using Beauregarde, an object as conspicuous as a paid political advertisement, Peter could keep track of Terry with fair accuracy. For the passage of anything as exotic as Terrestrial dog through any district made various waves. Some were frightened, some curious; many had heard of this strange beast with the tongue of man. Speculation, fear, wonder, sometimes amusement, and quite frequently fanciful tales of personal encounter were commonplace in the streets and in the vurguzz joints; all one had to do was listen carefully and then sort fact from fiction.

By keeping one ear to the ground, Peter Hawley had been able to keep track of and the dog, and so long as progress was maintained, Peter let well enough alone.

Like Terry, Peter was at a total loss to figure out what Xanabar had in mind; certainly there was enough manpower to collect the kid if Xanabar wanted to, and was willing to pay the price of overt kidnap. In the hope of gaining some idea of what was going on, Peter kept things ride, while watching carefully.

When the call went out to execute one of their mobilization plans, its interception by the Terrestrial Office was a matter of standard operating procedure. Peter went to the periphery of the ellipse, along with Martell, Homburg, and their specialized force of Peacekeepers. Knowing the city well, Peter stationed himself fairly accurately on a narrow street between Beauregarde's position and the spaceport. This left an error-probability of several city blocks, but it was close.

So in this area there were three very determined attitudes. One, a very large and well-determined group, was not going to let Terence Lincoln get to City Coleban spaceport; they were restrained only by the sure knowledge that open violence would bring about retaliation and they were wary of the fratchy temper of all Terrestrials. The second, a minority consisting solely of Peter Hawley, was bent on joining forces with Terry and Beauregarde and marching out of the district with them, daring any Xanabarian to put one toe over the demarcating a forty-foot circle about them. The third consisted of Terry and Beauregarde who wanted out and were going to get out, with or without help, with flags flying or furled, either marching down the avenue or slinking through the alleys.

* * * *

It was Terry who noted the lightening traffic. Not as such, however, but in an entirely different way.

The sight of standard urban traffic is natural, as inconspicuous to the city man as Poe's purloined letter or the postman whose presence was so stereotyped and scheduled that he was above suspicion. But when traffic thins down, it is no longer the collective traffic, but individuals and vehicles which are not a mass, but a bunch of articles that may look nor act alike.

Put another way, traffic is a moving mass; but a vehicle is a means of transportation.

"Beau," said Terry. "Why must we walk?"

"I don't see any visible means of riding," said the dog. "Why, there aren't any cars parked along here. And if we did try to swipe one, could you drive it?"

“Not really, and this is hardly the time to start learning, even though the principle be about the same as any vehicle. You know, a dingus to start it, a doodad to make it go fast or slow, wheel or lever to steer, and some sort of brakes. Finding out which is which be hazardous if done empirically. No. Beauregarde, I was wondering whether we might convince some driver that it would be the friendly thing to drive us.”

“I see,” said the dog. “You mean, ‘To the spaceport, James, or kiss your arm good-bye.’?”

“Something like that.”

“Might be interesting, at that,” said Beauregarde, looking up and down the street carefully. “And now that you mention it, traffic is sure thin. Terry, I’ll bet you a nice juicy steakbone that any driver we stop will be Peacekeeper in mufti. This is the kind of cap they plan.”

“Well, you’ve taken on a Peacekeeper or two, haven’t you?”

“Sure thing. Peter and I have taken on quite a number. But never more than one two at a time.”

“Then one more won’t bother you.”

“Not really—but this time we’ll be taking on the entire force, Terry.”

“The entire force is what they’ve got surrounding us,” said Terry thoughtfully. “And we’re going to be collected at their option—unless we bust out shouting.”

“I hear you,” said Beauregarde. “But what do you propose to do about it?”

“We wait until we and a vehicle approach a traffic signal simultaneously; specifically a vehicle with a single occupant, the driver. And one with doors easy to open.”

* * * *

They continued toward the next intersection, paying little apparent attention to their surroundings, but watching carefully in any windows to see if there was a vehicle approaching. Far behind, one turned in to the street and began to approach them.

Terry chuckled. “Now I know why the old folks kept saying that they simply can’t explain Understanding to someone who doesn’t have it and didn’t have to to someone who has. It’s sort of like playing chess with every move and motive explained.”

Beauregarde said, “Peter always claims that Understanding is a sort of refined

premonition or intuition; that women and dogs always had it even before it was discovered.

“Beau, when was Understanding discovered?”

“All interstellar-traveling cultures have it,” said Beauregarde. “It seems to enter a culture that is on the verge of real space travel. I guess, about that time, most people in that culture are well warned and prepared to believe that Out There they will meet creatures of extreme ugliness whose ancestors were out spacing while the home race was still settling their differences with a stone hatchet.”

“I mean in the individual.”

“Same difference but less vast. It comes rapidly once the individual really matures enough to take on true responsibility, face the consequences of his own acts and about to take care of those who depend upon him. Now, of course, there always have been individuals like that, many of them. But Understanding has to wait until the culture is ready for it. Until then, it lies a dormant faculty that all possess to some degree, but—er, let’s put it away, Terry: until the culture and its people are advanced enough to grasp Understanding itself can only be latent. And—er, here comes our transportation, right on time and to your specifications. Ready?”

“Sure thing.”

“Let’s go and find out who can maneuver the faster.”

* * * *

IX

The car stopped and paused overlong. Terry opened a rear door, and Beauregarde leapt in, over the back of the front seat, and showed the driver his fangs. Terry got in behind him and closed the door.

“Peacekeeper,” said Beauregarde, “this may be an act to you, but we’re deadly serious. Got it?”

The driver hit the go pedal, and the car leaped forward; within five seconds it was going fifty miles per hour. “Bite me at this speed,” said the driver, “and none of us will get home.”

“You haven’t won yet,” snarled Beauregarde. “You’ll have to slow down sooner or later, and then you lose—unless you’re driving us toward the spaceport.”

“Watch me,” said the driver. He goosed the pedal until the car was making better

than sixty-five. Then he relaxed behind the wheel.

Neither Terry nor Beauregarde had ever envisioned a situation like this, but both of them understood what was going on. Obviously, the driver was following a carefully planned route, from which all traffic had been cleared so that such breakneck speed was quite possible. It went quietly; there was no blare of the horn at intersections. And to point up the magnitude of the forces that Terry and Beauregarde were facing, traffic signals always turned to favor the hurtling vehicle, even though there was no side traffic visible at any intersection.

“This always proves what Peter says,” said Beauregarde. “If you want to ride at a break-law speed, ride with a keeper of the peace, who is sworn to defend and uphold the law. It’s fun going this fast, isn’t it?”

“So far. But when he stops?”

“We’ll see. Surely,” said Beauregarde to the driver, “you don’t think that stopping before fifty thousand witnesses is going to stop me from making a mess of you.”

“Not really. It’s one of the hazards of the profession,” said the driver.

With great skill, the driver hit a turn, tapped the brakes until the car drifted, waited through the drift until the car was aligned with the new street, and then kicked the drive again. The turn took no more than a second or two, and the force of the turn made the car hang tight—too tight to bother watching their surroundings.

When stress and strain diminished it was too late; dead ahead and blocking their path was a huge van. To Terry it was a sure crash, and coming too suddenly to do more than realize that a sure crash was coming. To Beauregarde it was part of the caper but this was far too short to do more than appreciate the fact. To the driver it was part of his instruction and training, for instead of hitting the brakes in a panic stop, he hit the go-pedal and clenched the wheel carefully.

The back of the van dropped, making a ramp. The car hit the ramp and raced up with hardly a bounce on its special springs. Inside the van was a solid mass of feathery padding which cushioned the possible crash; a carefully designed mass of plastic that applied a braking force inversely proportional to the kinetic energy of the racing car.

The car came to a stop with all three occupants pasted to the front by the force of deceleration, but unharmed beyond a few bruises and the inevitable blackout that comes with the high-G forces.

* * * *

When the smoke cleared away, Beauregarde was in a small cage, Terry was manacled

lightly to a chair, and their driver was receiving the thanks of a man behind a small but desk.

Beauregarde said, "That was a fine operation—but then, it would be, wouldn't it, Commissioner Martell?"

"You know him?" asked Terry.

"Sure. Peter and I have met him a number of times, but under different circumstances. This is Commissioner Martell, Number Two Peacekeeper. The party s at the other desk is Homburg, Number Three, or among the several Number Threes th Martell has reporting to him."

"Quite," said Martell to the dog. To Terry, he said, "You are Terence Lincoln, of B

"I am—and now that you recognize me, I demand that you place me on a space bound for Earth."

"Stop acting childish," said Martell coldly. "You've gained Understanding. You are responsible for your acts. You are going to account for them."

"I am a Terrestrial—"

"You are a lawbreaker, and we are operating within the rules of universal law."

"If so, why this big operation?"

"Quite simple," said Martell calmly. "At first, we assumed that your runaway was a boyish lark, the universal urge to go it alone in a strange land for a time. We tolerated boyish pranks. We smiled at your theft of food, for it is neither the policy of Xanabar nor the desire of her citizens that the stranger within her gates go hungry."

"That was darned nice of you," said Terry.

"Then you team up with this animal, and at that point you became no longer a you with an adventuresome spirit, but the center of possible danger to the Peace of Xanabar. At this point, the Peacekeepers we assigned to see that you came to no harm in the bad of City Coleban were then assigned to protect the Peace. And then you gained Understanding, Terence Lincoln, and became responsible for your acts."

"So I did. But there's an—"

"And, with Understanding, did you abandon your lawlessness? You did not. Instead you assaulted a Peacekeeper—"

“Old saffron-face had it coming.”

“—during the performance of his duty, instead of appealing to him for protection safe delivery to the spaceport. Had you renounced your former acts by becoming a peace-loving man, you would not be here.”

“Nuts,” replied Terry. “I know why I’m here and so does Beauregarde.”

“Of course,” said Martell smoothly. “Understanding works that way. You are a lawbreaker, and you are here to account for your petty felonies.”

“Fine. And I suppose that I will be sentenced to a series of terms for vagrancy, trespass, and using old saffron-face for a punching bag? Terms long enough to squeeze the secret of Scholar’s Cluster out of me.”

* * * *

“You have that secret?” asked Martell.

“Get off it,” growled Terry. “You know it, and I know it, and Beauregarde knows it. Maybe even Peter Hawley knows it by now.”

“Yes,” smiled Martell suavely. “But you see, I know it now because you’ve told me.”

“Terry,” said Beauregarde, “you can’t fight this city hallitician with words. You’ll find that he and his gang of Peacekeepers were acting only in the best interests of Xanabab for both Earth and its hapless youth, Terence Lincoln. That he and his have put you through the wringer, and out of it comes a hidden secret—that’s just serendipity, Terry.”

“Well,” replied Terry thoughtfully, “nothing we’ve done is a capital crime, so he’ll have to release us sooner or later.”

“I’d prefer it sooner,” said Beauregarde. “This cage isn’t big enough, and I’m not in favor of cages anyway. Peter—”

“You can forget Peter Hawley,” said Martell. “The danger of you and the youth together was so great that we have cleared the entire district of anybody except us Peacekeepers, who have sworn to lay down our lives to maintain the Peace of Xanabab.”

“And I suppose that stunt with the truck full of crushable gunch was simply part of your Peacekeeping activity?”

“How would you apprehend a headstrong youth and a dangerous animal who had

invaded the car of a citizen and threatened the citizen with the loss of life or limb? Would you hold up a hand and cry 'Stop!' or perhaps—"

"Forget it," said Beauregarde. "You make me—"

There came a crash. The van lurched, humping high on one corner, and then dropping down so that the corner was lower than the others. The sense of smooth motion stopped.

There was muffled shouting outside. The van lurched slowly again. Then came the incredibly short electrical tingle that fills the region when a nerve stunner is fired; the energy came through the metal walls of the van, even though the bolt would not have penetrated.

The uproar outside ceased. The van door opened, and two Peacekeepers came carrying a man by ankles and armpits. The man was not as stiff as a board, because the cliché implies something straight and flat. The man was stiff all right, but he had been in the typical posture of a man halfway through the act of getting out of a car in a tearing hurry. The Peacekeepers dropped him on the floor, where he rolled over, statuelike, until three points of rest came to ground with the center of gravity between them.

"He came roaring down the street flat out," explained one Peacekeeper. "He didn't miss you. Instead, he aimed the car like a missile."

Martell nodded and waved the Peacekeeper away. "Now we are complete," he said cheerfully. "Terence Lincoln, may I present Peter Hawley—who won't be able to do anything for a day or so. Now," he said to the dog, "what were you thinking about Peter Hawley?"

"There isn't much to say," said Beauregarde. "You've got me caged, Terry man, and Peter to that chair, and Peter Hawley in the deep freeze. We can't even go where you'd like to go—we'll have to be taken."

Martell turned to Homburg. "Whistle up your car. There'll be room in it for all of us if we put Hawley and his dog in the trunk." He turned to Beauregarde. "And that makes three," he said, waving a hand at Peter. "Lawbreakers all; for we will find that his stated purpose was to come here to assist you criminals to escape. He is an accessory, and thus accessory of the same breaches of the peace as you."

Beauregarde made an ugly dog-noise deep in his chest. Terry rattled the handcuffs helplessly. Peter Hawley startled everybody by emitting a long, lung-shuddering sigh and collapsing from his up-ended statue position to a completely flaccid limpless flat upon the slightly tilted floor.

"They must have hit him with a near-miss or a splash-off from the car body," said Martell. "He shouldn't go limp for at least another hour."

“No matter, Martell,” said Homburg. “It will make him easier to put in my trunk.”

“So it will, Homburg. So it will.”

Inwardly, Homburg glowed. Martell had been addressed as an equal and had received in kind. He had been accepted.

For one of five in the office van, things were looking up.

* * * *

X

The man who entered wore the uniform of a Peacekeeper, complete with sidearm, but on his shoulder was the blazer of a chauffeur. He saluted Homburg and said, “Your car, Zer Homburg.”

“You made good time,” nodded Homburg. “Get help and put that one in the trunk. Then come and get that animal and put it with its master. In the trunk. We will be quite capable of handling the youth.”

“Yes, Zer Homburg.”

The chauffeur turned to walk toward Peter Hawley as Homburg approached Terry Lincoln. It was their first mistake.

Terry waited, looking helpless as Homburg approached, the ring of keys dangling from his hand. “Behave,” he said to the youth, “and you won’t get hurt.” Seeing no movement even an air of defiance, Homburg put the key in the lock, turned, and sprang the cuff. Terry lurched backward in his chair, curled like a ball, put his feet up, and let them fly outward. Homburg went hurtling back, the ring of keys completely torn from his grasp. He hit the cage at the same time Terry’s chair completed its backward overturn and hit the floor.

The blow took Terry’s breath, but he was young, and he had been hit before on the playing fields of Scholar’s Cluster. He landed almost flat, and rolled to one side, the keys dangling from the lock.

Homburg’s scream stopped all motion. He’d fallen with one arm close to the dog cage. While Homburg’s body was still at a tumble, Beauregarde had snapped at the fingers and caught. Now he had hand and arm through the bars; he had Homburg’s wrist between the gleaming molars, with the fangs denting the skin on the far side of the wrist. As the echoing scream died, the dog applied pressure. Homburg screamed again.

Terry got to his feet slowly, watching the action—or the frozen lack of it—warily. “Beauregarde means ‘stop!’ or your man Homburg loses a hand,” he said.

They stood. Martell in half-a-step forward; the Peacekeeper half-turned from Peter Hawley, his hand on the sidearm; Homburg on the floor, groveling in fear and pain; and Beauregarde with a trickle of blood on his muzzle.

They stood frozen for but a moment, but it was moment enough for Terry to regain breath and his balance. Then, as he reached to unlock the other cuff, Martell went into a rage and fury.

* * * *

“Drill them both!” he shouted at the Peacekeeper, and with the words he leaped for Terry. Terry swung the manacles; they were not the morgenstern of knightly warfare, but they were lethal against unarmored flesh. The open cuff caught Martell in the mouth, and stopped him in midstep.

Behind the Peacekeeper, Peter Hawley fought himself to his knees, lunged with a painful lack of nearly all coordination, and managed to connect—not with the Peacekeeper’s shooting arm, but with his calves and ankles. The shock wrecked the Peacekeeper’s aim, and the bolt hit the metal wall and simply disappeared. Its field tingle went unnoticed.

Beauregarde snapped his head, and Homburg screamed once more and fainted. “Get me outa here!” roared the dog. Terry swung the manacles again, but Martell ducked back—and into the Peacekeeper, who was trying once more to take aim. They both went back a step, off balance; then the second step hit the still-trying Peter Hawley. Peacekeeper and Martell went down asprawl, landing on Peter, who did not feel a thing.

There were, by luck, only two keys on the dangling ring that still hung from the cuffs. One was the key still in its lock. The other was the only one free. Without even looking, Terry lunged with the other key, slid it into the lock on the cage, and turned. Beauregarde came out with a leap that brought him face to face with Martell—or more properly, fang to fang with Martell. With a snarl, Beauregarde said, “I broke his wrist. What do you want to lose, Peacekeeper?”

Martell cringed back from the fangs, but replied, “You wouldn’t dare—”

“Oh, I can bite gently,” said the dog.

“You cannot win. We’re surrounded by my men for an entire district of City Colebrook.”

“Then I suggest that you tell them that you are escorting Terence Lincoln to the spaceport, in person, with Beauregarde the dog and Peter Hawley the Terrestrial Agent.”

part of the embarking party.”

Martell sneered. “Watch,” he said. He stepped to the door of the van, ran down to the window and shouted orders that the Terrestrials were to be given free passage.

* * * *

Seconds later there was a muffled blast outside, and a black missile screeched in through the opened window, and hit the far wall. Beauregarde leaped, and caught it in mid-bounce, snapped his head aside without waiting to come to the floor, and whipped the smoking missile through the opened window. It burst outside; some of the pale blue gas billowed out but not enough to do its job. A second missile hit the side of the van. A third hit the window, cracking it, as Terry wound it up. A fourth hit the closed window but did not shatter the glass.

Calmly, Martell said, “I don’t mind taking a gas nap. You can’t stay in here forever and when we awaken, we Peacekeepers will be once more the masters.”

There was an official sounding rap on the door. “Open!” came the cry.

“Go ahead, Terry, open it.”

“And let them in?”

“No, to let me out for a moment.”

“I—er—”

“Open it, Terry,” said the painful voice of Peter Hawley. “He—knows what—he’s doing.”

Terry opened the door. Beauregarde leaped out, catching the Peacekeeper out by the throat, and carrying him backwards by yards before the two of them went down. The man screamed in fear and pain, and Beauregarde cold-bloodedly raked the soft throat with his teeth, making ugly furrows that ran together and down to a spreading red puddle on the pavement. Then with a leap the dog turned, made three long bounds and on the third passed back inside the van.

Terry slammed the door behind the dog; he was just in time to stop a spattering of missiles that further cracked the glass but did not breach it.

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Beauregarde faced Martell; there was menace in the dog’s forward pose and there was anger in the dog’s voice.

“You, Martell, listen to me. We’re safe in this bullet-proof, mobile castle of yours, you’re likely to win so long as you can keep us bottled up. But we’re not staying. Peter here—”

“I’m not much—like my fighting—self,” groaned Peter Hawley.

“In fighting trim or barely able to sit up and take nourishment, you’re good for this game.”

“Game? Oh, the one about the farmer with the fox, the goose and the sack of grain and one wide river to cross in a leaky boat?”

“The same—with Terry as the prize. Now, Martell, hear this! I am a dog, and while I have Understanding, it is a dog’s Understanding because, being a dog, I think like a dog. No civilized person commits murder, Martell. But isn’t ‘murder’ confined to the killing of one’s own species? I hardly think of it as ‘murder’ when Peter Hawley points at some bastard and says, ‘Beauregarde, kill!’ because the deceased isn’t my kind of herring.”

“Now,” went on the dog, “that Peacekeeper out there on the street isn’t dead, but he will bear the scars of dog-fangs for life, and he will forever more be scared of the sight of a Terrestrial dog. You, Martell, think of him as an example and tell your mob of Peacekeeper warriors outside to think of their Glorious Leader, Commissioner Martell, lying out there real with his throat slashed with sharp teeth—because that is the name of the game of the farmer with the fox and the goose and the grain.”

“Threats cannot—”

“Get off it!” snapped the dog. “They can, too. You will therefore give orders that Homburg’s tame Peacekeeper is to drive through your battle line with Terence Lincoln. If your outfit remains honest. Once Terence is in the hands of the local Terrestrial Office spaceport, your Peacekeeper and Peter will return, at which point I will permit your master Homburg to depart as whole as he ever will be. It shouldn’t be too bad,” said Beauregard with a cynical tone in his voice, “because a man in his position hardly needs a good, fast-drawing gun wrist. Once Homburg gets to a sawbones for his shattered wrist, and gets a shot of perk-up to dissipate that nerve-stun hangover, he himself can return alone and we happy trio will walk out of here with you in the middle.”

“You fools, you cannot—”

“But you forget. It’s ~~your~~ ^{only} throat that we are wagering, isn’t it—Bod Martell?”

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Now, to end all this, this is the ending that got lost. Fred Pohl remarked that it was far better than the ending I had written, and I'm reasonably certain that John W. Campbell would have said the same thing. I leave it to you readers to decide. Go back to Martell's exclamation:

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“Threats cannot—”

“Get off it,” snapped the dog. “They—”

“No, Beauregarde, he is right,” said Terry Lincoln calmly.

Understanding is like maturity. In fact, it is a part of maturity, so one explains them both in the same terms. Then, some acquire maturity and Understanding early, others long time, and some never acquire either. At no time in the life of the young who are present from late adolescence to youthful maturity does some upper being wave a wand and transform one overnight. One starts to acquire Understanding as a babe, when one realizes that sounds have meaning and begins to make them, and one finally has acquired Understanding when operations and traits foreign to the maturing adolescent, but quite conventional to someone else, make sense to the someone else, despite the fact that the person who has just acquired Understanding would have no part in the other's behavior. Thus, Terry Lincoln passed his last test. Martell's operations were anathema to Terry, but he understood how and why Martell behaved as he did.

Terry said, “Threats won't work, Beauregarde. Homburg and Martell rank quite high in the Empire of Xanabar; they did not come to their rank by chance, nor by family, nor by any other reason beyond ambition and competence. To yield under a threat would be a disastrous mistake, one that couldn't be explained to the next highest above them. In fact, they and theirs would fair far better if they gave their lives to defend what is expected of them.”

Homburg groaned, and stirred from his faint. Martell said, as calmly as Terry had said, “You can't win against these odds, young Lincoln.”

“Can't I?” replied Terry. “Can't I? Remember the mission I was sent upon. I don't want to die to complete it. Keep him away from me, Beau!”

The dog took a stance before Martell, and said, “You may prefer to die for your cause, Martell, but you have enough Understanding to realize that if you attack me you will die without accomplishing anything.”

And as the dog took his stance, Terry went to the front of the van and pulled away the crushables, and behind it he found what he sought. He snapped the switch, turned the

function dial to “general broadcast, all frequencies including planet to starcraft” and picked up the microphone.

“Record this,” he said, “and re-broadcast it for the entire universe to hear:

“The secret of Scholar’s Cluster is a complicated multi-modulated series of waveforms generated by three of the central suns of the cluster and intermodulated as radiation passes through the ionized gases between the three suns. The process is fairly new. In the early days of the first wireless telegraph systems, one of the radio transmitters was an electric arc immersed in a heavy magnetic field.

“The three source suns generate radiation that inter-modulates to produce the wave trains that affect the brain. It has the form—” and here Terry rattled off three minutes of mathematical symbols in a notation as far above calculus as calculus is above simple algebra.

To which Beauregarde said, “What does that mean?”

Terry smiled. “Specifically, I haven’t the foggiest notion. I was taught it by rote just as one can recite higher mathematics without knowing what it means. Specifically, it means nothing to me. But in detail, here and now, I have accomplished my mission, and from now and now, the peoples of the outer spiral arm will not have to pass through this mare’s nest graft and colossal dishonesty called the Empire of Xanabar.

“You have lost, Martell, haven’t you, Martell!”

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