

The Early Asimov Volume 01

Isaac Asimov

To the memory of

John Wood Campbell, Jr. (1910-71)

for reasons that this book will make amply obvious

Although I have written over a hundred and twenty books, on almost every subject from astronomy to Shakespeare and from mathematics to satire, it is probably as a science fiction writer that I am best known.

I began as a science fiction writer, and for the first eleven years of my literary career I wrote nothing but science fiction stories, for magazine publication only—and for minute pay-ment. The thought of actually

publishing honest-to-goodness books never entered my essentially humble mind.

But the time came when I did begin to produce books, and then I began to gather together the material I had earlier written for magazines. Between 1950 and 1969, ten collections appeared (all of which were published by Doubleday). These contained eighty-five stories (plus four pieces of comic verse) originally intended for, and published in, the science fiction magazines. Nearly a quarter of them came from those first eleven years.

For the record, these books are:

i, ROBOT (1950)

FOUNDATION (1951)

FOUNDATION AND EMPIRE (1952)

SECOND FOUNDATION (1953)

THE MARTIAN WAY AND OTHER STORIES (1955)

EARTH IS ROOM ENOUGH (1957)

NINE TOMORROWS (1959)

THE REST OF THE ROBOTS (1964)

ASIMOV'S MYSTERIES (1968)

NIGHTFALL AND OTHER STORIES (1969)

THE EARLY ASIMOV

It might be argued that this was quite enough, but in arguing so, one is omitting the ravenous appetites of my readers (bless them!). I am constantly getting letters requesting lists of ancient stories out of me so that the letter writers can haunt secondhand shops for old magazines. There are people who prepare bibliographies of my science fiction (don't ask me why) and who want to know all sorts of half-forgotten details concerning them. They even grow distinctly angry when they find that some early stories were never sold and no longer exist. They want those, too, apparently, and seem to think I have negligently destroyed a natural resource.

So when Panther Books, in England, and Doubleday suggested that I make a collection of those of my early stories not already collected in the ten books listed above, with the literary history of each, I could resist no further. Everyone who has ever met me knows just how amenable to flattery I am, and if you think I can withstand this kind of flattery for more than half a second (as a rough estimate), you are quite wrong.

Fortunately I have a diary, which I have been keeping since January 1, 1938 (the day before my eighteenth birthday); it can give me dates and details.*

I began to write when I was very young—eleven, I think. The reasons are obscure, I might say it was the result of an unreasoning urge, but that would just indicate I could think of no reason.

Perhaps it was because I was an avid reader in a family that was too poor to afford books, even the cheapest, and besides, a family that considered cheap books unfit reading. I had to go to the library (my first library card was obtained for me by my father when I was six years old) and make do with two books per week.

This was simply not enough, and my craving drove me to extremes. The diary began as the sort of thing a teen-ager would write, but it quickly degenerated to a simple kind of literary record. It is, to anyone but myself, utterly boring—so boring, in fact, that I leave it around for anyone who wishes, to read. No one ever reads more than two pages. Occasionally someone asks me if I have never felt that my diary ought to record my innermost feelings and emotions, and my answer is always, “No. Never!” After all, what’s the point of being a writer if I have to waste my innermost feelings and emotions on a mere diary?

At the beginning of each school term, I eagerly read through every schoolbook I was assigned, going from cover to cover like a personified conflagration. Since I was blessed with a tenacious memory and with instant recall, that was all the studying I had to do for that school term, but I was through before the week was over, and then what?

So, when I was eleven, it occurred to me that if I wrote my own books, I could then reread them at my leisure. I never really wrote a complete book, of course. I would start one and keep rambling on with it till I outgrew it and then I would start another. All these early writings are forever gone, though I remember some of the details quite clearly.

In the spring of 1934 I took a special English course given at my high school (Boys’ High School in Brooklyn) that placed the accent on writing. The teacher was also faculty adviser for the semiannual literary magazine put out by the students, and it was his intention to gather material. I took that course.

It was a humiliating experience. I was fourteen at the time, and a rather green and innocent fourteen. I wrote trifles, while everyone else in the class (who were sixteen apiece) wrote sophisticated, tragic mood pieces. All of them made no particular secret of their scorn for me, and though I resented it bitterly there was nothing I could do about it.

For a moment I thought I had them when one of my products was accepted for the semiannual literary magazine while many of theirs were rejected. Unfortunately the teacher told me, with callous insensitivity, that mine was the only item submitted that was humorous and that since he had to have one non-tragic piece he was forced to take it.

It was called “Little Brothers,” dealt with the arrival of my own little brother five years earlier, and was my first piece of published material of any kind. I suppose it can be located in the records at Boys’ High, but I don’t have it

Sometimes I wonder what happened to all those great tragic writers in the class. I don’t remember a single name and I have no intention of ever trying to find out—but I sometimes wonder.

It was not until May 29, 1937 (according to a date I once jotted down—though that was before I began my diary, so I won’t swear to it), that the vague thought occurred to me that I ought to write something for professional publication; something that would be paid for! Naturally it would have to be a science

fiction story, for I had been an avid science fiction fan since 1929 and I recognized no other form of literature as in any way worthy of my efforts.

The story I began to compose for the purpose, the first story I ever wrote with a view to becoming a “writer,” was entitled “Cosmic Corkscrew.”

In it I viewed time as a helix (that is, something like a bed-spring). Someone could cut across from one turn directly to the next, thus moving into the future by some exact interval but being incapable of traveling one day less into the future. My protagonist made the cut across time and found the Earth deserted. All animal life was gone; yet there was every sign that life had existed until very shortly before—and no indication at all of what had brought about the disappearance. It was told in the first person from a lunatic asylum, because the narrator had, of course, been placed in a madhouse after he returned and tried to tell his tale.

I wrote only a few pages in 1937, then lost interest. The mere fact that I had publication in mind must have paralyzed me. As long as something I wrote was intended for my own eyes only, I could be carefree enough. The thought of possible other readers weighed down heavily upon my every word.

So I abandoned it.

Then, in May 1938, the most important magazine in the field. *Astounding Science Fiction*, changed its publication schedule from the third Wednesday of the month to the fourth Friday. When the June issue did not arrive on its accustomed day, I went into a decline.

By May 17, I could stand it no more and took the subway
to 79 Seventh Avenue, where the publishing house. Street &
Smith Publications, Inc., was then located. There, an official
of the firm informed me of the changed schedule, and on
May 19, the June issue arrived. -

The near brush with doom, and the ecstatic relief that followed, reactivated my desire to write and publish. I returned to “Cosmic Corkscrew” and by June 19 it was finished.

I told this story in some detail in an article entitled “Portrait of the Writer as a Boy,” which was included as Chapter 17 of my book of essays *Science, Numbers and I* (Doubleday, 1968). In it, relying on memory alone, I said that I had called Street & Smith on the phone. When I went back to my diary to check actual dates for this book, I was astonished to discover that I had actually made the subway trip—an utterly daring venture for me in those days, and a measure of my desperation.

The next question was what to do with it. I had absolutely no idea what one did with a manuscript intended for publication, and no one I knew had any idea either. I discussed it with my father, whose knowledge of the real world was scarcely greater than my own, and he had no idea either.

But then it occurred to me that, the month before, I had gone to 79 Seventh Avenue merely to inquire about the non-appearance of *Astounding*. I had not been struck by lightning for doing so. Why not repeat

the trip, then, and hand in the manuscript in person?

The thought was a frightening one. It became even more frightening when my father further suggested that necessary preliminaries included a shave and my best suit. That meant I would have to take additional time, and the day was already wearing on and I would have to be back in time to make the afternoon newspaper delivery. (My father had a candy store and newsstand, and life was very complicated in those days for a creative writer of artistic and sensitive bent such as my-self. For instance, we lived in an apartment in which all the rooms were in a line and the only way of getting from the living room to the bedroom of my parents, or of my sister, or of my brother, was by going through my bedroom. My bed-room was therefore frequently gone through, and the fact that I might be in the throes of creation meant nothing to anyone.)

I compromised. I shaved, but did not bother changing suits, and off I went. The date was June 21, 1938.

I was convinced that, for daring to ask to see the editor of Astounding Science Fiction, I would be thrown out of the building bodily, and that my manuscript would be torn up and thrown out after me in a shower of confetti. My father, how-ever (who had lofty notions) was convinced that a writer—by which he meant anyone with a manuscript—would be treated with the respect due an intellectual. He had no fears at all—but I was the one who had to go into the building.

Trying to mask panic, I asked to see the editor. The girl behind the desk (I can see the scene in my mind's eye right now exactly as it was) spoke briefly on the phone and said, "Mr. Campbell will see you."

She directed me through a large, loftlike room filled with huge rolls of paper and enormous piles of magazines and permeated with the heavenly smell of pulp (a smell that, to this day, will recall my youth in aching detail and reduce me to tears of nostalgia). And there, in a small room on the other side, was Mr. Campbell.

John Wood Campbell, Jr., had been working for Street & Smith for a year and had taken over sole command of Astounding Stories (which he had promptly renamed Astounding Science Fiction) a couple of months earlier. He was only twenty-eight years old then. Under his own name and under his pen name, Don A. Stuart, he was one of the most famous and highly regarded authors of science fiction, but he was about to bury his writing reputation forever under the far greater renown he was to gain as editor.

He was to remain editor of Astounding Science Fiction and of its successor, Analog Science Fact—Science Fiction, for a third of a century. During all that time, he and I were to remain friends, but however old I grew and however venerable and respected a star of our mutual field I was to become, I never approached him with anything but that awe he inspired in me on the occasion of our first meeting.

He was a large man, an opinionated man, who smoked and talked constantly, and who enjoyed, above anything else, the production of outrageous ideas, which he bounced off his listener and dared him to refute. It was difficult to refute Campbell even when his ideas were absolutely and madly illogical.

We talked for over an hour that first time. He showed me forthcoming issues of the magazine (actual future issues in the cellulose-flesh). I found he had printed a 'fan letter of mine in the issue about to be published, and another in the next—so he knew the genuineness of my interest.

He told me about himself, about his pen name and about his opinions. He told me that his father had sent in one of his manuscripts to Amazing Stories when he was seventeen and that it would have been

published but the magazine lost it and he had no carbon. (I was ahead of him there. I had brought in the story myself and I had a carbon.) He also promised to read my story that night and to send a letter, whether acceptance or rejection, the next day. He promised also that in case of rejection he would tell me what was wrong with it so I could improve.

He lived up to every promise. Two days later, on June 23,

I heard from him. It was a rejection. (Since this book deals with real events and is not a fantasy—you can't be surprised that my first story was instantly rejected.)

Here is what I said in my diary about the rejection:

“At 9:30 I received back ‘Cosmic Corkscrew’ with a polite letter of rejection. He didn’t like the slow beginning, the suicide at the end.”

Campbell also didn’t like the first-person narration and the stiff dialog, and further pointed out that the length (nine thousand words) was inconvenient—too long for a short story, too short for a novelette. Magazines had to be put together like jigsaw puzzles, you see, and certain lengths for individual stories were more convenient than others.

By that time, though, I was off and running. The joy of having spent an hour and more with John Campbell, the thrill of talking face to face and on even terms with an idol, had already filled me with the ambition to write another science fiction story, better than the first, so that I could try him again. The pleasant letter of rejection—two full pages—in which he discussed my story seriously and with no trace of patronization or contempt, reinforced my joy. Before June 23 was over, I was halfway through the first draft of another story.

Many years later I asked Campbell (with whom I had by then grown to be on the closest terms) why he had bothered with me at all, since that first story was surely utterly im-possible.

“It was,” he said frankly, for he never flattered. “On the other hand, I saw something in you. You were eager and you listened and I knew you wouldn’t quit no matter how many rejections I handed you. As long as you were willing to work hard at improving, I was willing to work with you.”

That was John. I wasn’t the only writer, whether newcomer or oldtimer, that he was to work with in this fashion. Patiently, and out of his own enormous vitality and talent, he built up a stable of the best s.f. writers the world had, till then, ever seen.

What happened to “Cosmic Corkscrew” after that I don’t really know. I abandoned it and never submitted it anywhere else. I didn’t actually tear it up and throw it away; it simply languished in some desk drawer until eventually I lost track of it. In any case, it no longer exists.

This seems to be one of the main sources of discomfort among the archivists—they seem to think the first story I ever wrote for publication, however bad it might have been, was an important document. All I can say, fellows, is that I’m sorry but there was no way of my telling in 1938 that my first try might have historic interest someday. I may be a monster of vanity and arrogance, but I’m not that much a monster of vanity and arrogance.

Besides, before the month was out I had finished my second story, “Stowaway,” and I was concentrating on that. I brought it to Campbell’s office on July 18, 1938, and he was just a trifle slower in returning it, but the rejection came on July 22.

I said in my diary concerning the letter that accompanied it:

“... it was the nicest possible rejection you could imagine. Indeed, the next best thing to an acceptance. He told me the idea was good and the plot passable. The dialog and handling, he continued, were neither stiff nor wooden (this was rather a delightful surprise to me) and that there was no one particular fault but merely a general air of amateurishness, constraint, forcing. The story did not go smoothly. This, he said, I would grow out of as soon as I had had sufficient experience. He assured me that I would probably be able to sell my stories but it meant perhaps a year's work and a dozen stories before I could click. ...”

It is no wonder that such a “rejection letter” kept me hotly charged with enormous enthusiasm to write, and I got promptly to work on a third story.

What's more, I was sufficiently encouraged to try to submit “Stowaway” elsewhere. In those days there were three science fiction magazines on the stands. Astounding was the aristocrat of the lot, a monthly with smooth edges and an appearance of class. The other two, Amazing Stories and Thrilling Wonder Stories, were somewhat more primitive in appearance and printed stories, with more action and less-sophisticated plots. I sent “Stowaway” to Thrilling Wonder Stories, which, however, also rejected it promptly on August 9, 1938 (with a form letter).

By then, though, I was deeply engaged with my third story, which, as it happened, was fated to do better—and do it faster. In this book, however, I am including my stories not in the order of publication but in order of writing—which I presume is more significant from the standpoint of literary development. Let me stay with “Stowaway,” therefore.

In the summer of 1939, by which time I had gained my first few successes, I returned to “Stowaway,” refurbished it somewhat, and tried Thrilling Wonder Stories again. Undoubtedly I had a small suspicion that the new luster of my name would cause them to read it with a different attitude than had been the case when I was a complete unknown. I was quite wrong. It was rejected again.

Then I tried Amazing, and again it was rejected.

That meant the story was dead, or would have meant so were it not for the fact that science fiction was entering a small “boom” as the 1930s approached their end. New magazines were being founded, and toward the end of 1939, plans were made to publish a magazine to be called Astonishing Stories, which would retail for the price of ten cents. (Astounding cost twenty cents an issue.)

The new magazine, together with a sister magazine, Super Science Stories, were to be edited on a shoestring by a young science fiction fan, Frederik Pohl, who was then just turning twenty (he was about a month older than myself), and who, in this way, made his entry into what was to be a distinguished professional career in science fiction.

Pohl was a thin, soft-spoken young man, with hair that was already thinning, a solemn face, and a pronounced overbite that gave him a rabbit-like look when he smiled. The economic facts of his life kept him out of college, but he was far brighter (and knew more) than almost any college graduate I've ever met.

Pohl was a friend of mine (and still is) and perhaps did more to help me start my literary career than anyone except, of course, Campbell himself. We had attended fan-club meetings together. He had read my manuscripts and praised them—and now he needed stories in a hurry, and at low rates, for his new magazines.

He asked to look through my manuscripts again. He began by choosing one of my stories for his first issue. On November 17, 1939, nearly a year and a half after “Stowaway” was first written, Pohl selected it for inclusion in his second issue of *Astonishing*. He was an inveterate title changer, however, and he plastered “The Callistan Menace” on the story and that was how it was published.

So here it is, the second story I ever wrote and the earliest story to see professional publication. The reader can judge for himself whether Campbell’s critique, given above, was overly kind and whether he was justified in foreseeing a professional writing career for me on the basis of this story.

“The Callistan Menace” appears here (as will all the stories in this volume) exactly as it appeared in the magazine with only the editing and adjustment required to correct typo-graphical errors.

The Callistan Menace

“Damn Jupiter!” growled Ambrose Whitefield viciously, and I nodded agreement.

“I’ve been on the Jovian satellite run,” I said, “for fifteen years and I’ve heard those two words spoken maybe a million times. It’s probably the most sincere curse in the Solar System.”

Our watch at the controls of the scoutship *Ceres* had just been relieved and we descended the two levels to our room with dragging steps.

“Damn Jupiter—and damn it again,” insisted Whitefield morosely. “It’s too big for the System. It stays out there be-hind us and pulls and pulls and pulls! We’ve got to keep the *Atomos* firing all the way. We’ve got to check our course—completely—every hour. No relaxation, no coasting, no taking it easy! nothing but the rottenest kind of work.”

There were tiny beads of perspiration on his forehead and he swabbed at them with the back of his hand. He was a young fellow, scarcely thirty, and you could see in his eyes that he was nervous, and even a little frightened.

And it wasn’t Jupiter that was bothering him, in spite of his profanity. Jupiter was the least of our worries. It was Callisto! It was that little moon which gleamed a pale blue upon our visiplates that made Whitefield sweat and that had spoiled four nights’ sleep for me already. Callisto! Our des-tination!

Astonishing Stories, April 1940

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THE CALLISTAN MENACE

Even old Mac Steeden, gray mustachioed veteran who, in his youth, had sailed with the great Peewee Wilson himself, went about his duties with an absent stare. Four days out—and ten days more ahead of us—and panic was reaching out with clammy fingers.

We were all brave enough in the ordinary course of events.

The eight of us on the Ceres had faced the purple Lectronics and stabbing Disintos of pirates and rebels and the alien en-vironments of half a dozen worlds. But it takes more than run-of-the-mill bravery to face the unknown; to face Callisto, the “mystery world” of the Solar System.

One fact was known about Callisto—one grim, bare fact. Over a period of twenty-five years, seven ships, progressively better equipped, had landed—and never been heard from again. The Sunday supplements peopled the satellite with any-thing from super-dinosaurs to invisible ghosts of the fourth dimension, but that did not solve the mystery.

We were the eighth. We had a better ship than any of those preceding. We were the first to sport the newly-developed beryl-tungsten hull, twice as strong as the old steel shells. We possessed super-heavy armaments and the very latest Atomic Drive engines.

Still—we were only the eighth, and every man jack of us knew it.

Whitefield entered our quarters silently and flopped down upon his bunk. His fists were clenched under his chin and showed white at the knuckles. It seemed to me that he wasn’t far from the breaking point. It was a case for careful diplomacy.

“What we need,” said I, “is a good, stiff drink.” “What we need,” he answered harshly, “is a hell of a lot of good, stiff drinks.”

“Well, what’s stopping us?”

He looked at me suspiciously, “You know there isn’t a drop of liquor aboard ship. It’s against Navy regulations!” “Sparkling green Jabra water,” I said slowly, letting the words drip from my mouth. “Aged beneath the Martian deserts. Melted emerald juice. Bottles of it! Cases of it!”

“Where?”

“I know where. What do you say? A few drinks—just a few—will cheer us both up.”

For a moment, his eyes sparkled, and then they dulled again, “What if the Captain finds out? He’s a stickler for discipline, and on a trip like this, it’s liable to cost us our rating.”

I winked and grinned, “It’s the Captain’s own cache. He can’t discipline us without cutting his own throat—the old hypocrite. He’s the best damn Captain there ever was, but he likes his emerald water.”

Whitefield stared at me long and hard, “All right. Lead me to it.”

We slipped down to the supply room, which was deserted, of course. The Captain and Steeden were at the controls;

Brock and Charney were at the engines; and Harrigan and Tuley were snoring their fool heads off in their own room.

Moving as quietly as I could, through sheer habit, I pushed aside several crates of food tabs and slid open a hidden panel near the floor. I reached in and drew out a dusty bottle, which, in the dim light, sparkled a dull sea-green.

“Sit down,” I said, “and make yourself comfortable.” I produced two tiny cups and filled them.

Whitefield sipped slowly and with every evidence of satisfaction. He downed his second at one gulp.

“How come you volunteered for this trip, anyway, Whitey?”

I asked, “You’re a little green for a thing like this.”

He waved his hand, “You know how it is. Things get dull after a while. I went in for zoology after getting out of college—big field since interplanetary travel—and had a nice comfortable position back on Ganymede. It was dull, though;

I was bored blue. So I joined the Navy on an impulse, and on another I volunteered for this trip.” He sighed ruefully, “I’m a little sorry I did.”

“That’s not the way to take it, kid. I’m experienced and I know. When you’re panicky, you’re as good as licked. Why, two months from now, we’ll be back on Ganymede.”

“I’m not scared, if that’s what you’re thinking,” he exclaimed angrily. “It’s—it’s,” there was a long pause in which he frowned at his third cupful. “Well, I’m just worn out try-ing to imagine what the hell to expect. My imagination is working overtime and my nerves are rubbing raw.”

“Sure, sure,” I soothed, “I’m not blaming you. It’s that way

with all of us, I guess. But you have to be careful. Why, I

remember once on a Mars-Titan trip, we had—“

Whitefield interrupted what was one of my favorite yarns—and I could spin them as well as anyone in the service—with a jab in the ribs that knocked the breath out of me.

He put down his Jabra gingerly.

“Say, Jenkins,” he stuttered, “I haven’t downed enough liquor to be imagining things, have I?”

“That depends on what you imagined.”

“I could swear I saw something move somewhere in the pile of empty crates in the far corner.”

“That’s a bad sign,” and I took another swig as I said it. “Your nerves are going to your eyes and now they’re going back on you. Ghosts, I suppose, or the Callistan menace look-ing us over in advance.”

“I saw it, I tell you. There’s something alive there.” He edged towards me—his nerves were plenty shot—and for a moment, in the dim, shadowy light even I felt a bit choked up.

“You’re crazy,” I said in a loud voice, and the echoes calmed me down a bit. I put down my empty cup and got up just a wee bit unsteadily. “Let’s go over and poke through the crates.”

Whitefield followed me and together we started shoving the light aluminum cubicles this way and that. Neither of us was quite one hundred per cent sober and we made a fair amount of noise. Out of the corner of my eye, I could see Whitefield trying to move the case nearest the wall.

“This one isn’t empty,” he grunted, as it lifted very slightly off the floor.

Muttering under his breath, he knocked off the cover and looked in. For a half second he just stared and then he backed away slowly. He tripped over something and fell into a sitting position, still gaping at the case.

I watched his actions with raised eyebrows, then glanced hastily at the case in question. The glance froze into a steady glare, and I emitted a hoarse yell that rattled off each of the four walls.

A boy was sticking his head out of the case—a red-haired dirty-faced kid of thirteen or thereabouts.

“Hello,” said the boy as he clambered out into the open. Neither of us found the strength to answer him, so he continued, “I’m glad you found me. I was getting a cramp in my shoulder trying to curl up in there.”

Whitefield gulped audibly, “Good God! A kid stowaway!

And on a voyage to Callisto!”

“And we can’t turn back,” I reminded in a stricken voice, “without wrecking ourselves. The Jovian satellite run is poison.”

“Look here,” Whitefield turned on the kid in a sudden belligerence. “Who are you, you young nut, and what are you doing here?”

The kid flinched. “I’m Stanley Fields,” he answered, a bit scared. “I’m from New Chicago on Ganymede. I—I ran away to space, like they do in books.” He paused and then asked brightly, “Do you think we’ll have a fight with pirates on this trip, mister?”

There was no doubt that the kid was filled to the brim with “Dime Spacers.” I used to read them myself as a youngster.

“How about your parents?” asked Whitefield, grimly.

“Oh, all I got’s an uncle. He won’t care much, I guess.” He had gotten over his first uneasiness and stood grinning at us.

“Well, what’s to be done?” said Whitefield, looking at me in complete helplessness.

I shrugged, “Take him to the Captain. Let him worry.”

“And how will he take it?”

“Anyway he wants. It’s not our fault. Besides, there’s absolutely nothing to be done about the mess.”

And grabbing an arm apiece, we walked away, dragging the kid between us.

Captain Bartlett is a capable officer and one of the deadpan type that very rarely displays emotion. Consequently, on those few occasions when he does, it’s like a Mercurian volcano in full eruption—and you haven’t lived until you’ve seen one of those.

It was a case of the final straw. A satellite run is always wearing. The image of Callisto up ahead was harder on him than on any member of the crew. And now there was this kid stowaway.

It wasn't to be endured! For half an hour, the Captain shot off salvo after salvo of the very worst sort of profanity. He started with the sun and ran down the list of planets, satellites, asteroids, comets, to the very meteors themselves. He was starting on the nearer fixed stars, when he collapsed from sheer nervous exhaustion. He was so excited that he never thought to ask us what we were doing in the storeroom in the first place, and for that Whitefield and I were duly grateful. But Captain Bartlett is no fool. Having purged his system of its nervous tension, he saw clearly that that which cannot be cured must be endured.

"Someone take him and wash him up," he growled wearily, "and keep him out of my sight for a while." Then, softening a bit, he drew me towards him, "Don't scare him by telling him where we're going. He's in a bad spot, the poor kid."

When we left, the old soft-hearted fraud was sending through an emergency message to Ganymede trying to get in touch with the kid's uncle.

Of course, we didn't know it at the time, but that kid was a Godsend—a genuine stroke of Old Man Luck. He took our minds off Callisto. He gave us something else to think about. The tension, which at the end of four days had almost reached the breaking point, eased completely.

There was something refreshing in the kid's natural gayety; in his bright ingenuousness. He would meander about the ship asking the silliest kind of questions. He insisted on expecting pirates at any moment. And, most of all, he persisted in re-garding each and every one of us as "Dime Spacer" heroes.

That last nattered our egos, of course, and put us on our mettle. We vied with each other in chest-puffing and tale-telling, and old Mac Steeden, who in Stanley's eyes was a demi-god, broke the all-time record for plain and fancy lying.

I remember, particularly, the talk-fest we had on the seventh day out. We were just past the midpoint of the trip and were set to begin a cautious deceleration. All of us (except Harri-gan and Tuley, who were at the engines) were sitting in the control room. Whitefield, with half an eye on the Mathematico, led off, and, as usual, talked zoology.

"It's a little slug-like thing," he was saying, "found only on Europa. It's called the Carolus Europis but we always re-ferred to it as the Magnet Worm. It's about six inches long and has a sort of a slate-grey color—most disgusting thing you could imagine.

"We spent six months studying that worm, though, and I never saw old Mornikoff so excited about anything before. You see, it killed by some sort of magnetic field. You put the Magnet Worm at one end of the room and a caterpillar, say, at the other. You wait about five minutes and the caterpillar just curls up and dies.

"And the funny thing is this. It won't touch a frog—too big; but if you take that frog and put some sort of iron band about it, that Magnet Worm kills it just like that. That's why we know it's some type of magnetic field that does it—the presence of iron more than quadruples its strength."

His story made quite an impression on us. Joe Brock's deep bass voice sounded, "I'm damn glad those things are only four inches long, if what you say is right."

Mac Steeden stretched and then pulled at his grey mustachios with exaggerated indifference, “You call that worm unusual. It isn’t a patch on some of the things I’ve seen in my day—.” He shook his head slowly and reminiscently, and we knew we were in for a long and gruesome tale. Someone groaned hollowly, but Stanley brightened up the minute he saw the old veteran was in a story-telling mood.

Steeden noticed the kid’s sparkling eyes, and addressed him-self to the little fellow, “I was with Peewee Wilson when it happened—you’ve heard of Peewee Wilson, haven’t you?”

“Oh, yes,” Stanley’s eyes fairly exuded hero-worship. “I’ve read books about him. He was the greatest spacer there ever was.”

“You bet all the radium on Titan he was, kid. He wasn’t any taller than you, and didn’t scale much more than a hundred pounds, but he was worth five times his weight in Venusian Devils in any fight. And me and him were just like that. He never went anywhere but what I was with him. When the going was toughest it was always me that he turned to.”

He sighed lugubriously, “I was with him to the very end. It

was only a broken leg that kept me from going with him on

his last voyage—“

He choked off suddenly and a chilly silence swept over all of us. Whitefield’s face went gray, the Captain’s mouth twisted in a funny sort of way, and I felt my heart skid all the way down to the soles of my feet.

No one spoke, but there was only one thought among the six of us. Peewee Wilson’s last trip had been to Callisto. He had been the second—and had never returned. We were the eighth.

Stanley stared from one to the other of us in astonishment, but we all avoided his eyes.

It was Captain Bartlett that recovered first.

“Say, Steeden, you’ve got an old spacesuit of Peewee Wilson’s, haven’t you?” His voice was calm and steady but I could see that it took a great deal of effort to keep it so.

Steeden brightened and looked up. He had been chewing at the tips of his mustachios (he always did when nervous) and now they hung downwards in a bedraggled fashion.

“Sure thing. Captain. He gave it to me with his own hand, he did. It was back in ‘23 when the new steel suits were just being put out. Peewee didn’t have any more use for his old vitri-rubber contraption, so he let me have it—and I’ve kept it ever since. It’s good luck for me.”

“Well, I was thinking that we might fix up that old suit for the boy here. No other suit’ll fit him, and he needs one bad.”

The veteran’s faded eyes hardened and he shook his head vigorously, “No sir. Captain. No one touches that old suit Peewee gave it to me himself. With his own hand! It’s—it’s sacred, that’s what it is.”

The rest of us chimed in immediately upon the Captain’s side but Steeden’s obstinacy grew and

hardened. Again and again he would repeat tonelessly, "That old suit stays where it is." And he would emphasize the statement with a blow of his gnarled fist.

We were about to give up, when Stanley, hitherto discreetly silent, took a hand.

"Please, Mr. Steeden," there was just the suspicion of a quaver in his voice. "Please let me have it. I'll take good care of it. I'll bet if Peewee Wilson were alive today he'd say I could have it." His blue eyes misted up and his lower lip trembled a bit. The kid was a perfect actor.

Steeden looked irresolute and took to biting his mustachio again, "Well—oh, hell, you've all got it in for me. The kid can have it but don't expect me to fix it up! The rest of you can lose sleep—I wash my hands of it."

And so Captain Bartlett killed two birds with one stone. He took our minds off Callisto at a time when the morale of the crew hung in the balance and he gave us something to think about for the remainder of the trip—for renovating that ancient relic of a suit was almost a week's job.

We worked over that antique with a concentration out of all

proportion to the importance of the job. In its pettiness, we

forgot the steadily growing orb of Callisto. We soldered every |

last crack and blister in that venerable suit. We patched the !

inside with close-meshed aluminum wire. We refurbished the tiny heating unit and installed new tungsten oxygen-containers.

Even the Captain was not above giving us a hand with the suit, and Steeden, after the first day, in spite of his tirade at the beginning, threw himself into the job with a will.

We finished it the day before the scheduled landing, and Stanley, when he tried it on, glowed with pride, while Steeden stood by, grinning and twirling his mustachio.

And as the days passed, the pale blue circle that was Callisto grew upon the visiplat until it took up most of the sky. The last day was an uneasy one. We went about our tasks ab-stractedly, and studiously avoided the sight of the hard, emo-tionless satellite ahead.

We dived—in a long, gradually contracting spiral. By this manoeuvre, the Captain had hoped to gain some preliminary knowledge of the nature of the planet and its inhabitants, but the information gained was almost entirely negative. The large percentage of carbon dioxide present in the thin, cold atmo-sphere was congenial to plant life, so that vegetation was plentiful and diversified. However, the three per cent oxygen content seemed to preclude the possibility of any animal life, other than the simplest and most sluggish species. Nor was there any evidence at all of cities or artificial structures of any kind.

Five times we circled Callisto before sighting a large lake, shaped something like a horse's head. It was towards that lake that we gently lowered ourselves, for the last message of the second expedition—Peewee Wilson's expedition—spoke of landing near such a lake.

We were still half a mile in the air, when we located the gleaming metal ovoid that was the Phobos, and when we finally thumped softly on to the green stubble of vegetation, we were scarcely five hundred

yards from the unfortunate craft.

“Strange,” muttered the Captain, after we had all congregated in the control room, waiting for further orders, “there seems to be no evidence of any violence at all.”

It was true! The Phobos lay quietly, seemingly unharmed. Its old-fashioned steel hull glistened brightly in the yellow light of a gibbous Jupiter, for the scant oxygen of the atmosphere could make no rusty inroads upon its resistant exterior.

The Captain came out of a brown study and turned to Charney at the radio.

“Ganymede has answered?”

“Yes, sir. They wish us luck.” He said it simply, but a cold shiver ran down my spine.

Not a muscle of the Captain’s face flickered. “Have you tried to communicate with the Phobos?”

“No answer, sir.”

“Three of us will investigate the Phobos. Some of the answers, at least, should be there.”

“Matchstickst” grunted Brock, stolidly.

The Captain nodded gravely.

He palmed eight matches, breaking three in half, and extended his arm towards us, without saying a word.

Charney stepped forward and drew first. It was broken and he stepped quietly towards the space-suit rack. Tuley followed and after him Harrigan and Whitefield. Then I, and I drew the second broken match. I grinned and followed Charney, and in thirty seconds, old Steeden himself joined us.

“The ship will be backing you fellows,” said the Captain quietly, as he shook our hands. “If anything dangerous turns up, run for it. No heroics now, for we can’t afford to lose men.”

We inspected our pocket Lectronics and left. We didn’t know exactly what to expect and weren’t sure but that our first steps on Callistan soil might not be our last, but none of us hesitated an instant. In the “Dime Spacers,” courage is a very cheap commodity, but it is rather more expensive in real life. And it is with considerable pride that I recall the firm steps with which we three left the protection of the Ceres.

I looked back only once and caught a glimpse of Stanley’s face pressed white against the thick glass of the porthole. Even from a distance, his excitement was only too apparent. Poor kid! For the last two days he had been convinced we were on our way to clean up a pirate stronghold and was almost dying with impatience for the fighting to begin. Of course, none of us cared to disillusion him.

The outer hull of the Phobos rose before us and overshadowed us with its might. The giant vessel lay in the dark green stubble, silent as death. One of the seven that had attempted and failed. And we were the eighth.

Charney broke the uneasy silence, “What are these white smears on the hull?”

He put up a metal-encased finger and rubbed it along the steel plate. He withdrew it and gazed at the soft white pulp upon it. With an involuntary shudder of disgust, he scraped it off upon the coarse grass beneath.

“What do you think it is?”

The entire ship as far as we could see—except for that portion immediately next the ground—was besmeared by a thin layer of the pulpy substance. It looked like dried foam—like—

I said: “It looks like slime left after a giant slug had come out of the lake and slithered over the ship.”

I wasn’t serious in my statement, of course, but the other two cast hasty looks at the mirror-smooth lake in which Jupiter’s image lay unruffled. Charney drew his hand Lectronic.

“Here!” cried Steeden, suddenly, his voice harsh and metallic as it came over the radio, “that’s no way to be talking. We’ve got to find some way of getting into the ship; there must be some break in its hull somewhere. You go around to the right, Charney, and you, Jenkins, to the left. I’ll see if I can’t get atop of this thing somehow.”

Eyeing the smoothly-round hull carefully, he drew back and jumped. On Callisto; of course, he weighed only twenty pounds or less, suit and all, so he rose upwards some thirty or forty feet. He slammed against the hull lightly, and as he started sliding downwards, he grabbed a rivet-head and scrambled to the top.

Waving a parting to Charney at this point, I left.

“Everything all right?” the Captain’s voice sounded thinly in my ear.

“All O.K.,” I replied gruffly, “so far.” And as I said so, the Ceres disappeared behind the convex bulge of the dead Phobos and I was entirely alone upon the mysterious moon.

I pursued my round silently thereafter. The spaceship’s “skin” was entirely unbroken except for the dark, staring portholes, the lowest of which were still well above my head. Once or twice I thought I could see Steeden scrambling monkey-like on top of the smooth hull, but perhaps that was only fancy.

I reached the prow at last which was bathed in the full light of Jupiter. There, the lowest row of portholes were low enough to see into and as I passed from one to the other, I felt as if I were gazing into a shipful of spectres, for in the ghostly light all objects appeared only as flickering shadows.

It was the last window in the line that proved to be of sudden, overpowering interest. In the yellow rectangle of Jupiter-light stamped upon the floor, there sprawled what remained of a man. His clothes were draped about him loosely and his shirt was ridged as if the ribs below had moulded it into position. In the space between the open shirt collar and engineer’s cap, there showed a grinning, eyeless skull. The cap, resting askew upon the smooth skullcase, seemed to add the last refinement of horror to the sight.

A shout in my ears caused my heart to leap. It was Steeden, exclaiming profanely somewhere above the ship. Almost at once, I caught sight of his ungainly steel-clad body slipping and sliding down the side of the ship.

We raced towards him in long, floating leaps and he waved us on, running ahead of us, towards the lake.

At its very shores, he stopped and bent over some half-buried object Two bounds brought us to him, and we saw that the object was a space-suited human, lying face downward. Over it was a thick layer of the same slimy smear that covered the Phobos.

“I caught sight of it from the heights of the ship,” said Steeden, somewhat breathlessly, as he turned the suited figure over.

What we saw caused all three of us to explode in a simultaneous cry. Through the glassy visor, there appeared a leprous countenance. The features were putrescent, fallen apart, as if decay had set in and ceased because of the limited air supply. Here and there a bit of gray bone showed through. It was the most repulsive sight I have ever witnessed, though I have seen many almost as bad.

“My God!” Charney’s voice was half a sob. “They simply die and decay.” I told Steeden of the clothed skeleton I had seen through the porthole.

“Damn it, it’s a puzzle,” growled Steeden, “and the answer must be inside the Phobos.” There was a momentary silence, “I tell you what. One of us can go back and get the Captain to dismount the Disintegrator. It ought to be light enough to handle on Callisto, and at low power, we can draw it fine enough to cut a hole without blowing the entire ship to kingdom come. You go, Jenkins. Charney and I will see if we can’t find any more of the poor devils.”

I set off for the Ceres without further urging, covering the ground in space-devouring leaps. Three-quarters of the distance had been covered when a loud shout, ringing metallically in my ear, brought me to a skidding halt. I wheeled in dismay and remained petrified at the sight before my eyes.

The surface of the lake was broken into boiling foam, and from it there reared the fore-parts of what appeared to be giant caterpillars. They squirmed out upon land, dirty-grey bodies dripping slime and water. They were some four feet long, about one foot in thickness, and their method of locomotion was the slowest of oxygen-conserving crawls. Except for one stalky growth upon their forward end, the tip of which glowed a faint red, they were absolutely featureless.

Even as I watched, their numbers increased, until the shore became one heaving mass of sickly gray flesh.

Charney and Steeden were running towards the Ceres, but less than half the distance had been covered when they stumbled, their run slowing to a blind stagger. Even that ceased, and almost together they fell to their knees.

Charney’s voice sounded faintly in my ear, “Get help! My head is splitting. I can’t move! I—“ Both lay still now.

I started towards them automatically, but a sudden sharp pang just over my temples staggered me, and for a moment I stood confused.

Then I heard a sudden unearthly shout from Whitefield, “Get back to the ship, Jenkins! Get back! Get back!”

I turned to obey, for the pain had increased into a continuous tearing pain. I weaved and reeled as I approached the yawning airlock, and I believe that I was at the point of collapse when I finally fell into it. After that, I can recall only a jumble for quite a period.

My next clear impression was of the control-room of the Ceres. Someone had dragged the suit off me, and I gazed about me in dismay at a scene of the utmost confusion. My brain was still somewhat addled and Captain Bartlett as he leant over me appeared double.

“Do you know what those damnable creatures are?” He pointed outwards at the giant caterpillars.

I shook my head mutely.

“They’re the great grand-daddies of the Magnet Worm Whitefield was telling us of once. Do you remember the Magnet Worm?”

I nodded, “The one that kills by a magnetic field which is strengthened by surrounding iron.”

“Damn it, yes,” cried Whitefield, interrupting suddenly. “I’ll swear to it. If it wasn’t for the lucky chance that our hull is beryl-tungsten and not steel—like the Phobos and the rest—every last one of us would be unconscious by now and dead before long.”

“Then that’s the Call’istan menace.” My voice rose in sudden dismay, “But what of Charney and Steeden?”

“They’re sunk,” muttered the Captain grimly. “Unconscious —maybe dead. Those filthy worms are crawling towards them and there’s nothing we can do about it.” He ticked off the points on his fingers. “We can’t go after them in a spacesuit without signing our own death warrant—spacesuits are steel.

No one can last there and back without one. We have no

weapons with a beam fine enough to blast the Worms without

scorching Charney and Steeden as well. I’ve thought of ma-

neuvering the Ceres nearer and making a dash for it, but one

can’t handle a spaceship on planetary surfaces like that—not

without cracking up. We—“

“In short,” I interrupted hollowly, “we’ve got to stand here and watch them die.” He nodded and I turned away bitterly.

I felt a slight twitch upon my sleeve, and when I turned, it was to find Stanley’s wide blue eyes staring up at me. In the excitement, I had forgotten about him, and now I regarded him bad-temperedly.

“What is it?” I snapped.

“Mr. Jenkins,” his eyes were red, and I think he would have preferred pirates to Magnet Worms by a good deal, “Mr. Jenkins, maybe / could go and get Mr. Charney and Mr.

Steeden.”

I sighed, and turned away.

“But, Mr. Jenkins, I could. I heard what Mr. Whitefield said, and my spacesuit isn’t steel. It’s vitri-rubber.”

“The kid’s right,” whispered Whitefield slowly, when Stanley repeated his offer to the assembled men. “The un-strengthened field doesn’t harm us, that’s evident. He’d be safe in a vitri-rubber suit.”

“But it’s a wreck, that suit!” objected the Captain. “I never really intended having the kid use it.” He ended rag-gedly and his manner was evidently irresolute.

“We can’t leave Neal and Mac out there without trying, Captain,” said Brock stolidly.

The Captain made up his mind suddenly and became a whirlwind of action. He dived into the space-suit rack for the battered relic himself, and helped Stanley into it.

“Get Steeden first,” said the Captain, as he clipped shut the last bolt. “He’s older and has less resistance to the field.

Good luck to you, kid, and if you can’t make it, come back right away. Right away, do you hear me?”

Stanley sprawled at the first step, but life on Ganymede had inured him to below-normal gravities and he recovered quickly. There was no sign of hesitation, as he leaped to-wards the two prone figures, and we breathed easier. Evidently, the magnetic field was not affecting him yet.

He had one of the suited figures over his shoulders now and was proceeding back to the ship at an only slightly slower pace. As he dropped his burden inside the airlock, he waved an arm to us at the window and we waved back.

He had scarcely left, when we had Steeden inside. We ripped the spacesuit off him and laid him out, a gaunt pale figure, on the couch.

The Captain bent an ear to his chest and suddenly laughed aloud in sudden relief, “The old geezer’s still going strong.”

We crowded about happily at hearing that, all eager to place a finger upon his wrist and so assure ourselves of the life within him. His face twitched, and when a low, blurred voice suddenly whispered, “So I said to Peewee, I said—“ our last doubts were put to rest.

It was a sudden, sharp cry from Whitefield that drew us back to the window again, “Something’s wrong with the kid.”

Stanley was half way back to the ship with his second burden, but he was staggering now—progressing erratically.

“It can’t be,” whispered Whitefield, hoarsely, “it can’t be.

The field can’t be getting him!”

“God!” the Captain tore at his hair wildly, “that damned antique has no radio. He can’t tell us what’s wrong.” He wrenched away suddenly. “I’m going after him. Field or no field, I’m going to get him.”

“Hold on. Captain,” said Tuley, grabbing him by the arm, “he may make it.”

Stanley was running again, but in a curious weaving fashion that made it quite plain, he didn’t see where he was going. Two or three times he slipped and fell but each time he man-aged to scramble up again. He fell against the hull of the ship, at last, and felt wildly about for the yawning airlock. We shouted and prayed and sweated, but could help in no way.

And then he simply disappeared. He had come up against the lock and fallen inside.

We had them both inside in record time, and divested them of their suits. Charney was alive, we saw that at a glance, and after that we deserted him unceremoniously for Stanley. The blue of his face, his swollen tongue, the line of fresh “blood running from nose to chin told its own story.

“The suit sprung a leak,” said Harrigan.

“Get away from him,” ordered the Captain, “give him air.”

We waited. Finally, a soft moan from the kid betokened returning consciousness and we all grinned in concert.

“Spunky little kid,” said the Captain. “He travelled that last hundred yards on nerve and nothing else.” Then, again. “Spunky little kid. He’s going to get a Naval Medal for this, if I have to give him my own.”

Callisto was a shrinking blue ball on the televisor—an ordinary unmysterious world. Stanley Fields, honorary Cap-tain of the good ship Ceres, thumbed his nose at it, protruding his tongue at the same time. An inelegant gesture, but the symbol of Man’s triumph over a hostile Solar System.

THE END

As I reread the story now (it’s the first time I’ve reread it since it was published) I am amused to see that my stow-away youngster’s name is Stanley. That is the name of my younger brother, who was only nine when I wrote the story (the same younger brother who was the subject of my Boys’ High essay, and who is now Assistant Publisher of the Long Island Newsday). Why it is necessary to use “real names” I don’t know, but almost every beginning writer does so, I suspect.

You will notice that there are no girls in the story. This is not really surprising. At eighteen I was busy finishing college and working in my father’s candy store and handling a paper delivery route morning and evening, and I had actually never had time to have a date. I didn’t know any-thing at all about girls (except for such biology as I got out of books and from other, more knowledgeable, boys).

I eventually had dates and I eventually introduced girls into my stories, but the early imprinting had its effect. To this very day, the romantic element in my stories is minor and the sexual element virtually nil.

On the other hand, I wonder if the above explanation for the lack of sex in my stories is not an oversimplification. After all, I am also a teetotaler and yet I notice that my characters drink Martian jabra water (whatever that is).

My knowledge of astronomy was quite respectable but I let myself be overinfluenced by the conventions common in the science fiction of that era. All worlds were Earthlike and inhabited in those days, so I gave Callisto an atmosphere containing a small quantity of free oxygen. I also gave it running water, and both

plant and animal life. All of this is, of course, unlikely in the extreme, and what evidence we have seems to make of Callisto an airless, waterless world like our Moon (and, of course, I really knew this even back then).

Back to my third story, now—

THE CALLISTAN MENACE

On July 30, 1938, only eight days after Campbell's second rejection, I had finished my third story, "Marooned off Vesta." I did not think it politic to see Campbell oftener than once a month, however, since I suspected that I might easily wear out my welcome if I did. I put "Marooned off Vesta" to one side, therefore, and began to write other stories. By the end of the month I had two more: "This Irrational Planet" and "Ring Around the Sun."

My first three stories, including "Marooned off Vesta," had been typed on a very old, but completely serviceable Underwood No. 5 typewriter, which my father had obtained for me in 1936 for ten dollars. After I had submitted my second story to Campbell, however, my father decided that I was in earnest about a writing career, and feeling that my failure to sell was irrelevant and, in any case, temporary, he set about getting me a brand-new typewriter.

On August 10, 1938, a Smith-Corona portable entered the house and it was on the new typewriter that my fourth and fifth stories were written.

Of the three, I felt "This Irrational Planet" to be the weakest, so I did not submit it to Campbell. I submitted it directly to Thrilling Wonder Stories on August 26, and it was not rejected till September 24. Campbell had spoiled me, and the four-week interval between submission and rejection appalled me. I even called during that interval to make an indignant inquiry—not knowing that a mere four-week wait was brief indeed for anyone but Campbell.

But at least the rejection, when it came, was typewritten ' and was not a printed form. What's more, it contained the sentence, "Try us again, won't you?" That encouraged me. Perhaps I underestimated the story. Buoyantly, I tried Campbell, and he rejected it in six days. Five other maga-zines rejected it afterward. I never did sell it, and "This Irrational Planet" is also nonexistent now. I don't even remember the plot, except that I'm pretty certain that the planet of the title was Earth itself. (The only other informa-tion I have about it is that it was quite short, only three thousand words long. Actually, most of the stories of those early years that I never sold, and no longer exist, were short. The longest was the first, "Cosmic Corkscrew.")

The other two stories written in the same month were reserved for a better fate, but it didn't seem so at first. On August 30, 1938, I visited Campbell for the third time and submitted both "Marooned off Vesta" and "Ring Around the Sun"—and both were returned to me on September 8.

The very next day I shipped off "Marooned off Vesta," which I felt to be the better of the two, to Amazing Stories. It took a month and a half to hear from them, but this time the wait was worth it. On October 21, 1938, there came a letter of acceptance from Raymond A. Palmer, who was then editor of Amazing and who has since achieved his greatest fame as a leading figure in the flying saucers craze and in other forms of occultism. To this day I have never met Mr. Palmer personally.

It was my first acceptance, four months to the day after

my first visit to John Campbell. By that time I had written

six stories and had collected nine rejections from Various magazines. The check, for \$64 (one cent a word), followed on October 31, and that was the first money I ever earned as a professional writer.*

For a number of years I kept that first acceptance letter, from Palmer, framed on my bedroom wall. But in the vicissitudes of life, it, too, has disappeared and, yes, I'm sorry.

The story appeared in the March 1939 issue of *Amazing Stories*, which reached the newsstands on January 10, 1939, just eight days after my nineteenth birthday. It was the first occasion on which I ever appeared professionally, and I still have an intact copy of that issue of the magazine. I did not save one at the time (my sense of historical importance, as I have already explained, is deficient) but eventually removed my story for binding and discarded the rest. Ordinarily, I don't mind doing this and have done it ruthlessly through all the years (space is limited even in the best of apartments when one is as prolific as I have been), but the time came when I was sorry I hadn't saved that first one intact. The well-known science fiction fan Forrest J Ackerman heard me express regret and kindly sent me a copy in excellent condition.

In this book, I am going to pay considerable attention to the money I received for my stories. This is not because I write primarily for money or regarded money as particularly important either then or now (my publishers will gladly bear witness to this). The money I received, however, was crucial in determining my career. It paid enough to put me through school and not so much as to lure me out of it. You'll see as we go along.

That copy, by the way, contains a little autobiographical squib in the rear, written by my teen-age self. On rereading, years later, it turned out to be exquisitely embarrassing.

"Marooned off Vesta" is not included here, since it appeared in *Asimov's Mysteries*. (This doesn't mean it was a mystery. The reason for its inclusion in that particular collection is explained there. —Well, go ahead, buy the book and satisfy your curiosity.)

As for "Ring Around the Sun," it was rejected by *Thrilling Wonder Stories*, but then, on February 5, 1939, it was accepted by *Future Fiction*, one of the new science fiction magazines that were springing up.

It appeared in the second issue of that magazine, which did not, however, reach the stands until nearly a year after the sale. The payment (theoretically on publication, rather than on acceptance as was Campbell's more civilized procedure) was even more delayed. What's more, it was at the rate of only half a cent a word, so the check came to a mere twenty-five dollars. *Amazing Stories* also paid only half a cent a word at that time, but "The Callistan Menace" was the longer story—6,500 words—so it netted me \$32.50.

I didn't feel put upon, however. I well knew by that time that in the still earlier history of science fiction magazines, payment of a quarter of a cent a word was common, and that not on publication but (the saying went) on lawsuit. Besides, those were lean times, and twenty-five dollars represented something like five months' pocket money to me (no kidding).

The editor of *Future Fiction* was, at that time, Charles D. Hornig. I occasionally visited his office to

inquire when a story might appear, or when a check might, but I don't recall ever having found him in. In fact, to this day I have never, to my knowledge, met him.

Ring Around the Sun

Jimmy Turner was humming merrily, if a bit raucously, when he entered the reception room.

"Is Old Sourpuss in?" he asked, accompanying the question with a wink at which the pretty secretary blushed gratefully.

"He is; and waiting for you." She motioned him towards the door on which was written in fat, black letters, "Frank McCutcheon, General Manager, United Space Mail."

Jim entered. "Hello, Skipper, what now?"

"Oh, it's you, is it?" McCutcheon looked up from his desk, champing a foul-smelling stogie. "Sit down."

McCutcheon stared at him from under bushy gray eyebrows. "Old Sourpuss," as he was euphoniously known to all members of United Space Mail, had never been known to laugh within the memory of the oldest inmate, though rumor did have it that when a child he had smiled at the sight of his father falling out of an apple-tree. Right now his expression made the rumor appear exaggerated.

"Now, listen. Turner," he barked, "United Space Mail is inaugurating a new service and you're elected to blaze the trail." Disregarding Jimmy's grimace, he continued, "From now on the Venerian mail is on an all-year-round basis."

"What! I've always thought that it was ruinous from a financial standpoint to deliver the Venerian mail except when it was this side of the Sun."

"Sure," admitted McCutcheon, "if we follow the ordinary routes. But we might cut straight across the system if we could only get near enough to the sun. That's where you come in! They've put out a new ship equipped to approach within twenty million miles of the sun and which will be able to remain at that distance indefinitely."

Jimmy interrupted nervously, "Wait a while, S—Mr. McCutcheon, I don't quite follow. What kind of a ship is this?"

"How do you expect me to know? I'm no fugitive from a laboratory. From what they tell me, it emits some kind of a field that bends the radiations of the sun around the ship. Get it? It's all deflected. No heat reaches you. You can stay there forever and be cooler than in New York."

"Oh, is that so?" Jimmy was skeptical. "Has it been tested, or is that a little detail that has been left for me?"

"It's been tested, of course, but not under actual solar conditions."

"Then it's out. I've done plenty for United, but this is the limit. I'm not crazy, yet."

McCutcheon stiffened. "Must I recall the oath you took

upon entering the service. Turner? 'Our flight through

space—“ “

“—must ne’er be stopped by anything save death,” fin-ished Jimmy. “I know that as well as you do and I also notice that it’s very easy to quote that from a comfortable armchair. If you’re that idealistic, you can do it yourself. It’s still out, as far as I’m concerned. And if you want, you can kick me out. I can get other jobs just like that,” he snapped his fingers airily.

McCutcheon’s voice dropped to a silky whisper. “Now, now. Turner, don’t be hasty. You haven’t heard all I have to say yet. Roy Snead is to be your mate.”

“Huh! Snead! Why, that four-flusher wouldn’t have the guts to take a job like this in a million years. Tell me some other fairy tale.”

“Well, as a matter of fact, he has already accepted. I thought you might accompany him, but I guess he was right. He insisted you’d back down. I thought at first you wouldn’t.”

McCutcheon waved him away and bent his eyes uncon-cernedly on the report he had been scrutinizing at the time of Jimmy’s entrance. Jimmy wheeled, hesitated, then returned.

“Wait a while, Mr. McCutcheon; do you mean to say that Roy is actually going?” McCutcheon nodded, still apparently absorbed in other matters, and Jimmy exploded, “Why, that low-down, spindle-shanked, dish-faced mug! So he thinks I’m too yellow to go! Well, I’ll show him. I’ll take the job and I’ll put up ten dollars to a Venerian nickel that he gets sick at the last minute.”

“Good!” McCutcheon rose and shook hands, “I thought you’d see reason. Major Wade has all the details. I think you leave in about six weeks and as I’m leaving for Venus tomor-row, you’ll probably meet me there.”

Jimmy left, still boiling, and McCutcheon buzzed for the secretary. “Oh, Miss Wilson, get Roy Snead on the ‘visor.”

A few minutes’ pause and then the red signal-light shone. The ‘visor was clicked on and the dark-haired, dapper Snead appeared on the visi-plate.

“Hello, Snead,” McCutcheon growled. “You lose that bet, Turner accepted that job. I thought he’d laugh himself sick when I told him you said he wouldn’t go. Send over the twenty dollars, please.”

“Wait a while, Mr. McCutcheon,” Snead’s face was dark with fury, “what’s the idea of telling that punch-drunk imbe-cile I’m not going? You must have, you double-crosser. I’ll be there all right, but you can put up another twenty and I’ll bet he changes his mind yet. But /’// be there.” Roy Snead was still spluttering when McCutcheon clicked off.

The General Manager leaned back, threw away his mangled cigar, and lit a fresh one. His face remained sour, but there was a definite note of satisfaction in his tone when he said, “Ha! I thought that would get them.”

It was a tired and sweaty pair that blasted the good ship Helios across Mercury’s orbit. In spite of the perfunctory friendship enforced upon them by the weeks alone in space, Jimmy Turner and Roy Snead were scarcely on speaking terms. Add to this hidden hostility, the heat of the bloated sun and the torturing uncertainty of the final outcome of the trip and you have a miserable pair indeed.

Jimmy peered tiredly at the maze of dials confronting him, and, brushing a damp lock of hair from his eyes, grunted, "What's the thermometer reading now, Roy?"

"One hundred twenty-five degrees Fahrenheit and still climbing," was the growled response.

Jimmy cursed fluently, "The cooling system is on at max-imum, the ship's hull reflects 95% of the solar radiation, and it's still in the hundred twenties." He paused. "The gravo-meter indicates that we're still some thirty-five million miles from the Sun. Fifteen millions miles to go before the De-flection Field becomes effective. The temperature will prob-ably scale 150 yet. That's a sweet prospect! Check the desiccators. If the air isn't kept absolutely dry, we're not going to last long."

"Within Mercury's orbit, think of it!" Snead's voice was husky. "No one has ever been this close to the sun before. And we're going closer yet."

"There have been many this close and closer," reminded Jimmy, "but they were out of control and landed in the sun.

Friedlander, Debuc, Anton—" His voice trailed into a brood-

ing silence,

Roy stirred uneasily. "How effective is this Deflection Field anyway, Jimmy? Your cheerful thoughts aren't very soothing, you know."

"Well, it's been tested under the harshest conditions lab-oratory technicians could devise. I've watched them. It's been bathed in radiation approximating the sun's at a distance of twenty million. The Field worked like a charm. The light was bent about it so that the ship became invisible. The men inside the ship claimed that everything outside became invisible and that no heat reached them. A funny thing, though, the Field will work only under certain radiation strengths."

"Well, I wish it were over one way or the other," Roy glowered. "If Old Sourpuss is thinking of making this my regular run—, well, he'll lose his ace pilot."

"He'll lose his two ace pilots," Jimmy corrected.

The two lapsed into silence and the Helios blasted on.

The temperature climbed: 130, 135, 140. Then, three days later, with the mercury quivering at 148, Roy announced that they were approaching the critical belt, the belt where the solar radiation reached sufficient intensity to energize the Field.

The two waited, minds at feverish concentration, pulses pounding.

"Will it happen suddenly?"

"I don't know. We'll have to wait."

From the portholes, only the stars were visible. The sun, three times the size as seen from Earth, poured its blinding rays upon opaque metal, for on this specially designed ship, portholes closed automatically when struck by powerful radia-tion.

And then the stars began disappearing. Slowly, at first, the dimmest faded—then the brighter ones: Polaris, Regulus, Arcturus, Sirius. Space was uniformly black.

“It’s working,” breathed Jimmy. The words were scarcely out of his mouth, when the sunward portholes clicked open. The sun was gone!

“Ha! I feel cooler already,” Jimmy Turner was jubilant. “Boy, it worked like a charm. You know, if they could adjust this Deflection field to all radiation strengths, we would have perfected invisibility. It would make a convenient war weapon.” He lit a cigarette and leaned back luxuriously.

“But meanwhile we’re flying blind,” Roy insisted.

Jimmy grinned patronizingly, “You needn’t worry about that, Dishface. I’ve taken care of everything. We’re in an orbit about the sun. In two weeks, we’ll be on the opposite side and then I’ll let the rockets blast and out of this band we go, zooming towards Venus.” He was very self-satisfied indeed.

“Just leave it to Jimmy ‘Brains’ Turner. I’ll have us through in two months, instead of the regulation six. You’re with United’s ace pilot, now.”

Roy laughed nastily. “To listen to you, you’d think you did all the work. All you’re doing is to run the ship on the course I’ve plotted. You’re the mechanic; I’m the brains.”

“Oh, is that so? Any damn pilot-school rookie can plot a course. It takes a man to navigate one.”

“Well, that’s your opinion. Who’s paid more, though, the navigator or the course-plotter?”

Jimmy gulped on that one and Roy stalked triumphantly out of the pilot room. Unmindful of all this, the Helios blasted on.

For two days, all was serene; then, on the third day. Jimmy inspected the thermometer, scratched his head and looked worried. Roy entered, watched the proceedings and raised his eyebrows in surprise.

“Is anything wrong?” He bent over and read the height of the thin, red column. “Just 100 degrees. That’s nothing to look like a sick goat over. From your expression, I thought some-thing had gone wrong with the Deflection Field and that it was rising again,” he turned away with an ostentatious yawn.

“Oh, shut up, you senseless ape,” Jimmy’s foot lifted in a half-hearted attempt at a kick. “I’d feel a lot better if the temperature were rising. This Deflection Field is working a lot too good for my liking.”

“Huh! What do you mean?”

“I’ll explain, and if you listen carefully you may under-stand me. This ship is built like a vacuum bottle. It gains .40 heat only with the greatest of difficulty and loses it likewise.” He paused and let his words sink in. “At ordinary tempera-tures this ship is not supposed to lose more than two degrees a day if no outside sources of heat are supplied. Perhaps at the temperature at which we were, the loss might amount to five degrees a day. Do you get me?”

Roy’s mouth was open wide and Jimmy continued. “Now this blasted ship has lost fifty degrees in less than three days.”

“But that’s impossible.”

“There it is.” Jimmy pointed ironically. “I’ll tell you what’s wrong. It’s that damn Field. It acts as a repulsive agent to-wards electromagnetic radiations and somehow is hastening the loss of heat of our ship.”

Roy sank into thought and did some rapid mental calculations. “If what you say is true,” he said at length, “we’ll hit freezing point in five days and then spend a week in what amounts to winter weather.”

“That’s right. Even allowing for the decrease in heat-loss as the temperature is lowered, we’ll probably end up with the mercury anywhere between thirty and forty below.”

Roy gulped unhappily. “And at twenty million miles away from the sun!”

“That isn’t the worst,” Jimmy pointed out. “This ship, like all others used for travel within the orbit of Mars, has no heating system. With the sun shining like fury and no way to lose heat except by ineffectual radiation, Mars and Venus space-ships have always specialized in cooling systems. We, for instance, have a very efficient refrigeration device.”

“We’re in a devil of a fix, then. The same applies to our space suits.”

In spite of the still roasting temperature, the two were beginning to experience a few anticipatory chills.

“Say, I’m not going to stand this,” Roy burst out. “I vote we get out of here right now and head for Earth. They can’t expect more of us.”

“Go ahead! You’re the pilot. Can you plot a course at this distance from the sun and guarantee that we won’t fall into the sun?”

“Hell! I hadn’t thought of that.”

The two were at their wits’ end. Communication via radio had been impossible ever since they had passed Mercury’s orbit. The sun was at sunspot maximum and static had drowned out all attempts.

So they settled down to wait.

The next few days were taken up entirely with thermometer watching, with a few minutes taken out here and there when one of the two happened to think of an unused malediction to hurl at the head of Mr. Frank McCutcheon. Eating and sleeping were indulged in, but not enjoyed.

And meanwhile, the Helios, entirely unconcerned in the plight of its occupants, blasted on.

As Roy had predicted, the temperature passed the red line marked “Freezing” towards the end of their seventh day in the Deflection Belt. The two were remarkably unhappy when this happened even though they had expected it.

Jimmy had drawn off about a hundred gallons of water from the tank. With this he had filled almost every vessel on board.

“It might,” he pointed out, “save the pipes from bursting when the water freezes. And if they do, as is probable, it is just as well that we supply ourselves with plenty of available water. We have to stay here

another week, you know.”

And on the next day, the eighth, the water froze. There were the buckets, overflowing with ice, standing chill and bluecold. The two gazed at them forlornly. Jimmy broke one open.

“Frozen solid,” he said bleakly and wrapped another sheet about himself.

It was hard to think of anything but the increasing cold now. Roy and Jimmy had requisitioned every sheet and blanket on the ship, after having put on three or four shirts and a like number of pairs of pants.

They kept in bed for as long as they were able, and when forced to move out, they huddled near the small oil-burner for warmth. Even this doubtful pleasure was soon denied them, for, as Jimmy remarked, “the oil supply is extremely limited and we will need the burner to thaw out the water and food.”

Tempers were short and clashes frequent, but the com-mon misery kept them from actually jumping on each other’s throats. It was on the tenth day, however, that the two, united by a common hatred, suddenly became friends.

The temperature was hovering down near the zero point, making up its mind to descend into the minus regions. Jimmy was huddled in a corner thinking of the times back in New York when he had complained of the August heat and wondered how he could have done so. Roy, meanwhile, had manipulated numb fingers long enough to calculate that they would have to endure the coldness for exactly 6354 minutes more.

He regarded the figures with distaste and read them off to Jimmy. The latter scowled and grunted, “The way I feel, I’m not going to last 54 minutes, let alone 6354.” Then, impatiently, “I wish you could manage to think of some way of getting us out of this.”

“If we weren’t so near the sun,” suggested Roy, “we might start the rear blasts and hurry us up.”

“Yes, and if we landed in the sun, we’d be nice and warm.

You’re a big help!”

“Well, you’re the one that calls himself ‘Brains’ Turner. You think of something. The way you talk, you’d think all this was my fault.”

“It certainly is, you donkey in human clothing! My better judgment told me all along not to go on this fool trip. When McCutcheon proposed it, I refused pointblank. I know better.” Jimmy was very bitter. “So what happened? Like the fool you are, you accept and rush in where sensible men fear to tread. And then, of course, I naturally had to tag along.

“Why, do you know what I should have done,” Jimmy’s voice ascended the scale, “I should have let you go alone and freeze and then sat down by a roaring fire all by myself and gloated. That is, if I had known what was going to happen.”

A hurt and surprised look appeared on Roy’s face. “Is that so? So that’s how it is! Well, all I can say is that you certainly have a genius for twisting facts, if for nothing else. The fact of the matter is that you were unutterably stupid enough to accept and / the poor fellow raked in by the force of circumstances.”

Jimmy’s expression was one of the utmost disdain. “Evidently the cold has driven you batty, though I

admit it wouldn't take much to knock the little sense you possess out of you."

"Listen," Roy answered hotly. "On October 10th, Mc-Cutcheon called me up on the 'visor and told me you had accepted and laughed at me for a yellow-belly for refusing to go. Do you deny that?"

"Yes, I do, and unconditionally. On October 10, Sourpass

told me that you had decided to go and had bet him that—"

Jimmy's voice faded away very suddenly and a shocked look spread over his face. "Say—, are you sure McCutcheon told you I had agreed to go?"

A chill, clammy feeling clutched at Roy's heart when he caught Jimmy's drift, a feeling that drowned out the numb-ness of the cold.

"Absolutely," he answered. "I'll swear to that. That's why I went."

"But he told me you had accepted and that's why / went."

Jimmy felt very stupid all at once.

The two fell into a protracted and ominous silence which was broken at length by Roy, who spoke in a voice that quivered with emotion.

"Jimmy, we've been the victims of a contemptible, dirty, lowdown, doublecrossing trick." His eyes dilated with fury. "We've been cheated, robbed—," words failed him but he kept on uttering meaningless sounds, indicative mainly of de-vouring rage.

Jimmy was cooler, but none the less vindictive, "You're right, Roy; McCutcheon has done us dirty. He has plumbed the depths of human iniquity. But we'll get even. When we get through in 6300 odd minutes, we will have a score to settle with Mr. McCutcheon."

"What are we going to do?" Roy's eyes were filled with a bloodthirsty joy.

"On the spur of the moment, I suggest that we simply tear into him and rend him into tiny, little pieces."

"Not gruesome enough. How about boiling him in oil?"

"That's reasonable, yes; but it might take too long. Let's give him a good old-fashioned beating—with brass knuckles."

Roy rubbed his hands. "We'll have lots of time to think up some really adequate measures. The dirty. God-forsaken, yellow-livered, leprous—" The rest verged fluently into the un-printable.

And for four more days, the temperature dove. It was on the fourteenth and last day that the mercury froze, the solid red shaft pointed its congealed finger at forty below.

On this terrible last day, they had lit the oil-burner, using their entire scanty supply of oil. Shivering and more than half frozen, they crouched close, attempting to extract every last drop of heat.

Jimmy had found a pair of ear-muffs several days before in some obscure corner, and it now changed

hands at the end of every hour. Both sat buried under a small mountain of blankets, chafing chilled hands and feet. With every pass-ing minute, their conversation, concerning McCutcheon al-most exclusively, grew more vitriolic.

“Always quoting that triply-damned slogan of the Space Mail: ‘Our flight through sp—’ “ Jimmy choked with impo-tent fury.

“Yes, and always rubbing holes in chairs instead of coming out here and doing something like a man’s work, the rotten so-and-so,” agreed Roy.

“Well, we’re due to pass out of the deflection zone in two hours. Then three weeks and we’ll be on Venus,” said Jimmy, sneezing.

“That can’t be too soon for me,” answered Sneed, who had been sniffing for the last two days. “I’m never taking another space trip except maybe the one that takes me back to Earth. After this, I make my living growing bananas in Cen-tral America. A fellow can be decently warm out there at least.”

“We might not get off Venus, after what we’re going to do to McCutcheon.”

“No, you’re right there. But that’s all right. Venus is even warmer than Central America and that’s all I care about.”

“We have no legal worries either,” Jimmy sneezed again. “On Venus, life imprisonment’s the limit for first-degree murder. A nice,-warm dry cell for the rest of my life. What could be sweeter?”

The second hand on the chronometer whirled at its even pace; the minutes ticked off. Roy’s hands hovered lovingly over the lever that would set off the right rear blasts which would drive the Helios~but away from the sun and from that terrible Deflection Zone.

And at last, “Go!” shouted Jimmy eagerly. “Let her blast!”

With a deep reverberating roar, the rockets fired. The Helios trembled from stem to stern. The pilots felt the ac-celeration press them back into their seats and were happy. In a matter of minutes, the sun would shine again and they would be warm, feel the blessed heat once more.

It happened before they were aware of it. There was a momentary flash of light and then a grinding and a click, as the sunward portholes closed.

“Look,” cried Roy, “the stars! We’re out of it!” He cast an ecstatically happy glance at the thermometer. “Well, old boy, from now on we go up again.” He pulled the blankets about him closer, for the cold still lingered.

There were two men in Frank McCutcheon’s office at the Venus branch of the United Space Mail: McCutcheon him-self and the elderly, white-haired Zebulon Smith, inventor of the Deflection Field. Smith was talking.

“But Mr. McCutcheon, it is reaily of great importance that I learn exactly how my Deflection Field worked. Surely they have transmitted all possible information to you.”

McCutcheon’s face was a study in dourness as he bit the edge off one of his two-for-five cigars and lit it.

“That, my dear Mr. Smith,” he said, “is exactly what they did not do. Ever since they have receded far enough from the sun to render communication possible, I have been sending requests for information regarding the practicability of the Field. They just refuse to answer. They say it worked and that they’re alive and that they’ll give the details when they reach Venus. That’s all!”

Zebulon Smith sighed in disappointment. “Isn’t that a bit unusual; insubordination, so to speak? I thought they were required to be complete in their reports and to give any re-requested details.”

“So they are. But these are my ace pilots and rather tem-peramental. We have to extend some leeway. Besides, I tricked them into going on this trip, a very hazardous one, as you know, and so am inclined to be lenient.” “Well, then, I suppose I must wait.”

“Oh, it won’t be for long,” McCutcheon assured him. “They’re due today, and I assure you that as soon as I get in touch with them, I shall send you the full details. After all, they survived for two weeks at a distance of twenty million miles from the sun, so your invention is a success. That should satisfy you.”

Smith had scarcely left when McCutcheon’s secretary entered with a puzzled frown on her face.

“Something is wrong with the two pilots of the Helios, Mr. McCutcheon,” she informed him. “I have just received a bulletin from Major Wade at Pallas City, where they landed. They have refused to attend the celebration prepared for them, but instead immediately chartered a rocket to come here, refusing to state the reason. When Major Wade tried to stop them, they became violent, he says.” She laid the communication down on his desk.

McCutcheon glanced at it perfunctorily. “Hmm! they do seem confoundedly temperamental. Well, send them to me when they come. I’ll snap them out of it.”

It was perhaps three hours later that the problem of the two misbehaving pilots again forced itself upon his mind, this time by a sudden commotion that had arisen in the reception room. He heard the deep angry tones of two men and then the shrill remonstrances of his secretary. Suddenly the door burst open and Jim Turner and Roy Snead strode in.

Roy coolly closed the door and planted his back against it.

“Don’t let anyone disturb me until I’m through,” Jimmy told him.

“No one’s getting through this door for a while,” Roy answered grimly, “but remember, you promised to leave some for me.”

McCutcheon said nothing during all this, but when he saw Turner casually draw a pair of brass knuckles from his pocket and put them on with a determined air, he decided that it was time to call a halt to the comedy.

“Hello, boys,” he said, with a heartiness unusual in him.

“Glad to see you again. Take a seat.”

Jimmy ignored the offer. “Have you anything to say, any last request, before I start operations?” He gritted his teeth with an unpleasant scraping noise.

“Well, if you put it that way,” said McCutcheon, “I might ask exactly what this is all about—if I’m not being too un-reasonable. Perhaps the Deflector was inefficient and you had a hot trip.”

The only answer to that was a loud snort from Roy and a cold stare on the part of Jimmy.

“First,” said the latter, “what was the idea of that filthy, disgusting cheat you pulled on us?”

McCutcheon’s eyebrows raised in surprise. “Do you mean the little white lies I told you in order to get you to go? Why, that was nothing. Common business practice, that’s all. Why, I pull worse things than that every day and people consider it just routine. Besides, what harm did it do you?”

“Tell him about our ‘pleasant trip,’ Jimmy,” urged Roy.

“That’s exactly what I’m going to do,” was the response.

He turned to McCutcheon and assumed a martyr-like air. “First, on this blasted trip, we fried in a temperature that reached 150 but that was to be expected and we’re not com-plaining; we were half Mercury’s distance from the sun.

“But after that, we entered this zone where the light bends around us; incoming radiation sank to zero and we started losing heat and not just a degree a day the way we learned it in pilot school.” He paused to breathe a few novel curses he had just thought of, then continued.

“In three days, we were down to a hundred and in a week down to freezing. Then for one entire week, seven long days, we drove through our course at sub-freezing temperature. It was so cold the last day that the mercury froze.” Turner’s voice rose till it cracked, and at the door, a fit of self-pity caused Roy to catch his breath with an audible gulp. McCutcheon remained inscrutable.

Jimmy continued. “There we were without a heating sys-tem, in fact, no heat of any kind, not even any warm clothing. We froze, damn it; we had to thaw out our food and melt our water. We were stiff, couldn’t move. It was hell, I tell you, in reverse temperature.” He paused, at a loss for words.

Roy Snead took up the burden. “We were twenty million miles away from the sun and I had a case of frost-bitten ears. Frost-bitten, I say.” He shook his fist viciously under McCutcheon’s nose. “And it was your fault. You tricked us into it! While we were freezing, we promised ourselves that we’d come back and get you and we’re going to keep that promise.” He turned to Jimmy. “Go ahead, start it, will you? We’ve wasted enough time.”

“Hold it, hoys,” McCutcheon spoke at last. “Let me get this straight. You mean to say that the Deflection Field worked so well that it kept all the radiation away and sucked out what heat there was in the ship in the first place?” Jimmy grunted a curt assent.

“And you froze for a week because of that?” McCutcheon continued.

Again the grunt.

And then a very strange and unusual thing happened. McCutcheon, “Old, Sourpuss,” the man without the “risus” muscle, smiled. He actually bared his teeth in a grin. And what’s more, the grin grew wider and wider until finally a rusty, long-unused chuckle was heard louder and louder, until it developed into a full-fledged laugh, and the laugh into a bellow. In one stentorian burst, McCutcheon made up for a lifetime of sour gloom.

The walls reverberated, the windowpanes rattled, and still the Homeric laughter continued. Roy and Jimmy stood open-mouthed, entirely non-plussed. A puzzled bookkeeper thrust his head inside the door in a fit of temerity and remained frozen in his tracks. Others crowded about the door, conversing in awed whispers. McCutcheon had laughed!

Gradually, the risibilities of the old General Manager subsided. He ended in a fit of choking and finally turned a purple face towards his ace pilots, whose surprise had long since given way to indignation.

“Boys,” he told them, “that was the best joke I ever heard. You can consider your pay doubled, both of you.” He was still grinning away like clockwork and had developed a beautiful case of hiccoughs.

The two pilots were left cold at the handsome proposal. “What’s so killingly funny?” Jimmy wanted to know, “I don’t see anything to laugh at, myself.”

McCutcheon’s voice dripped honey, “Now, fellows, before I left I gave each of you several mimeographed sheets containing special instructions. What happened to them?”

There was sudden embarrassment in the air.

“I don’t know. I must have mislaid mine,” gulped Roy.

“I never looked at mine; I forgot about it.” Jimmy was genuinely dismayed.

“You see,” exclaimed McCutcheon triumphantly, “it was all the fault of your own stupidity.”

“How do you figure that out?” Jimmy wanted to know. “Major Wade told us all we had to know about the ship, and besides, I guess there’s nothing you could tell us about running one.”

“Oh, isn’t there? Wade evidently forgot to inform you of one minor point which you would have found on my instructions. The strength of the Deflection Field was adjustable. It happened to be set at maximum strength when you started, that’s all.” He was now beginning to chuckle faintly once more. “Now, if you had taken the trouble to read the sheets, you would have known that a simple movement of a small lever,” he made the appropriate gesture with his thumb, “would have weakened the Field any desired amount and allowed as much radiation to leak through as was wanted.”

And now the chuckle was becoming louder. “And you froze for a week because you didn’t have the brains to pull a lever. And then you ace pilots come here and blame me. What a laugh!” and off he went again while a pair of very sheepish young men glanced askance at each other.

When McCutcheon came around to normal, Jimmy and Roy were gone.

Down in an alley adjoining the building, a little ten-year-old boy watched, with open mouth and intense absorption, two young men who were engaged in the strange and rather startling occupation of kicking each other alternately. They were vicious kicks, too.

THE END

When I wrote “Ring Around the Sun” I was much taken by the two protagonists. Turner and Snead. It was in my mind, I recall, to write other stories about the pair. This was a natural thought, for in the late 1930s there were a number of “series” of stories about a given character or characters. Campbell himself

had written some delightful stories featuring two men named Penton and Blake, and I longed to do a Penton-Blake imitation.

There was a practical value to writing a “series.” For one thing, you had a definite background that was carried on from story to story, so that half your work was done for you. Secondly, if the “series” became popular, it would be difficult to reject new stories that fit into it.

I didn’t make it with Turner and Snead. In fact, I never tried. The time was to come, two years later, when I was to have a pair of very similar characters, Powell and Donovan, who were to be in four stories and who were to be part of a very successful “series” indeed.

By the end of August 1938, then, I had written five stories, of which three were eventually published. Not bad!

However, there followed a dry spell. I was finishing my third year of college and was trying, without success, to get admission into medical school. The situation in Europe was disturbing. It was the time of the surrender at Munich, and for a Jewish teen-ager there was something unsettling about the rapid, sure-fire victories of Hitler.

The next three stories took not one month, as had the previous three, but three months. And all were clearly well below the limits of salability even in the most permissive market. They were “The Weapon,” “Paths of Destiny,” and “Knossos in Its Glory.” Campbell rejected each one in very short order, and all made the rounds without luck. There came a time, nearly three years later, when Astonishing seemed interested in “The Weapon,” but that fell through and the other two didn’t even come that close.

All three stories are now gone forever. I remember nothing at all about two of them, but “Knossos in Its Glory” was an ambitious attempt to retell the Theseus myth in science fiction terms. The minotaur was an extra-terrestrial who landed in ancient Crete with only the kindest of intentions, and I remember writing terribly stilted prose in an attempt to make my Cretans sound as I imagined characters in Homer ought to sound. Campbell, always kind, said in rejecting it that my work “was definitely improving, especially where I was not straining for effect.”

By the time I was writing “Knossos in Its Glory” I had just received my check for “Marooned off Vesta” and I was a professional. My spirits rose accordingly, and toward the end of November I wrote “Ammonium,” which was another attempt (like “Ring Around the Sun”) at humor.

I had a pretty good notion that Campbell wouldn’t like it, however, and I never showed it to him. I sent it to Thrilling Wonder Stories instead. When they rejected it, I lost heart and retired it. It was only after Future Fiction had taken “Ring Around the Sun” that I thought I would chance this other one, too.

On August 23, 1939, I sent it in to Future Fiction, which took it, altering its name to “The Magnificent Possession.”

The Magnificent Possession

Walter Sills reflected now, as he had reflected often before, that life was hard and joyless. He surveyed his dingy chemical laboratory and grinned cynically—working in a dirty hole of a place, living on occasional ore analyses that barely paid for absolutely indispensable equipment, while others, not half his worth perhaps, were working for big industrial concerns and taking life easy.

He looked out the window at the Hudson River, ruddied in the flame of the dying sun, and wondered

moodily whether these last experiments would finally bring him the fame and success he was after, or if they were merely some more false alarms.

The unlocked door creaked open a crack and the cheerful face of Eugene Taylor burst into view. Sills waved and Tay-lor's body followed his head and entered the laboratory.

"Hello, old soak," came the loud and carefree hail. "How go things?"

Sills shook his head at the other's exuberance. "I wish I had your foolish outlook on life. Gene. For your information, things are bad. I need money, and the more I need it, the less I have."

"Well, I haven't any money either, have I?" demanded Taylor. "But why worry about it? You're fifty, and worry hasn't got you anything except a bald head. I'm thirty, and I want to keep my beautiful brown hair."

The chemist grinned. "I'll get my money yet. Gene. Just leave it to me."

"Your new ideas shaping out well?"

"Are they? I haven't told you much about it, have I? Well, come here and I'll show you what progress I've made."

Taylor followed Sills to a small table, on which stood a rack of test tubes, in one of which was about half an inch of a shiny metallic substance.

"Sodium-mercury mixture, or sodium amalgam, as it is called," explained Sills pointing to it.

He took a bottle labeled "Ammonium Chloride Sol." from the shelf and poured a little into the tube. Immediately the sodium amalgam began changing into a loosely-packed, spongy substance.

"That," observed Sills, "is ammonium amalgam. The am-monium radical (NH_2) acts as a metal here and combines with mercury." He waited for the action to go to completion and then poured off the supernatant liquid.

"Ammonium amalgam isn't very stable," he informed Taylor, "so I'll have to work fast." He grasped a flask of straw-colored, pleasant-smelling liquid and filled the test-tube with it. Upon shaking, the loosely-packed ammonium amalgam vanished and in its stead a small drop of metallic liquid rolled about the bottom.

Taylor gazed at the test-tube, open-mouthed. "What happened?"

“This liquid is a complex derivative of hydrazine which I’ve discovered and named Ammonaline. I haven’t worked out its formula yet, but that doesn’t matter. The point about it is that it has the property of dissolving the ammonium out of the amalgam. Those few drops at the bottom are pure mer-cury; the ammonium is in solution.”

Taylor remained unresponsive and Sills waxed enthusiastic. “Don’t you see the implications? I’ve gone half way towards isolating pure ammonium, a thing which has never been done before! Once accomplished it means fame, success, the Nobel Prize, and who knows what else.”

“Wow!” Taylor’s gaze became more respectful. “That yel-low stuff doesn’t look so important to me.” He snatched for it, but Sills withheld it.

“I haven’t finished, by any means, Gene. I’ve got to get it in its free metallic state, and I can’t do that so far. Every time I try to evaporate the Ammonaline, the ammonium breaks down to everlasting ammonia and hydrogen. . . . But I’ll get it—I’ll get it!”

Two weeks later, the epilogue to the previous scene was enacted. Taylor received a hurried and emphatic call from his chemist friend and appeared at the laboratory in a flurry of anticipation.

“You’ve got it?”

“I’ve got it—and it’s bigger than I thought! There’s mil-lions in it, really,” Sills’ eyes shone with rapture.

“I’ve been working from the wrong angle up to now,” he explained. “Heating the solvent always broke down the dis-solved ammonium, so I separated it out by freezing. It works the same way as brine, which, when frozen slowly, freezes into fresh ice, the salt crystallizing out. Luckily, the Ammona-line freezes at 18 degrees Centigrade and doesn’t require much cooling.”

He pointed dramatically to a small beaker, inside a glass-walled case. The beaker contained pale, straw-colored, needle-like crystals and, covering the top of this, a thin layer of a dullish, yellow substance.

“Why the case?” asked Taylor.

“I’ve got it filled with argon to keep the ammonium (which is the yellow substance on top of the Ammonaline) pure. It is so active that it will react with anything else but a helium-type gas.”

Taylor marveled and pounded his complacently-smiling friend on the back.

“Wait, Gene, the best is yet to come.”

Taylor was led to the other end of the room and Sills’ trembling finger pointed out another airtight case containing a lump of metal of a gleaming, yellow that sparkled and glistened.

“That, my friend, is ammonium oxide (NH_4O), formed by passing absolutely dry air over free ammonium metal. It is perfectly inert (the sealed case contains quite a bit of chlorine, for instance, and yet there is no reaction). It can be made as cheaply as aluminum, if not more so, and yet it looks more like gold than gold does itself. Do you see the possibilities?”

“Do I?” exploded Taylor. “It will sweep the country. You can have ammonium jewelry, and ammonium-plated table-ware, and a million other things. Then again, who knows how many countless

industrial applications it may have? You're rich, Walt—you're rich."

"We're rich," corrected Sills gently. He moved towards the telephone, "The newspapers are going to hear of this. I'm going to begin to cash in on fame right now."

Taylor frowned, "Maybe you'd better keep it a secret, Walt."

"Oh, I'm not breathing a hint as to the process. I'll just give them the general idea. Besides, we're safe; the patent application is in Washington right now."

But Sills was wrong! The article in the paper ushered in a very, very hectic two days for the two of them.

J. Throgmorton Bankhead is what is commonly known as a "captain of industry." As head of the Acme Chromium and Silver Plating Corporation he no doubt deserved the title; but to his patient and long-suffering wife, he was merely a dyspeptic and grouchy husband, especially at the breakfast table . . . and he was at the breakfast table now.

Rustling his morning paper angrily, he sputtered between bites of buttered toast, 'This man is ruining the country.' He pointed aghast at big, black headlines. "I said before and I'll say again that the man is as crazy as a bedbug. He won't be satisfied . . ."

"Joseph, please," pleaded his wife, "you're getting purple in the face. Remember your high blood pressure. You know the doctor told you to stop reading the news from Washing-ton if it annoys you so. Now, listen dear, about the cook. She's . . ."

"The doctor's a damn fool, and so are you," shouted J. Throgmorton Bankhead. "I'll read all the news I please and get purple in the face too, if I want to."

He raised the cup of coffee to his mouth and took a critical sip. While he did so, his eyes fell upon a more insignificant headline towards the bottom of the page: "Savant Discovers Gold Substitute." The coffee cup remained in the air while he scanned the article quickly. "This new metal," it ran in part, "is claimed by its discoverer to be far superior to chromium, nickel, or silver for cheap and beautiful jewelry. The twenty-dollar-a-week clerk,' said Professor Sills, 'will eat off ammonium plate more impressive in appearance than the gold plate of the Indian Nabob.' There is no . . ."

But J. Throgmorton Bankhead had stopped reading. Visions of a ruined Acme Chromium and Silver Plating Corporation danced before his eyes; and as they danced, the cup of coffee dropped from his hand, and splashed hot liquid over his trousers.

His wife rose to her feet in alarm, "What is it, Joseph; what is it?"

"Nothing," Bankhead shouted. "Nothing. For God's sake, go away, will you?"

He strode angrily out of the room, leaving his wife to search the paper for anything that could have disturbed him.

"Bob's Tavern" on Fifteenth Street is usually pretty well filled at all times, but on the morning we are speaking of, it was empty except for four or five rather poorly-dressed men who clustered about the portly and dignified form of Peter Q. Homswoggle, eminent ex-Congressman.

Peter Q. Homswoggle was, as usual, speaking fluently. His subject, again as usual, concerned the life of

a Congressman.

“I remember a case in point,” he was saying, “when that same argument was brought up in the House, and which I answered as follows: The eminent gentleman from Nevada in his statements overlooks one very important aspect of the problem. He does not realize that it is to the interest of the entire nation that the apple-parers of this country be attended to promptly; for, gentlemen, on the welfare of the apple-parers depends the future of the entire fruit industry and on the fruit-industry is based the entire economy of this great and glorious nation, the United States of America.” “

Homswoggle paused, swallowed half a pint of beer at once, and then smiled in triumph, “I have no hesitation in saying, gentlemen, that at that statement, the entire House burst into wild and tumultuous applause.”

One of the assembled listeners shook his head slowly and marvelled. “It must be great to be able to spiel like that, Senator. You musta been a sensation.”

“Yeah,” agreed the bartender, “it’s a dirty shame you were beat last election.”

The ex-Congressman winced and in a very dignified tone began, “I have been reliably informed that the use of bribery in that campaign reached unprecedented prop . . .” His voice died away suddenly as he caught sight of a certain article in the newspaper of one of his listeners. He snatched at it and read it through in silence and thereupon his eyes gleamed with a sudden idea.

“My friends,” he said turning to them again, “I find I must leave you. There is pressing work that must be done im-mediately at City Hall.” He leant over to whisper to the bar-keeper, “You haven’t got twenty-five cents, have you? I find I left my wallet in the Mayor’s office by mistake. I will surely repay you tomorrow.”

Clutching the quarter, reluctantly given, Peter Q. Homswoggle left

In a small and dimly lit room somewhere in the lower reaches of First Avenue, Michael Maguire, known to the police by the far more euphonious name of Mike the Slug, cleaned his trusty revolver and hummed a tuneless song. The door opened a crack and Mike looked up.

“That you, Slappy?”

“Yeh,” a short, wizened person sidled in, “I brung ye de evenin’ sheet. De cops are still tinkin’ Bragoni pulled de job.”

“Yeh? That’s good.” He bent unconcernedly over the re-

volver. “Anything else doing?” “

“Naw! Some dippy dame killed herself, but dat’s all.”

He tossed the newspaper to Mike and left. Mike leaned back and flipped the pages in a bored manner.

A headline attracted his eye and he read the short article that followed. Having finished, he threw aside the paper, lit a cigarette, and did some heavy thinking. Then he opened the door.

“Hey, Slappy, c’mere. There’s a job that’s got to be done.”

Walter Sills was happy, deliriously so. He walked about his laboratory king of all he surveyed, strutting like a peacock, basking in his new-found glory. Eugene Taylor sat and watched him, scarcely less happy himself.

“How does it feel to be famous?” Taylor wanted to know.

“Like a million dollars; and that’s what I’m going to sell the secret of ammonium metal for. It’s the fat of the land for me from now on.”

“You leave the practical details to me, Walt. I’m getting in touch with Staples of Eagle Steel today. You’ll get a decent price from him.”

The bell rang, and Sills jumped. He ran to open the door.

“Is this the home of Walter Sills?” The large, scowling visitor gazed about him superciliously.

“Yes, I’m Sills. Do you wish to see me?”

“Yes. My name is J. Throgmorton Bankhead and I repre-sent the Acme Chromium and Silver Plating Corporation. I would like to have a moment’s discussion with you.”

“Come right in. Come right in! This is Eugene Taylor, my associate. You may speak freely before him.”

“Very well.” Bankhead seated himself heavily. “I suppose you surmise the reason for my visit.”

“I take it that you have read of the new ammonium metal in the papers.”

“That’s right. I have come to see whether there is any truth in the story and to buy your process if there is.”

“You can see for yourself, sir,” Sills led the magnate to

where the argon-filled container of the few grams of pure

ammonium were. “That is the metal. Over here to the right,

I've got the oxide, an oxide which is more metallic than the metal itself, strangely enough. It is the oxide that is what the papers call 'substitute gold.' "

Bankhead's face showed not an atom of the sinking feeling within him as he viewed the oxide with dismay. "Take it out in the open," he said, "and let's see it."

Sills shook his head. "I can't, Mr. Bankhead. Those are the first samples of ammonium and ammonium-oxide that ever existed. They're museum pieces. I can easily make more for you, if you wish."

"You'll have to, if you expect me to sink my money in it You satisfy me and I'll be willing to buy your patent for as much as—oh, say a thousand dollars."

"A thousand dollars!" exclaimed Sills and Taylor together.

"A very fair price, gentlemen."

"A million would be more like it," shouted Taylor in an outraged tone. "This discovery is a goldmine."

"A million, indeed! You are dreaming, gentlemen. The fact of the matter is that my company has been on the track of ammonium for years now, and we are just at the point of solving the problem. Unfortunately you beat us by a week or so, and so I wish to buy up your patent in order to save my company a great deal of annoyance. You realize, of course, that if you refuse my price, I could just go ahead and manu-facture the metal, using my own process."

"We'll sue if you do," said Taylor.

"Have you got the money for a long, protracted—and ex-pensive—lawsuit?" Bankhead smiled nastily. "I have, you know. To prove, however, that I am not unreasonable, I will make the price two thousand."

"You've heard our price," answered Taylor stonily, "and we have nothing further to say."

"All right, gentlemen," Bankhead walked towards the door, "think it over. You'll see it my way, I'm sure."

He opened the door and revealed the symmetrical form of Peter Q. Hornswoggle bent in rapt concentration at the key-hole. Bankhead sneered audibly and the ex-Congressman jumped to his feet in consternation, bowing rapidly two or three times, for want of anything better to do.

The financier passed by disdainfully and Hornswoggle entered, slammed the door behind him, and faced the two be-wildered friends.

"That man, my dear sirs, is a malefactor of great wealth, an economic royalist. He is the type of predatory interest that is the ruination of this country. You did quite right in refusing his offer." He placed his hand on his ample chest and smiled at them benignantly.

"Who the devil are you?" rasped Taylor, suddenly recover-ing from his initial surprise.

“I?” Hornswoggle was taken aback. “Why—er—I am Peter Quintus Hornswoggle. Surely you know me. I was in the House of Representatives last year.”

“Never heard of you. What do you want?”

“Why, bless me! I read in the papers of your wonderful discovery and have come to place my services at your feet.”

“What services?”

“Well, after all, you two are not men of the world. With your new invention, you are prey for every self-seeking un-scrupulous person that comes along—like Bankhead, for in-stance. Now, a practical man of affairs, such as I, one with experience of the world, would be of inestimable use to you.

I could handle your affairs, attend to details, see that—“

“All for nothing, of course, eh?” Taylor asked, sardonically.

Hornswoggle coughed convulsively. “Well, naturally, I thought that a small interest in your discovery might fittingly be assigned to me.”

Sills, who had remained silent during all this, rose to his feet suddenly. “Get out of here! Did you hear me? Get out, before I call the police.”

“Now, Professor Sills, pray don’t get excited,” Hornswoggle retreated towards the door which Taylor held open for him. He passed out, still protesting, and swore softly to himself when the door slammed in his face.

Sills sank wearily into the nearest chair. “What are we to

do. Gene? He offers only two thousand. A week ago that

would have been beyond anything I could have hoped for,

but now—“

“Forget it. The fellow was only bluffing. Listen, I’m going right now to call on Staples. We’ll sell to him for what we can get (it ought to be plenty) and then if there’s any trouble with Bankhead—well, that’s Staples’ worry.” He patted the other on the shoulder. “Our troubles are practically over.”

Unfortunately, however, Taylor was wrong; their troubles were only beginning.

Across the street, a furtive figure, with beady eyes peering from upturned coat-collar, surveyed the house carefully. A curious policeman might have identified him as “Slappy” Egan if he had bothered to look, but no one did and “Slappy” remained unmolested.

“Cripes,” he muttered to himself, “dis is gonna be a cinch. De whole woiks on ‘the bottom floor, back window can be jimmied wid a toot’pick, no alarms, no nuttin’.” He chuckled and walked away.

Nor was “Slappy” alone with his ideas. Peter Q. Horn-swoggle, as he walked away, found strange

thoughts wander-ing through his massive cranium—thoughts which involved a certain amount of unorthodox action.

And J. Throgmorton Bankhead was likewise active. Be-longing to that virile class known as “go-getters” and being not at all scrupulous as to how he “go-got,” and certainly not intending to pay a million dollars for the secret of Ammonium, he found it necessary to call on a certain one of his acquaint-ances.

This acquaintance, while a very useful one, was a bit un-savory, and Bankhead found it advisable to be very careful and cautious while visiting him. However, the conversation that ensued ended in a pleasing manner for both of them.

Walter Sills snapped out of an uneasy sleep with startled suddenness. He listened anxiously for a while and then leaned over and nudged Taylor. He was rewarded by a few incoherent snuffles.

“Gene, Gene, wake up! Come on, get up!”

“Eh? What is it? What are you bothering—“

“Shut up! Listen, do you hear it?”

“I don’t hear anything. Leave me alone, will you?”

Sills put his finger on his lips, and the other quieted. There was a distinct shuffling noise down below, in the laboratory.

Taylor’s eyes widened and sleep left them entirely. “Bur-glars!” he whispered.

The two crept out of bed, donned bathrobe and slippers, and tiptoed to the door. Taylor had a revolver and took the lead in descending the stairs.

They had traversed perhaps half the flight, when there was a sudden, surprised shout from below, followed by a series of loud, threshing noises. This continued for a few moments and then there was a loud crash of glassware.

“My ammonium!” cried Sills in a stricken voice and rushed head-long down the stairs evading Taylor’s clutching arms.

The chemist burst into the laboratory, followed closely by his cursing associate, and clicked the lights on. Two struggling figures bunked owlshly in the sudden illumination, and sep-arated.

Taylor’s gun covered them. “Well, isn’t this nice,” he said.

One of the two lurched to his feet from amid a tangle of broken beakers and flasks, and, nursing a cut on his wrist, bent his portly body in a still dignified bow. It was Peter Q. Homswoggle.

“No doubt,” he said, eyeing the unwavering firearm ner-vously, “the circumstances seem suspicious, but I can explain very easily. You see, in spite of the very rough treatment I received after having made my reasonable proposal, I still felt a great deal of kindly interest in you two.

“Therefore, being a man of the world, and knowing the iniquities of mankind, I just decided to keep an eye on your house tonight, for I saw you had neglected to take precautions against house-breakers.

Judge my surprise to see this dastardly creature,” he pointed to the flat-nosed, plug-ugly, who still remained on the floor in a daze, “creeping in at the back window.

“Immediately, I risked life and limb in following the criminal, attempting desperately to save your great discovery. I really feel I deserve great credit for what I have done. I’m sure you will feel that I am a valuable person to deal with and reconsider your answers to my earlier proposals.”

Taylor listened to all this with a cynical smile. “You can certainly lie fluently, can’t you P.Q.?”

He would have continued at greater length and with greater forcefulness had not the other burglar suddenly raised his voice in loud protest “Cripes, boss, dis fat slob here is only tryin’ to get me in bad. I’m just followin’ orders, boss. A fellow hired me to come in here and rifle the safe and I’m just oinin’ a bit o’ honest money. Just plain safe-crackin’, boss, I ain’t out to hurt no one.

“Den, just as I was gettin’ down to de job—wannin’ up, so

to say—in crawls dis little guy wid a chisel and blowtorch

and makes for de safe. Well, naturally, I don’t like no compe-

tition, so I lays for him and then—“

But Homswoggle had drawn himself up in icy hauteur. “It

remains to be seen whether the word of a gangster is to be

taken before the word of one, who, I may truthfully say, was,

in his time, one of the most eminent members of the great—“

“Quiet, both of you,” shouted Taylor, waving the gun threateningly. “I’m calling the police and you can annoy them with your stories. Say, Walt, is everything all right?”

“I think so!” Sills returned from his inspection of the laboratory. “They only knocked over empty glassware. Every-thing else is unharmed.”

“That’s good,” Taylor began, and then choked in dismay.

From the hallway, a cool individual, hat drawn well over his eyes, entered. A revolver; expertly handled, changed the situation considerably.

“O. K.,” he grunted at Taylor, “drop the gat!” The other’s weapon slipped from reluctant fingers and hit the floor with a clank.

The new menace surveyed the four others with a sardonic glance. “Well! So there were two others trying to beat me to it This seems to be a very popular place.”

Sills and Taylor stared stupidly, while Homswoggle’s teeth chattered energetically. The first mobster moved back un-easily, muttering as he did so, “For Pete’s sake, it’s Mike the Slug.”

“Yeah,” Mike rasped, “Mike the Slug. There’s lots of guys who know me and who know I ain’t afraid

to pull the trigger anytime I feel like. Come on, Baldy, hand over the works.

You know—the stuff about your fake gold. Come on, before

I count five.”

Sills moved slowly toward the old safe in the corner. Mike stepped back carelessly to give him room, and in so doing, his coat sleeve brushed against a shelf. A small vial of sodium sulphate solution tottered and fell.

With sudden inspiration. Sills yelled, “My God, watch out!

It’s nitroglycerine!”

The vial hit the floor with a smashing tinkle of broken glass, and involuntarily, Mike yelled and jumped in wild dismay.

And as he did so, Taylor crashed into him with a beautiful flying tackle. At the same time. Sills lunged for Taylor’s fallen weapon to cover the other two. For this, however, there was no longer need. At the very beginning of the confusion, both had faded hurriedly into the night from whence they came.

Taylor and Mike the Slug rolled round and round the lab-oratory floor, locked in desperate struggle while Sills hopped over and about them, praying for a moment of comparative quiet that he might bring the revolver into sharp and sudden contact with the gangster’s skull.

But no such moment came. Suddenly Mike lunged, caught Taylor stunningly under the chin, and jerked free. Sills yelled in consternation and pulled the trigger at the fleeing figure. The shot was wild and Mike escaped unharmed. Sills made no attempt to follow.

A sluicing stream of cold water brought Taylor back to his senses. He shook his head dazedly as he surveyed the sur-rounding shambles.

“Whew!” he said, “what a night!”

Sills groaned, “What are we going to do now. Gene? Our very lives are in danger. I never thought of the possibility of thieves, or I would never have told of the discovery to the newspapers.”

“Oh, well, the harm’s done; no use weeping over it Now, listen, the first thing we have to do now is to get back to sleep. They won’t bother us again tonight Tomorrow you’ll go to the bank and put the papers outlining the details of the process in the vault (which you should have done long ago). Staples will be here at 3 p.m.; well close the deal, and then, at least, we’ll live happily ever after.”

The chemist shook his head dolefully. “Ammonium has certainly proved to be very upsetting so far. I almost wish I had never heard of it I’d almost rather be back doing ore analysis.”

As Walter Sills rattled cross-town towards his bank, he found no reason to change his wish. Even the comforting and homely jiggling of his ancient and battered automobile failed to cheer him. From a life characterized by peaceful monotony, he had entered a period of bedlam, and he was not at all satisfied with the change.

“Riches, like poverty, has its own peculiar problems,” he remarked sententiously to himself as he braked

the car before the two-story, marble edifice that was the bank. He stepped out carefully, stretched his cramped legs, and headed for the revolving door.

He didn't get there right away, though. Two husky speci-mens of the human race stepped up, one at each side, and Sills felt a very hard object pressing with painful intensity against his ribs. He opened his mouth involuntarily, and was rewarded by an icy voice in his ears, "Quiet, Baldy, or you'll get what you deserve for the damn trick you pulled on me last night."

Sills shivered and subsided. He recognized Mike the Slug's voice very easily.

"Where's the details?" asked Mike, "and make it quick."

"Inside jacket pocket," croaked Sills tremulously. Mike's companion passed his hand dexterously into the in-dicated pocket and flicked out three or four folded sheets of foolscap.

"Dat it, Mike?"

A hasty appraisal and a nod, "Yeh, we got it. All right, Baldy, on your way!" A sudden shove and the two gangsters jumped into their car and drove away rapidly, while the chemist sprawled on the sidewalk. Kindly hands raised him up.

"It's all right," he managed to gasp. "I just tripped, that's all. I'm not hurt." He found himself alone again, passed into the bank, and dropped into the nearest bench, in near-collapse. There was no doubt about it; the new life was not for him.

But he should have been prepared for it. Taylor had fore-seen a possibility of this sort of thing happening. He, himself, had thought a car had been trailing him. Yet, in his surprise and fright, he had almost ruined everything.

He shrugged his thin shoulders and, taking off his hat, ab-stracted a few folded sheets of paper from the sweatband. It was the work of five minutes to deposit them in a vault, and see the immensely strong steel door swing shut. He felt re-lieved.

"I wonder what they'll do," he muttered to himself on the way home, "when they try to follow the instructions on the paper they did get." He pursed his lips and shook his head. "If they do, there's going to be one heck of an explosion."

Sills arrived home to find three policemen pacing leisurely up and down the sidewalk in front of the house.

"Police guard," explained Taylor shortly, "so that we have no more trouble like last night."

The chemist related the events at the bank and Taylor nodded grimly. "Well, it's checkmate for them now. Staples will be here in two hours, and until then the police will take care of things. Afterwards," he shrugged, "it will be Staples' affair."

"Listen, Gene," the chemist put in suddenly, "I'm worried about the ammonium. I haven't tested its plating abilities and those are the most important things, you know. What if Staples comes, and we find that all we have is pigeon milk."

"Hmm," Taylor stroked his chin, "you're right there. But I'll tell you what we can do. Before Staples

comes, let's plate something—a spoon, suppose—for our own satisfaction.”

“It's really very annoying,” Sills complained fretfully. “If it weren't for these troublesome hooligans, we wouldn't have to proceed in this slipshod and unscientific manner.”

“Well, let's eat dinner first”

After the mid-day meal, they began. The apparatus was set up in feverish haste. In a cubic vat, a foot each way, a saturated solution of Ammonaline was poured. An old, battered spoon was the cathode and a mass of ammonium amalgam (separated from the rest of the solution by a perforated glass partition) was the anode. Three batteries in series provided the current.

Sills explained animatedly, “It works on the same principle as ordinary copper plating. The ammonium ion, once the electric current is run through, is attracted to the cathode, which is in the spoon. Ordinarily it would break up, being unstable, but this is not the case when it is dissolved in Ammonaline. This Ammonaline is itself very slightly ionized and oxygen is given off at the anode.

“This much I know from theory. Let us see what happens in practice.”

He closed the key while Taylor watched with breathless interest. For a moment, no effect was visible. Taylor looked disappointed.

Then Sills grasped his sleeve. “See!” he hissed. “Watch the anode!”

Sure enough, bubbles of gas were slowly forming upon the spongy ammonium amalgam. They shifted their attention to the spoon.

Gradually, they noticed a change. The metallic appearance

became dulled, the silver color slowly losing its whiteness. A

layer of distinct, if dull, yellow was being built up. For fifteen

minutes, the current ran and then Sills broke the circuit with

a contented sigh.

“It plates perfectly,” he said.

“Good! Take it out! Let's see it!”

“What?” Sills was aghast. “Take it out! Why, that's pure ammonium. If I were to expose it to ordinary air, the water vapor would dissolve it to NBLOH in no time. We can't do that.”

He dragged a rather bulky piece of apparatus to the table.

“This,” he said, “is a compressed-air container. I run it through calcium chloride dryers and then bubble the perfectly dry oxygen (safely diluted with four times its own volume of nitrogen) directly into the solvent.”

He introduced the nozzle into the solution just beneath the spoon and turned on a slow stream of air. It

worked like magic. With almost lightning speed, the yellow coating began to glitter and gleam, to shine with almost ethereal beauty.

The two men watched it with beating heart and panting breath. Sills shut the air off, and for a while they watched the wonderful spoon and said nothing.

Then Taylor whispered hoarsely, "Take it out. Let me feel

it! My God!—it's beautiful!"

With reverent awe, Sills approached the spoon, grasped it with forceps, and withdrew it from the surrounding liquid.

What followed immediately after that can never be fully described. Later on, when excited newspaper reporters pressed them unmercifully, neither Taylor nor Sills had the least re-collection of the happenings of the next few minutes.

What happened was that the moment the ammonium-plated spoon was exposed to open air, the most horrible odor ever conceived assailed their nostrils!—an odor that cannot be described, a terrible broth of Hell that plunged the room into sheer, horrible nightmare.

With one strangled gasp. Sills dropped the spoon. Both were coughing and retching, tearing wildly at their throats and mouths, yelling, weeping, sneezing!

Taylor pounced upon the spoon and looked about wildly. The odor grew steadily more powerful and their wild exertions to escape it had already succeeded in wrecking the laboratory and had upset the vat of Ammonalene. There was only one thing to do, and Sills did it. The spoon went flying out the open window in the middle of Twelfth Avenue. It hit the sidewalk right at the feet of one of the policemen, but Taylor didn't care.

"Take off your clothes. We'll have to burn them," Sills was gasping. "Then spray something over the laboratory—any-thing with a strong smell. Burn sulphur. Get some liquid Bromine."

Both were tearing at their clothes in distraction when they realized that someone had walked in through the unlocked door. The bell had rung, but neither had heard it. It was Staples, six-foot, lion-maned Steel King.

One step into the hall ruined his dignity utterly. He collapsed in one tearing sob and Twelfth Avenue was treated to the spectacle of an elderly, richly-dressed gentleman tearing uptown as fast as his feet would carry him, shedding as much of his clothes as he dared while doing so.

The spoon continued its deadly work. The three policemen

had long since retired in abject rout, and now to the numbed

and tortured senses of the two innocent and suffering causes

of the entire mess came a roaring and confused shouting

from the street

Men and women were pouring out of the neighboring houses, horses were bolting. Fire engines clanged down the street, only to be abandoned by their riders. Squadrons of police came—and left.

Sills and Taylor finally gave up, and clad only in trousers, ran pell-mell for the Hudson. They did not stop until they found themselves neck-deep in water, with blessed, pure air above them.

Taylor turned bewildered eyes to Sills. “But how could it emit that horrible odor? You said it was stable and stable solids have no odors. It takes vapor for that, doesn’t it?”

“Have you ever smelled musk?” groaned Sills. “It will give off an aroma for an indefinite period without losing any appreciable weight. We’ve come up against something like that.”

The two ruminated in silence for a while, wincing when-ever the wind brought a vagrant waft of Ammonium vapor to them, and then Taylor said in a low voice, “When they finally trace the trouble to the spoon, and find out who made it, I’m afraid we’ll be sued—or maybe thrown in jail.”

Sills’ face lengthened. “I wish I’d never seen the damned stuff! It’s brought nothing but trouble.” His tortured spirit gave way and he sobbed loudly.

Taylor patted him on the back mournfully. “It’s not as bad as all that, of course. The discovery will make you famous and you’ll be able to demand your own price, working at any industrial lab in the country. Then, too, you’re a cinch to win the Nobel Prize.”

“That’s right,” Sills smiled again, “and I may find a way to counteract the odor, too. I hope so.”

“I hope so, too,” said Taylor feelingly. “Let’s go back. I think they’ve managed to remove the spoon by now.”

THE END

It should be quite obvious to anyone reading “The Magnificent Possession” that I was majoring in chemistry in college at the time. As supposed humor, it is much more embarrassing on rereading than “Ring Around the Sun” is. Imagine having a Congressman named “Hornswoggle” and having gangsters speak in a ridiculous, misspelled version of Brooklyn slang.

“The Magnificent Possession” was the only one of the first nine stories I wrote that Campbell never saw, and I’m glad of that.

In early December I wrote a story I called “Ad Astra,” and on December 21, 1938 (my father’s forty-second birthday, though I don’t recall thinking of it as an omen one way or the other), I went in to submit it to Campbell. It was my seventh visit to his office, for I had not yet missed a month, and it was the ninth story I submitted to him.

“Ad Astra” is the first story I wrote for which I remember, even after all this time, the exact circumstances of the initiating inspiration. That fall, I applied for and received a National Youth Administration (NYA) job designed to help me through college. I received fifteen dollars a month, if memory serves me, in return for a few hours of typing. The typing I did was for a sociologist who was writing a book on the subject of social resistance to technological innovation. This included everything from the resistance of the early Mesopotamian priesthood to the dissemination of the knowledge of reading and writing among the general population, down to objections to the airplane by those who said heavier-than-air flight was impossible.

Naturally it occurred to me that a story might be written in which social resistance to space flight might play a small part. It was because of that that I used “Ad Astra” as the title. This was from the Latin proverb “Per aspera ad astra” (“Through difficulties to the stars”).

For the first time, Campbell did more than simply send a rejection. On December 29, I received a letter from him asking me to come in for a conference to discuss the story in detail.

On January 5, 1939, I went to see Campbell for the eighth time—and for the first time at his specific request. It turned out that what he liked in the story was the social resistance to space flight—the space flight itself was, of course, run of the mill.

Rather daunted, for I had never before had to revise a story to meet editorial specification, I went to work. I brought in the revised story on January 24, and on January 31 I discovered the system used by Campbell in accepting stories. Though his rejections were usually accompanied by long and useful letters, his acceptances consisted of a check only, without a single accompanying word. It was his feeling that the check was eloquent enough. In this case it was for sixty-nine dollars, since the story was 6,900 words long and Campbell paid one cent a word in those days.

It was my first sale to Campbell, after seven months of trying and after eight consecutive rejections. The story appeared half a year later, and I then found that Campbell had changed the title (on the whole justifiably, I think) to “Trends.”

Trends

John Harman was sitting at his desk, brooding, when I entered the office that day. It had become a common sight, by then, to see him staring out at the Hudson, head in hand, a scowl contorting his face—all too common. It seemed unfair for the little bantam to be eating his heart out like that day after day, when by rights he should have been receiving the praise and adulation of the world.

I flopped down into a chair. “Did you see the editorial in today’s Clarion, boss?”

He turned weary, bloodshot eyes to me. “No, I haven’t. What do they say? Are they calling the vengeance of God down upon me again?” His voice dripped with bitter sarcasm.

“They’re going a little farther now, boss,” I answered.

“Listen to this:

“ ‘Tomorrow is the day of John Harman’s attempt at pro-faning the heavens. Tomorrow, in defiance of world opinion and world conscience, this man will defy God.

“ This is not given to man to go wheresoever ambition and desire lead him. There are things forever denied him, and aspiring to the stars is one of these. Like Eve, John Harman wishes to eat of the forbidden fruit, and like Eve he will suffer due punishment therefor.

“ ‘But it is not enough, this mere talk. If we allow him thus to brook the vengeance of God, the trespass is man-kind’s and not Harman’s alone. In allowing him to carry out his evil designs, we make ourselves accessory to the crime, and Divine vengeance will fall on all alike.

“ ‘It is, therefore, essential that immediate steps be

taken to prevent Harman from taking off in his so-called rocketship tomorrow. The government in refusing to take such steps may force violent action. If it will make no move to confiscate the rocketship, or to imprison Harman, our enraged citizenry may have to take matters into their own hands—“”

Harman sprang from his seat in a rage and, snatching the paper from my hands, threw it into the corner furiously. “It’s an open call to a lynching,” he raved. “Look at this!”

He cast five or six envelopes in my direction. One glance sufficed to tell what they were.

“More death threats?” I asked.

“Yes, exactly that. I’ve had to arrange for another increase in the police patrol outside the building and for motorcycle police escort when I cross the river to the testing ground to-morrow.”

He marched up and down the room with agitated stride. “I don’t know what to do, Clifford. I’ve worked on the Prometheus almost ten years. I’ve slaved, spent a fortune of money, given up all that makes life worth while—and for what? So that a bunch of fool revivalists can whip up public sentiment against me until my very life isn’t safe.”

“You’re in advance of the times, boss,” I shrugged my shoulders in a resigned gesture which made him whirl upon me in a fury.

“What do you mean ‘in advance of the times’? This is 1973. The world has been ready for space travel for half a century now. Fifty years ago, people were talking, dreaming of the day when man could free himself of Earth and plumb the depths of space. For fifty years, science has inched toward , this goal, and now . . . now I finally have it, and behold! you say the world is not ready for me.”

“The ‘20s and ‘30s were years of anarchy, decadence, and misrule, if you remember your history,” I reminded him gently. “You cannot accept them as criteria.”

“I know, I know. You’re going to tell me of the First War of 1914, and the Second of 1940. It’s an old story to me; my father fought in the Second and my grandfather in the First.

Nevertheless, those were the days when science flourished.

Men were not afraid then; somehow they dreamed and dared.

There was no such thing as conservatism when it came to

matters mechanical and scientific. No theory was too radical

to advance, no discovery too revolutionary to publish. Today,

dry rot has seized the world when a great vision, such as

space travel, is hailed as ‘defiance of God.’ “

His head sank slowly down, and he turned away to hide his trembling lips and the tears in his eyes. Then he suddenly straightened again, eyes blazing: “But I’ll show them. I’m going through with it, in spite of Hell, Heaven and Earth. I’ve put too much into it to quit now.”

“Take it easy, boss,” I advised. “This isn’t going to do you any good tomorrow, when you get into that ship. Your chances of coming out alive aren’t too good now, so what will they be if you start out worn to pieces with excitement and worry?”

“You’re right. Let’s not think of it any more. Where’s Shelton?”

“Over at the Institute arranging for the special photographic plates to be sent us.”

“He’s been gone a long time, hasn’t he?”

“Not especially; but listen, boss, there’s something wrong with him. I don’t like him.”

“Poppycock! He’s been with me two years, and I have no complaints.”

“All right.” I spread my hands in resignation. “If you won’t listen to me, you won’t. Just the same I caught him reading one of those infernal pamphlets Otis Eldredge puts out. You know the kind: ‘Beware, O mankind, for judgment draws near. Punishment for your sins is at hand. Repent and be saved.’ And all the rest of the time-honoured junk.”

Harman snorted in disgust. “Cheap tub-thumping revivalist! I suppose the world will never outgrow his type—not while sufficient morons exist. Still you can’t condemn Shelton just because he reads it. I’ve read them myself on occasion.”

“He says he picked it up on the sidewalk and read it in ‘idle curiosity,’ but I’m pretty sure that I saw him take it out of his wallet. Besides, he goes to church every Sunday.”

“Is that a crime? Everyone does, nowadays!”

“Yes, but not to the Twentieth Century Evangelical Society. That’s Eldredge’s.”

That jolted Harman. Evidently, it was the first he had heard of it. “Say, that is something, isn’t it? We’ll have to keep an eye on him, then.”

But after that, things started to happen, and we forgot all about Shelton—until it was too late.

There was nothing much left to do that last day before the test, and I wandered into the next room, where I went over Harman’s final report to the Institute. It was my job to correct any errors or mistakes that crept in, but I’m afraid I wasn’t very thorough. To tell the truth, I couldn’t concentrate. Every few minutes, I’d fall into a brown study.

It seemed queer, all this fuss over a space travel. When Harman had first announced the approaching perfection of the Prometheus, some six months before, scientific circles had been jubilant. Of course, they

were cautious in their state-ments and qualified everything they said, but there was real enthusiasm.

However, the masses didn't take it that way. It seems strange, perhaps, to you of the twenty-first century, but per-haps we should have expected it in those days of '73. People weren't very progressive then. For years there had been a swing toward religion, and when the churches came out unan-imously against Harman's rocket—well, there you were.

At first, the opposition confined itself to the churches and we thought it might play itself out. But it didn't. The papers got hold of it, and literally spread the gospel. Poor Harman became an anathema to the world in a remarkably short time, and then his troubles began.

He received death threats, and warnings of divine vengeance every day. He couldn't walk the streets in safety. Dozens of sects, to none of which he belonged—he was one of the very rare free-thinkers of the day, which was another count against him—excommunicated him and placed him under special interdict. And, worst of all, Otis Eldredge and his Evangelical Society began stirring up the populace.

Eldredge was a queer character—one of those geniuses, in their way, that arise every so often. Gifted with a golden tongue and a sulphurous vocabulary, he could fairly hypnotize a crowd. Twenty thousand people were so much putty in his hands, could he only bring them within earshot. And for four months, he thundered against Harman; for four months, a pouring stream of denunciation rolled forth in oratorical frenzy. And for four months, the temper of the world rose.

But Harman was not to be daunted. In his tiny, five-foot-two body, he had enough spirit for five six-footers. The more the wolves howled, the firmer he held his ground. With almost divine—his enemies said, diabolical—obstinacy, he refused to yield an inch. Yet his outward firmness was to me, who knew him, but an imperfect concealment of the great sorrow and bitter disappointment within.

The ring of the doorbell interrupted my thoughts at that point and brought me to my feet in surprise. Visitors were very few those days.

I looked out the window and saw a tall, portly figure talk-ing with Police Sergeant Cassidy. I recognized him at once as Howard Winstead, head of the Institute. Harman was hurry-ing out to greet him, and after a short exchange of phrases, the two entered the office. I followed them in, being rather curious as to what could have brought Winstead, who was more politician than scientist, here.

Winstead didn't seem very comfortable, at first; not his usual suave self. He avoided Harman's eyes in an embarrassed manner and mumbled a few conventionalities concerning the weather. Then he came to the point with direct, undiplomatic bluntness.

"John," he said, "how about postponing the trial for a time?"

"You really mean abandoning it altogether, don't you? Well, I won't, and that's final."

Winstead lifted his hand. "Wait now, John, don't get ex-cited. Let me state my case. I know the Institute agreed to give you a free hand, and I know that you paid at least half the expenses out of your own pocket, but—you can't go through with it."

"Oh, can't I, though?" Herman snorted derisively. "Now listen, John, you know your science, but you don't know your human nature, and I do. This is not the world of the 'Mad Decades,' whether you realize it or not. There have been profound changes since 1940." He swung into what was evidently a carefully prepared speech.

“After the First World War, you know, the world as a whole swung away from religion and toward freedom from convention. People were disgusted and disillusioned, cynical and sophisticated. Eldredge calls them ‘wicked and sinful.’ In spite of that, science flourished—some say it always fares best in such an unconventional period. From its standpoint it was a ‘Golden Age.’

“However, you know the political and economic history of the period. It was a time of political chaos and international anarchy; a suicidal, brainless, insane period—and it culminated in the Second World War. And just as the First War led to a period of sophistication, so the Second initiated a return to religion.

“People were disgusted with the ‘Mad Decades.’ They had had enough of it, and feared, beyond all else, a return to it. To remove that possibility, they put the ways of those decades behind them. Their motives, you see, were understandable and laudable. All the freedom, all the sophistication, all the lack of convention were gone—swept away clean. We are living now in a second Victorian age; and naturally so, because human history goes by swings of the pendulum and this is the swing toward religion and convention.

“One thing only is left over since those days of half a century ago. That one thing is the respect of humanity for science. We have prohibition; smoking for women is outlawed; cosmetics are forbidden; low dresses and short skirts are unheard of; divorce is frowned upon. But science has not been confined—as yet.

“It behoves science, then, to be circumspect, to refrain from arousing the people. It will be very easy to make them believe—and Otis Eldredge has come perilously close to doing it in some of his speeches—that it was science that brought about the horrors of the Second World War. Science outstripped culture, they will say, technology outstripped sociology, and it was that unbalance that came so near to destroying the world. Somehow, I am inclined to believe they are not so far wrong, at that.

“But do you know what would happen, if it ever did come to that? Scientific research may be forbidden; or, if they don’t go that far, it will certainly be so strictly regulated as to stifle in its own decay. It will be a calamity from which humanity would not recover for a millennium.

“And it is your trial flight that may precipitate all this. You are arousing the public to a stage where it will be difficult to calm them. I warn you, John. The consequences will be on your head.”

There was absolute silence for a moment and then Harman forced a smile. “Come, Howard, you’re letting yourself be frightened by shadows on the wall. Are you trying to tell me that it is your serious belief that the world as a whole is ready to plunge into a second Dark Ages? After all, the intelligent men are on the side of science, aren’t they?”

“If they are, there aren’t many of them left from what I see.” Winstead drew a pipe from his pocket and filled it slowly with tobacco as he continued: “Eldredge formed a League of the Righteous two months ago—they call it the L. R.—and it has grown unbelievably. Twenty million is its membership in the United States alone. Eldredge boasts that after the next election Congress will be his; and there seems to be more truth than bluff in that. Already there has been strenuous lobbying in favour of a bill outlawing rocket experiments, and laws of that type have been enacted in Poland, Portugal and Rumania. Yes, John, we are perilously close to open persecution of science.” He was smoking now in rapid, nervous puffs.

“But if I succeed, Howard, if I succeed! What then?”

“Bah! You know the chances for that. Your own estimate gives you only one chance in ten of coming out alive.”

“What does that signify? The next experimenter will learn by my mistakes, and the odds will improve. That’s the scientific method.”

“The mob doesn’t know anything about the scientific method; and they don’t want to know. Well, what do you say? Will you call it off?”

Harman sprang to his feet, his chair tumbling over with a crash. “Do you know what you ask? Do you want me to give up my life’s work, my dream, just like that? Do you think I’m going to sit back and wait for your dear public to become benevolent? Do you think they’ll change in my lifetime?”

“Here’s my answer: I have an inalienable right to pursue knowledge. Science has an inalienable right to progress and develop without interference. The world, in interfering with me, is wrong; I am right. And it shall go hard; but I -will not abandon my rights.”

Winstead shook his head sorrowfully. “You’re wrong, John, when you speak of ‘inalienable’ rights. What you call a ‘right’ is merely a privilege, generally agreed upon. What society accepts, is right; what it does not, is wrong.”

“Would your friend, Eldredge, agree to such a definition of his ‘righteousness’?” questioned Harman bitterly.

“No, he would not, but that’s irrelevant. Take the case of those African tribes who used to be cannibals. They were brought up as cannibals, have the long tradition of cannibalism, and their society accepts the practice. To them, cannibalism is right, and why shouldn’t it be? So you see how relative the whole notion is, and how inane your conception of ‘inalienable’ rights to perform experiments is.”

“You know, Howard, you missed your calling when you didn’t become a lawyer.” Harman was really growing angry. “You’ve been bringing out every moth-eaten argument you can think of. For God’s sake, man, are you trying to pretend that it is a crime to refuse to run with the crowd? Do you stand for absolute uniformity, ordinariness, orthodoxy, commonplaceness? Science would die far sooner under the programme you outline than under governmental prohibition.”

Harman stood up and pointed an accusing finger at the other. “You’re betraying science and the tradition of those glorious rebels: Galileo, Darwin, Einstein and their kind. My rocket leaves tomorrow on schedule in spite of you and every other stuffed shirt in the United States. That’s that, and I refuse to listen to you any longer. So you can just get out.”

The head of the Institute, red in the face, turned to me. “You’re my witness, young man, that I warned this obstinate nitwit, this . . . this hare-brained fanatic.” He spluttered a bit, and then strode out, the picture of fiery indignation.

Harman turned to me when he had” gone: “Well, what do you think? I suppose you agree with him.”

There was only one possible answer and I made it: “You’re not paying me to do anything else but follow orders, boss. I’m sticking with you.”

Just then Shelton came in and Harman packed us both off to go over the calculations of the orbit of flight for the ump-teenth time, while he himself went off to bed.

The next day, July 15th, dawned in matchless splendour, and Harman, Shelton, and myself were in an almost gay mood as we crossed the Hudson to where the Prometheus—sur-rounded by an adequate police guard—lay in gleaming grandeur.

Around it, roped off at an apparently safe distance, rolled a crowd of gigantic proportions. Most of them were hostile, raucously so. In fact, for one fleeting moment, as our motor-cycle police escort parted the crowds for us, the shouts and imprecations that reached our ears almost convinced me that we should have listened to Winstead.

But Harman paid no attention to them at all, after one supercilious sneer at a shout of: “There goes John Harman, son of Belial.” Calmly, he directed us about our task of in-spection. I tested the foot-thick outer walls and the air locks for leaks, then made sure the air purifier worked. Shelton checked up on the repellent screen and the fuel tanks. Finally, Hal-man tried on the clumsy spacesuit, found it suitable, and announced himself ready.

The crowd stirred. Upon a hastily erected platform of wooden planks piled in confusion by some in the mob, there rose up a striking figure. Tall and lean; with thin, ascetic countenance; deep-set, burning eyes, peering and half closed; a thick, white mane crowning all—it was Otis Eldredge. The crowd recognized him at once and many cheered. Enthusiasm waxed and soon the entire turbulent mass of people shouted themselves hoarse over him.

He raised a hand for silence, turned to Harman, who re-garded him with surprise and distaste, and pointed a long, bony finger at him:

“John, Harman, son of the devil, spawn of Satan, you are here for an evil purpose. You are about to set out upon a blasphemous attempt to pierce the veil beyond which man is forbidden to go. You are tasting of the forbidden fruit of Eden and beware that you taste not of the fruits of sin.”

The crowd cheered him to the echo and he continued: “The finger of God is upon you, John Harman. He shall not allow His works to be defiled. You die today, John Harman.” His voice rose in intensity and his last words were uttered in truly prophetlike fervour.

Harman turned away in disdain. In a loud, clear voice, he addressed the police sergeant: “Is there any way, officer, of removing these spectators. The trial flight may be attended by some destruction because of the rocket blasts, and they’re crowding too close.”

The policeman answered in a crisp, unfriendly tone: “If you’re afraid of being mobbed, say so, Mr. Harman. You don’t have to worry, though, we’ll hold them back. And as for danger—from that contraption—“ He sniffed loudly in the direction of the Prometheus, evoking a torrent of jeers and yells.

Harman said nothing further, but climbed into the ship in silence. And when he did so, a queer sort of stillness fell over the mob; a palpable tension. There was no attempt at rushing the ship, an attempt I had thought inevitable. On the con-trary, Otis Eldredge himself shouted to everyone to move back.

“Leave the sinner to his sins,” he shouted. “ ‘Vengeance is mine,’ saith the Lord.”

As the moment approached, Shelton nudged me. “Let’s get out of here,” he whispered in a strained voice. “Those rocket blasts are poison.” Saying this, he broke into a run, beckoning anxiously for me to

follow.

We had not yet reached the fringes of the crowd when there was a terrific roar behind me. A wave of heated air swept over me. There was the frightening hiss of some speed-ing object past my ear, and I was thrown violently to the ground. For a few moments I lay dazed, my ears ringing and my head reeling.

When I staggered drunkenly to my feet again, it was to view a dreadful sight. Evidently, the entire fuel supply of the Prometheus had exploded at once, and where it had lain a moment ago there was now only a yawning hole. The ground was strewn with wreckage. The cries of the hurt were heart-rending, and the mangled bodies—but I won't try to describe those.

A weak groan at my feet attracted my attention. One look, and I gasped in horror, for it was Shelton, the back of his head a bloody mass.

"I did it." His voice was hoarse and triumphant but withal
so low that I could scarcely hear it. "I did it. I broke open the
liquid-oxygen compartments and when the spark went through
the acetylide mixture the whole cursed thing exploded." He
gasped a bit and tried to move but failed. "A piece of wreck-
age must have hit me, but I don't care. I'll die knowing
that—"

His voice was nothing more than a rasping rattle, and on his face was the ecstatic look of martyr. He died then, and I could not find it in my heart to condemn him.

It was then I first thought of Harman. Ambulances from Manhattan and from Jersey City were on the scene, and one had sped to a wooden patch some five hundred yards distant, where, caught in the treetops, lay a splintered fragment of the Prometheus' forward compartment. I limped there as fast as I could, but they had dragged out Harman and clanged away long before I could reach them.

After that, I didn't stay. The disorganized crowd had no thought but for the dead and wounded now, but when they recovered, and bent their thoughts to revenge, my life would not be worth a straw. I followed the dictates of the better part of valour and quietly disappeared.

The next week was a hectic one for me. During that time, I lay in hiding at the home of a friend, for it would have been more than my life was worth to allow myself to be seen and recognized. Harman, himself, lay in a Jersey City hospital, with nothing more than superficial cuts and bruises—thanks to the backward force of the explosion and the saving clump of trees which cushioned the fall of the Prometheus. It was on him that the brunt of the world's wrath fell.

New York, and the rest of the world also, just about went crazy. Every last paper in the city came out with gigantic headlines, "28 Killed, 73 Wounded—the Price of Sin," printed in blood-red letters. The editorials howled for Har-man's life, demanding he be arrested and tried for first-degree murder.

The dreaded cry of "Lynch him!" was raised throughout the five boroughs, and milling thousands

crossed the river and converged on Jersey City. At their head was Otis Eldredge, both legs in splints, addressing the crowd from an open automobile as they marched. It was a veritable army.

Mayor Carson of Jersey City called out every available policeman and phoned frantically to Trenton for the State militia. New York clamped down on every bridge and tunnel leaving the city—but not till after many thousands had left.

There were pitched battles on the Jersey coast that sixteenth of July. The vastly outnumbered police clubbed indiscriminately but were gradually pushed back and back. Mounties rode down upon the mob relentlessly but were swallowed up and pulled down by sheer force of numbers. Not until tear gas was used, did the crowd halt—and even then they did not retreat.

The next day, martial law was declared, and the State militia entered Jersey City. That was the end for the lynchers. Eldredge was called to confer with the mayor, and after the conferences ordered his followers to disperse.

In a statement to the newspapers. Mayor Carson said;

“John Harman must needs suffer for his crime, but it is essential that he do so legally. Justice must take its course, and the State of New Jersey will take all necessary measures.”

By the end of the week, normality of a sort had returned and Harman slipped out of the public spotlight. Two more weeks and there was scarcely a word about him in the newspapers, excepting such casual references to him in the discussion of the new Zittman antirocketry bill that had just passed both houses of Congress by unanimous votes.

Yet he remained in the hospital still. No legal action had been taken against him, but it began to appear that a sort of indefinite imprisonment “for his own protection” might be his eventual fate. Therefore, I bestirred myself to action.

Temple Hospital is situated in a lonely and outlying district of Jersey City, and on a dark, moonless night I experienced no difficulty at all in invading the grounds unobserved. With a facility that surprised me, I sneaked in through a basement window, slugged a sleepy interne into insensibility and proceeded to Room 15E, which was listed in the books as Harman’s.

“Who’s there?” Harman’s surprised shout was music in my ears.

“Sh! Quiet! It’s I, Cliff McKenny.”

“You! What are you doing here?”

“Trying to get you out. If I don’t, you’re liable to stay here the rest of your life. Come on, let’s go.”

I was hustling him into his clothes while we were speaking, and in no time at all we were sneaking down the corridor. We were out safely and into my waiting car before Harman collected his scattered wits sufficiently to begin asking questions.

“What’s happened since that day?” was the first question. “I don’t remember a thing after starting the rocket blasts until I woke up in the hospital.”

“Didn’t they tell you anything?”

“Not a damn thing,” he swore. “I asked until I was hoarse.”

So I told him the whole story from the explosion on. His eyes were wide with shocked surprise when I told of the dead and wounded, and filled with wild rage when he heard of Shelton’s treachery. The story of the riots and attempted lynching evoked a muffled curse from between set lips.

“Of course, the papers howled ‘murder,’ “ I concluded, “but they couldn’t pin that on you. They tried manslaughter, but there were too many eye-witnesses that had heard your request for the removal of the crowd and the police sergeant’s absolute refusal to do so. That, of course, absolved you from all blame. The police sergeant himself died in the explosion, and they couldn’t make him the goat.

“Still, with Eldredge yelling for your hide, you’re never safe. It would be best to leave while able.”

Harman nodded his head in agreement “Eldredge survived the explosion, did he?”

“Yes, worse luck. He broke both legs, but it takes more than that to shut his mouth.”

Another week had passed before I reached our future haven—my uncle’s farm in Minnesota. There, in a lonely and out-of-the-way rural community, we stayed while the hullabaloo over Harman’s disappearance gradually died down and the perfunctory search for us faded away. The search, by the way, was short indeed, for the authorities seemed more relieved than concerned over the disappearance.

Peace and quiet did wonders with Harman. In six months he seemed a new man—quite ready to consider a second attempt at space travel. Not all the misfortunes in the world could stop him, it seemed, once he had his heart set on something.

“My mistake the first time,” he told me one winter’s day, “lay in announcing the experiment. I should have taken the temper of the people into account, as Winstead said. This time, however”—he rubbed his hands and gazed thoughtfully into the distance—“I’ll steal a march on them. The experiment will be performed in secrecy—absolute secrecy.”

I laughed grimly, “It would have to be. Do you know that all future experiment in rocketry, even entirely theoretical research is a crime punishable by death?”

“Are you afraid, then?”

“Of course not, boss. I’m merely stating a fact. And here’s another plain fact. We two can’t build a ship all by ourselves, you know.”

“I’ve thought of that and figured a way out, Cliff. What’s more, I can take care of the money angle, too. You’ll have to do some traveling, though.

“First, you’ll have to go to Chicago and look up the firm of Roberts & Scranton and withdraw everything that’s left of my father’s inheritance, which,” he added in a rueful aside, “is more than half gone on the first ship. Then, locate as many of the old crowd as you can: Harry Jenkins, Joe O’Brien, Neil Stanton—all of them. And get back as quickly as you can. I am tired of delay.”

Two days later, I left for Chicago. Obtaining my uncle’s

consent to the entire business was a simple affair. “Might as well be strung up for a herd of sheep as for a lamb,” he grunted, “so go ahead. I’m in enough of a mess now and can afford a bit more, I guess.”

It took quite a bit of travelling and even more smooth talk and persuasion before I managed to get four men to come:

the three mentioned by Harman and one other, a Saul Simonoff. With that skeleton force and with the half million’ still left Harman out of the reputed millions left him by his father, we began work.

The building of the New Prometheus is a story in itself—a long story of five years of discouragement and insecurity. Little by little, buying girders in Chicago, beryl-steel plates in New York, a vanadium cell in San Francisco, miscellaneous items in scattered corners of the nation, we constructed the sister ship to the illfated Prometheus.

The difficulties in the way were all but insuperable. To prevent drawing suspicion down upon us, we had to spread our purchases over periods of time, and to see to it, as well, that the orders were made out to various places. For this we required the co-operation of various friends, who, to be sure, did not know at the time for exactly what purpose the purchases were being used.

We had to synthesize our own fuel, ten tons of it, and that was perhaps the hardest job of all; certainly it took the most time. And finally, as Harman’s money dwindled, we came up against our biggest problem—the necessity of economizing. From the beginning we had known that we could never make the New Prometheus as large or as elaborate as the first ship had been, but it soon developed that we would have to reduce its equipment to a point perilously close to the danger line. The repulsion screen was barely satisfactory and all attempts at radio communication were perforce abandoned.

And as we labored through the years, there in the back-woods of northern Minnesota, the world moved on, and Winstead’s prophecies proved to have hit amazingly near the mark.

The events of those five years—from 1973 to 1978—are well known to the schoolboys of today, the period being the climax of what we now call the “Neo-Victorian Age.” The happenings of those years seem well-nigh unbelievable as we look back upon them now.

The outlawing of all research on space travel came in the very beginning, but was a bare start compared to the anti-scientific measures taken in the ensuing years. The next congressional elections, those of 1974, resulted in a Congress in which Eldredge controlled the House and held the balance of power in the Senate.

Hence, no time was lost. At the first session of the ninety-third Congress, the famous Stonely-Carter bill was passed. It established the Federal Scientific Research Investigatory Bureau—the FSRIB—which was given full power to pass on the legality of all research in the country. Every laboratory, industrial or scholastic, was required to file information, in advance, on all projected research before this new bureau, which could, and did, ban absolutely all such as it disapproved of.

The inevitable appeal to the supreme court came on November 9, 1974, in the case of Westly vs. Simmons, in which Joseph Westly of Stanford upheld his right to continue his investigations on atomic

power on the grounds that the Stonely-Carter act was unconstitutional.

How we five, isolated amid the snowdrifts of the Middle West, followed that case! We had all the Minneapolis and St. Paul papers sent to us—always reaching us two days late—and devoured every word of print concerning it. For the two months of suspense work ceased entirely on the New Prometheus.

It was rumoured at first that the court would declare the act unconstitutional, and monster parades were held in every large town against this eventuality. The League of the Righteous brought its powerful influence to bear—and even the supreme court submitted. It was five to four for constitutionality. Science strangled by the vote of one man.

And it was strangled beyond a doubt. The members of the bureau were Eldredge men, heart and soul, and nothing that would not have immediate industrial use was passed.

“Science has gone too far,” said Eldredge in a famous speech at about that time. “We must halt it indefinitely, and allow the world to catch up. Only through that and trust in God may we hope to achieve universal and permanent prosperity.”

But this was one of Eldredge’s last statements. He had never fully recovered from the broken legs he received that fateful day in July of ‘73, and his strenuous life since then had strained his constitution past the breaking point. On February 2, 1976, he passed away amid a burst of mourning unequalled since Lincoln’s assassination.

His death had no immediate effect on the course of events. The rules of the FSRIB grew, in fact, in stringency as the years passed. So starved and choked did science become, that once more colleges found themselves forced to reinstate philosophy and the classics as the chief studies—and at that the student body fell to the lowest point since the beginning of the twentieth century.

These conditions prevailed more or less throughout the civilized world, reaching even lower depths in England, and perhaps least depressing in Germany, which was the last to fall under the “Neo-Victorian” influence.

The nadir of science came in the spring of 1978, a bare month before the completion of the New Prometheus, with the passing of the “Easter Edict”—it was issued the day before Easter. By it, all independent research or experimentation was absolutely forbidden. The FSRIB thereafter reserved the right to allow only such research as it specifically requested.

John Harman and I stood before the gleaming metal of the New Prometheus that Easter Sunday; I in the deepest gloom, and he in an almost jovial mood.

“Well, Clifford, my boy,” said he, “the last ton of fuel, a few polishing touches, and I am ready for my second attempt. This time there will be no Sheltons among us.” He hummed a hymn. That was all the radio played those days, and even we rebels sang them from sheer frequency of repetition.

I grunted sourly: “It’s no use, boss. Ten to one, you end up somewhere in space, and even if you come back, you’ll most likely be hung by the neck. We can’t win.” My head shook dolefully from side to side.

“Bah! This state of affairs can’t last, Cliff.”

“I think it will. Winstead was right that time. The pendulum swings, and since 1945 it’s been swinging

against us. We're ahead of the times—or behind them.”

“Don't speak of that fool, Winstead. You're making the same mistake he did. Trends are things of centuries and millenniums, not years or decades. For five hundred years we have been moving toward science. You can't reverse that in thirty years.”

“Then what are we doing?” I asked sarcastically.

“We're going through a momentary reaction following a period of too-rapid advance in the Mad Decades. Just such a reaction took place in the Romantic Age—the first Victorian Period—following the too-rapid advance of the eighteenth-century Age of Reason.”

“Do you really think so?” I was shaken by his evident self-assurance.

“Of course. This period has a perfect analogy in the spas-modic ‘revivals’ that used to hit the small towns in America's Bible Belt a century or so ago. For a week, perhaps everyone would get religion, and virtue would reign triumphant. Then, one by one, they would backslide and the Devil would re-sume his sway.

“In fact, there are symptoms of backsliding even now. The

L. R. has indulged in one squabble after another since El-dredge's death. There have been half a dozen schisms al-ready. The very extremities to which those in power are going are helping us, for the country is rapidly tiring of it.”

And that ended the argument—I in total defeat, as usual. A month later, the New Prometheus was complete. It was nowhere near as glittering and as beautiful as the original, and bore many a trace of makeshift workmanship, but we were proud of it—proud and triumphant.

“I'm going to try again, men”—Harman's voice was husky, and his little frame vibrant with happiness—“and I may not make it, but for that I don't care.” His eyes shone in anticipa-tion. “I'll be shooting through the void at last, and the dream of mankind will come true. Out around the Moon and back;

the first to see the other side. It's worth the chance,”

“You won't have fuel enough to land on the Moon, boss, which is a pity,” I said.

At that a pessimistic whisper ran through the little group surrounding him, to which he paid no attention.

“Good-bye,” he said. “I'll be seeing you.” And with a cheer-ful grin he climbed into the ship.

Fifteen minutes later, the five of us sat about the living-room table, frowning, lost in thought, eyes gazing out of the building at the spot where a burned section of soil marked the spot where a few minutes earlier the New Prometheus had lain.

Simonoff voiced the thought that was in the mind of each one of us: “Maybe it would be better for him not to come back. He won't be treated very well if he does, I think.” And we all nodded in gloomy assent.

How foolish that prediction seems to me now from the hindsight of three decades.

The rest of the story is really not mine, for I did not see Harman again until a month after his eventful trip ended in a safe landing.

It was almost thirty-six hours after the take-off that a screaming projectile shot its way over Washington and buried itself in the mud just across the Potomac.

Investigators were at the scene of the landing within fifteen minutes, and in another fifteen minutes the police were there, for it was found that the projectile was a rocketship. They stared in involuntary awe at the tired, dishevelled man who staggered out in near-collapse.

There was utter silence while he shook his fist at the staring spectators and shouted: "Go ahead, hang me, fools. But I've reached the Moon, and you can't hang that. Get the FSRIB. Maybe they'll declare the flight illegal and, therefore, non-existent." He laughed weakly and suddenly collapsed.

Someone shouted: "Take him to a hospital. He's sick." In stiff unconsciousness Harman was bundled into a police car and carried away, while the police formed a guard about the rocketship.

Government officials arrived and investigated the ship, read the log, inspected the drawings and photographs he had taken of the Moon, and finally departed in silence. The crowd grew and the word spread that a man had reached the Moon.

Curiously enough, there was little resentment of the fact. Men were impressed and awed; the crowd whispered and cast inquisitive glances at the dim crescent of Luna, scarcely seen in the bright sunlight. Over all, an uneasy pall of silence, the silence of indecision, lay.

Then, at the hospital, Harman revealed his identity, and the fickle world went wild. Even Harman himself was stunned in surprise at the rapid change in the world's temper. It seemed almost incredible, and yet it was true. Secret discontent, combined with a heroic tale of man against overwhelming odds—the sort of tale that had stirred man's soul since the beginning of time—served to sweep everyone into an ever-swelling current of anti-Victorianism. And Eldredge was dead—no other could replace him.

I saw Harman at the hospital shortly after that. He was propped up and still half buried with papers, telegrams and letters. He grinned at me and nodded. "Well, Cliff," he whispered, "the pendulum swung back again."

THE END

Actually, though "Trends" was the second story I sold, it was the third to be published. Ahead of it was not only "Marooned off Vesta," but another story (to be mentioned shortly) that was written and sold after "Trends" but was rushed into print sooner. Both earlier stories were, however, published in *Amazing* and, somehow, I find it difficult to count them. To me, the first story I sold to Campbell and

published in Astounding is my first significant published

story. This is rather ungrateful of me toward Amazing, but

I can't help it.

The July 1939 issue of Astounding is sometimes considered by later fans to mark the beginning of science fiction's so-called Golden Age, a period stretching through most of the 1940s. In that period, Campbell's views were in full force in the magazine, and the authors he trained and developed were writing with the full ardor of youth. I wish I could say that "Trends" was what marked the beginning of that Golden Age, but I can't. Its appearance in that issue was pure coincidence.

What really counted was that the lead novelette in the July 1939 issue was "Black Destroyer," by A. E. van Vogt, a first story by a new author, while in the next issue, August 1939, was a short story, "Lifeline," by Robert A. Heinlein, another first story by a new author.

In time to come, Van Vogt, Heinlein, and I would be uni-versally listed among the top authors of the Golden Age, but Van Vogt and Heinlein were that from the very beginning. Each blazed forth as a first-magazine star at the moment his first story appeared, and their status never flagged throughout the remainder of the Golden Age. I, on the other hand (and this is not false modesty), came up only gradually. I was very little noticed for a while and came to be considered a major author by such gradual steps that despite the healthy helping of vanity with which I am blessed, I myself was the last to notice.

"Trends" is an amusing story in some respects. It sets the initial space flights to the Moon in the 1970s. I thought at the time I was being daring indeed, but it has turned out that I was behind the eventual reality by a full decade, since what I described was done, and with immensely greater sophistication, in the 1960s. My description of the first attempts at space flight was, of course, incredibly naive, in hindsight.

In one respect, however, the story is unusual. In recent years Phil Klas (a science fiction writer who publishes under the pseudonym "William Tenn") pointed out to me that this was the first story in history that predicted resistance of any kind to the notion of space exploration. In all other stories, the general public was either indifferent or enthusiastic. This makes me sound enormously and uniquely perceptive, but having explained the nature of the book I was doing my NYA work on, I can't take credit for brilliance. (Heck!)

Notice also the reference to the "Second [World War] of 1940." The story, remember, was written two months after Munich. I did not believe at the time that this meant "peace in our time," as Neville Chamberlain had maintained. I estimated that there would be war in a year and a half, and again I was too conservative.

"Trends," incidentally, is one of the few stories I have written in the first person, and the narrator is named Clifford McKenny. (Why my penchant for Irish last names in those days I haven't been able to figure out.) Behind the first name, though, lies a story.

After my May 1938 scare concerning the demise of Astounding, I began sending monthly letters to the magazine, carefully rating the stories. (I stopped after I began selling stories myself.) These were all published, and, in fact, I had sent a letter to Astounding, which was published, back in 1935. Two established science fiction writers wrote me personally in response to remarks I made concerning their stories. These were Russell R. Winterbotham and Clifford D. Simak.

With both, I maintained a correspondence, quite regular at first, and with long dry intervals in later years. The friendship that resulted, though long distance, was enduring. I met Russ Winterbotham in person only once, and that was at the World Science Fiction Convention in Cleveland in 1966. He died in 1971. I have met Cliff Simak three times, the most recent occasion being at the World Science Fiction Convention in Boston in 1971, where he was guest of honor.

Simak's first letter to me was in response to a letter of mine printed in *Astounding* that had given a low rating to his story "Rule 18," in the July 1938 issue. Simak wrote to ask details so that he might consider my criticisms and perhaps profit from them. (Would that I would react so gently and rationally to adverse criticism!)

I reread the story in order to be able to answer properly and found, to my surprise, that there was nothing wrong with it at all. What he had done was to write the story in separate scenes with no explicit transition passages between. I wasn't used to that technique, so the story seemed choppy and incoherent. The second time around, I recognized what he was doing and realized that not only was the story not in the least incoherent but it moved with a slick speed that would have been impossible if all the dull, bread-and-butter transitions had been inserted.

I wrote Simak to explain, and adopted the same device in my own stories. What's more, I attempted, as far as possible, to make use of something similar to Simak's cool and unadorned style,

I have sometimes heard science fiction writers speak of the influence upon their style of such high-prestige literary figures as Kafka, Proust, and Joyce. This may be pose or it may be reality, but, for myself, I make no such claim. I learned how to write science fiction by the attentive reading of science fiction, and among the major influences on my style was Clifford Simak.

Simak was particularly encouraging in those anxious months during which I was trying to sell a story. On the day I made my first sale, I had a letter, all sealed and addressed and stamped, waiting to be mailed to him. I tore it open to add the news, and destroying a stamped envelope, which represented a clear loss of several cents, was not something I did lightly in those days.

It has always pleased me, therefore, that my first sale to Campbell had, as its first-person narrator, a character named in Clifford Simak's honor.

One more point about "Trends"—

In my early sessions with Campbell, he had occasionally pointed out the value of having a name that wasn't odd and hard to pronounce, and suggested the use of a common Anglo-Saxon name as a pseudonym. On this point, I clearly expressed intransigence. My name was my name and it would go on my stories.

When "Trends" was sold, I steeled myself for what I thought might be a struggle with Campbell that might even cost me my precious sale. —It never happened. Perhaps it was because my name had already appeared on two stories in *Amazing*, or perhaps Campbell recognized I would not agree to a pseudonym, but he never raised the point.

As it happened, my disinclination for a pseudonym was lucky indeed, for the name Isaac Asimov proved highly visible. No one could see the name for the first time without smiling at its oddness; and anyone seeing it the second time would instantly remember the first time. I'm convinced that at least part of my eventual popularity came about because the readers recognized the name quickly and became aware of my stories as a group.

Indeed, matters came full circle. In later years, I frequently met readers who were convinced the name was a pseudonym designed to achieve visibility and that my real name must be something like John Smith. It was sometimes hard to disabuse them.

While I was revising "Trends" for Campbell, I was also working on another story, "The Weapon Too Dreadful to Use." That one I did not submit to Campbell. Either I did not wish to push him too hard immediately after I had made a sale to him, or I suspected the story wasn't good enough for him and didn't want to spoil the impression "Trends" might have made. In either case (and I don't really remember the motive) I decided to try it on Amazing first. It was also a one cent market, after all, and perhaps I thought I owed them another chance, now that I had made my Campbell sale.

I mailed "The Weapon Too Dreadful to Use" to Amazing on February 6, 1939, and on February 20 received notice of acceptance. Amazing may have bought it because it needed a story in a hurry, for it appeared in the May issue, which reached the newsstands only three weeks after the sale. That made it my second published story, for it appeared two months before "Trends."

The Weapon Too Dreadful to Use

Karl Frantor found the prospect a terribly dismal one. From low-hanging clouds, fell eternal misty rain; squat, rubbery vegetation with its dull, reddish-brown colour stretched away in all directions. Now and then a Hop-scotch Bird fluttered wildly above them, emitting plaintive squawks as it went.

Karl turned his head to gaze at the tiny dome of Aphro-dopolis, largest city on Venus.

"God," he muttered, "even the dome is better than this awful world out here." He pulled the rubberized fabric of his coat closer about him. "I'll be glad to get back to Earth again."

He turned to the slight figure of Antil, the Venusian, "When are we coming to the ruins, Antil?"

There was no answer and Karl noticed the tear that rolled down the Venusian's green, puckered cheeks. Another glinted in the large, lemur-like eyes; soft, incredibly beautiful eyes.

The Earthman's voice softened. "Sorry, Antil, I didn't mean to say anything against Venus."

Antil turned his green face toward Karl, "It was not that, my friend. Naturally, you would not find much to admire in an alien world. I, however, love Venus, and I weep because I am overcome with its beauty." The words came fluently but with the inevitable distortion caused by vocal cords unfitted for harsh-languages.

"I know it seems incomprehensible to you," Antil continued, "but to me Venus is a paradise, a golden land—I can-not express my feelings for it properly."

"Yet there are some that say only Earthmen can love."

Karl's sympathy was strong and sincere.

The Venusian shook his head sadly. "There is much besides the capacity to feel emotion that your people deny us."

Karl changed the subject hurriedly. "Tell me, Antil, doesn't Venus present a dull aspect even to you? You've been to Earth and should know. How can this eternity of brown and grey compare to the living, warm colours of Earth?"

"It is far more beautiful to me. You forget that my colour sense is so enormously different from yours.* How can I explain the beauties, the wealth of colour in which this land-scape abounds?" He fell silent, lost in the wonders he spoke of, while to the Terrestrial the deadly, melancholy grey re-mained unchanged.

"Someday," Antil's voice came as from a person in a dream, "Venus will once more belong to the Venusians. The Earth-lings shall no longer rule us, and the glory of our ancestors shall return to us."

Karl laughed. "Come, now, Antil, you speak like a member of the Green Bands, that are giving the government so much trouble. I thought you didn't believe in violence."

"I don't, Karl," Antil's eyes were grave and rather fright-ened, "but the extremists are gaining power, and I fear the worst. And if—if open rebellion against Earth breaks out, I must join them."

"But you disagree with them."

"Yes, of course," he shrugged his shoulders, a gesture he had learned from Earthmen, "we can gain nothing by violence. There are five billion of you and scarcely a hundred million of us. You have resources and weapons while we have none. It would be a fool's venture, and even should we win, we might leave such a heritage of hatred that there could never be peace among our two planets."

"Then why join them?"

"Because I am a Venusian."

The Venusian eye can distinguish between two tints, the wave-lengths of which differ by as little as five Angstrom units. They see thousands of colours to which Earthmen are blind.—Author.

The Earthman burst into laughter again. "Patriotism, it seems, is as irrational On Venus as on Earth. But come, let us proceed to the ruins of your ancient city. Are we nearly there?"

"Yes," answered Antil, "it's a matter of little more than an Earth mile now. Remember, however, that you are to disturb nothing. The ruins of Ash-taz-7.or are sacred to us, as the sole existing remnant of the time when we, too, were a great race, rather than the degenerate remains of one."

They walked on in silence, slogging through the soft earth beneath, dodging the writhing roots of the Snaketree, and giving the occasional Tumbling Vines they passed a wide berth.

It was Antil who resumed the conversation.

"Poor Venus." His quiet, wistful voice was sad. "Fifty

years ago the Earthman came with promises of peace and

plenty—and we believed. We showed them the emerald mines

and the juju weed and their eyes glittered with desire. More

and more came, and their arrogance grew. And now—“

“It’s too bad, Antil,” Karl said, “but you really feel too strongly about it.”

“Too strongly! Are we allowed to vote? Have we any rep-resentation at all in the Venusian Provincial Congress? Aren’t there laws against Venusians riding in the same stratocars as Earthlings, or eating in the same hotel, or living in the same house? Are not all colleges closed to us? Aren’t the best and most fertile parts of the planet pre-empted by Earthlings? Are there any rights at all that Terrestrials allow us upon our own planet?”

“What you say is perfectly true, and I deplore it. But similar conditions once existed on Earth with regard to cer-tain so-called ‘inferior races,’ and in time, all those disabilities were removed until today total equality reigns. Remember, too, that the intelligent people of Earth are on your side. Have I, for instance, ever displayed any prejudice against a Venu-sian?”

“No, Karl, you know you haven’t. But how many intelli-gent men are there? On Earth, it took long and weary millennia, filled with war and suffering, before equality was established. What if Venus refuses to wait those millennia?”

Karl frowned, “You’re right, of course, but you must wait What else can you do?”

“I don’t know—I don’t know,” Antil’s voice trailed into silence.

Suddenly, Karl wished he hadn’t started on this trip to the ruins of mysterious Ash-taz-zor. The maddeningly monoto-nous terrain, the just grievances of Antil had served to depress him greatly. He was about to call the whole thing on when the Venusian raised his webbed fingers to point out a mound of earth ahead.

“That’s the entrance,” he said; “Ash-taz-zor has been buried under the soil for uncounted thousands of years, and only Venusians know of it. You’re the first Earthman ever to see it.”

“I shall keep it absolutely secret, Antil. I have promised.”

“Come, then.”

Antil brushed aside the lush vegetation to reveal a narrow entrance between two boulders and beckoned to Karl to fol-low. Into a narrow, damp corridor they crept. Antil drew from his pouch a small Atomite lamp, which cast its pearly white glow upon walls of dripping stone. -^“These corridors and burrows,” he said, “were dug three centuries ago by our ancestors who considered the city a holy place. Of late, however, we have neglected it. I was the first to visit it in a long, long time. Perhaps that is another sign of our degeneracy.”

For over a hundred yards they walked on straight ahead; then the corridors flared out into a lofty dome. Karl gasped at the view before him. There were the remains of buildings, architectural marvels unrivalled on Earth since the days of Periclean Athens. But all lay in shattered ruins, so that only a hint of the city’s magnificence remained.

Antil led the way across the open space and plunged into another burrow that twisted its way for half a mile through soil and rock. Here and there, side-corridors branched off, and once or twice Karl caught glimpses of ruined structures. He would have investigated had not Antil kept him on the path.

Again they emerged, this time before a low, sprawling building constructed of a smooth, green stone. Its right wing was utterly smashed, but the rest seemed scarcely touched.

The Venusian's eyes shone; his slight form straightened with pride. "This is what corresponds to a modern museum of arts and sciences. In this you shall see the past greatness and culture of Venus."

With high excitement, Karl entered—the first Earthman ever to see these ancient achievements. The interior, he found, was divided into a series of deep alcoves, branching out from the long central colonnade. The ceiling was one great painting that showed dimly in the light of the Atomite lamp.

Lost in wonder, the Earthman wandered through the alcoves. There was an extraordinary sense of strangeness to the sculptures and paintings about him, an unearthliness that doubled their beauty.

Karl realized that he missed something vital in Venusian art simply because of the lack of common ground between his own culture and theirs, but he could appreciate the technical excellence of the work. Especially, did he admire the colour-work of the paintings which went far beyond anything he had ever seen on Earth. Cracked, faded, and scaling though they were, there was a blending and a harmony about them that was superb.

"What wouldn't Michelangelo have given," he said to Antil, "to have the marvellous colour perception of the Venusian eye."

Antil inflated his chest with happiness. "Every race has its own attributes. I have often wished my ears could distinguish the slight tones and pitches of sound the way it is said Earth-men can. Perhaps I would then be able to understand what it is that is so pleasing about your Terrestrial music. As it is, its noise is dreadfully monotonous to me."

They passed on, and every minute Karl's opinion of Venusian culture mounted higher. There were long, narrow strips of thin metal, bound together, covered with the lines and ovals of Venusian script—thousands upon thousands of them. In them, Karl knew, might lie such secrets as the scientists of Earth would give half their lives to know.

Then, when Antil pointed out a tiny, six-inch-high affair, and said that, according to the inscription, it was some type of atomic converter with an efficiency several times any of the current Terrestrial models, Karl exploded.

"Why don't you reveal these secrets to Earth? If they only knew your accomplishments in ages past, Venusians would occupy a far higher place than they do now."

"They would make use of our knowledge of former days, yes," Antil replied bitterly, "but they would never release their stranglehold on Venus and its people. I hope you are not forgetting your promise of absolute secrecy."

"No, I'll keep quiet, but I think you're making a mistake."

"I think not," Antil turned to leave the alcove, but Karl called to him to wait.

“Aren’t we going into this little room here?” he asked.

Antil whirled, eyes staring, “Room? What room are you talking about? There’s no room here.”

Karl’s eyebrows shot up in surprise as he mutely pointed out the narrow crack that extended half way up the rear wall. The Venusian muttered something beneath his breath and fell to his knees, delicate fingers probing the crack. “Help me, Karl. This door was never meant to be opened, I think. At least there is no record of its being here, and I know the ruins of Ash-taz-zor perhaps better than any other of my people.”

The two pushed against the section of the wall, which gave backward with groaning reluctance for a short distance, then yielded suddenly so as to catapult them into the tiny, almost empty cubicle beyond. They regained their feet and stared about.

The Earthman pointed out broken, ragged rust-streaks on the floor, and along the line where door joined wall. “Your peo-ple seem to have sealed this room up pretty effectively. Only the rust of eons broke the bonds. You’d think they had some sort of secret stored here.”

Antil shook his green head. “There was no evidence of a door last time I was here. However—“ he raised the Atomite lamp up high and surveyed the room rapidly, “there doesn’t seem to be anything here, anyway.”

He was right. Aside from a nondescript oblong chest that squatted on six stubby legs, the place contained only unbelievable quantities of dust and the musty, almost suffocating smell of long-shut-up tombs.

Karl approached the chest, tried to move it from the corner where it stood. It didn’t budge, but the cover slipped under his pressing fingers.

“The cover’s removable, Antil. Look!” He pointed to a shallow compartment within, which contained a square slab of some glassy substance and five six-inch-long cylinders re-sembling fountain-pens.

Antil shrieked with delight when he saw these objects and for the first time since Karl knew him, lapsed into sibilant Venusian gibberish. He removed the glassy slab and inspected it closely. Karl, his curiosity aroused, did likewise. It was covered with closely-spaced, varicoloured dots, but there seemed no reason for Antil’s extreme glee.

“What is it, Antil?”

“It is a complete document in our ancient ceremonial language. Up to now we have never had more than disjointed fragments. This is a great find.”

“Can you decipher it?” Karl regarded the object with more respect.

“I think I can. It is a dead language and I know little more than a smattering. You see, it is a colour language. Each word is designated by a combination of two, and sometimes three, coloured dots. The colours are finely differentiated, though, and a Terrestrial, even if he had the key to the language, would have to use a spectroscope to read it.”

“Can you work on it now?”

“I think so, Karl. The Atomite lamp approximates normal daylight very closely, and I ought to have no trouble with it. However, it may take me quite a time; so perhaps you’d better continue your investigation. There’s no danger of your getting lost, provided you remain inside this building.”

Karl left, taking a second Atomite lamp with him, left Antil, the Venusian, bent over the ancient manuscript, de-ciphering it slowly and painfully.

Two hours passed before the Earthman returned; but when he did, Antil had scarcely changed his position. Yet, now, there was a look of horror on the Venusian’s face that had not been there before. The “colour” message lay at his feet, disregarded. The noisy entrance of the Earthman made no impression upon him. As if ossified, he sat in unmoving, staring fright. Karl jumped to his side. “Antil, Antil, what’s wrong?” Antil’s head turned slowly, as though moving through viscous liquid, and his eyes gazed unseeingly at his friend. Karl grasped the other’s thin shoulders and shook him un-mercifully.

The Venusian came to his senses. Writhing out of Karl’s grasp he sprang to his feet. From the desk in the corner he removed the five cylindrical objects, handling them with a queer sort of reluctance, placing them in his pouch. There, likewise, did he put the slab he had deciphered.

Having done this, he replaced the cover on the chest and motioned Karl out of the room. “We must go now. Already we have stayed too long.” His voice had an odd, frightened tone about it that made the Earthman uncomfortable.

Silently, they retraced their steps until once more they stood

upon the soaked surface of Venus. It was still day, but

twilight was near. Karl felt a growing hunger. They would

need to hurry if they expected to reach Aphrodopolis before

the coming of night. Karl turned up the collar of his slicker,

pulled his rubberized cap low over his forehead and set out,

Mile after mile passed by and the domed city once more rose upon the grey horizon. The Earthman chewed at damp ham sandwiches, wished fervently for the comfortable dryness of Aphrodopolis. Through it all, the normally friendly Venusian maintained a stony silence, vouchsafing not so much as a glance upon his companion.

Karl accepted this philosophically. He had a far higher regard for Venusians than the great majority of Earthmen, but even he experienced a faint disdain for the ultra-emotional character of Antil and his kind. This brooding silence was but a manifestation of feelings that in Karl would perhaps have resulted in no more than a sigh or a frown. Realizing this, Antil’s mood scarcely affected him.

Yet the memory of the haunting fright in Antil’s eyes aroused a faint unease. It had come after the translation of that queer slab. What secret could have been revealed in that message by those scientific progenitors of the Venusians?

It was with some diffidence that Karl finally persuaded him-self to ask, “What did the slab say, Antil? It must be interest-ing, I judge, considering that you’ve taken it with you.”

Antil's reply was simply a sign to hurry, and the Venusian thereupon plunged into the gathering darkness with redoubled speed. Karl was puzzled and rather hurt. He made no further attempt at conversation for the duration of the trip.

When they reached Aphrodispolis, however, the Venusian broke his silence. His puckered face, drawn and haggard, turned to Karl with the expression of one who has come to a painful decision.

"Karl," he said, "we have been friends, so I wish to give you a bit of friendly advice. You are going to leave for Earth next week. I know your father is high in the councils of the Planetary President. You yourself will probably be a person-age of importance in the not-too-distant future. Since this is so, I beg you earnestly to use every atom of your influence to a moderation of Earth's attitude toward Venus. I, in my turn, being a hereditary noble of the largest tribe on Venus, shall do my utmost to repress all attempts at violence."

The other frowned. "There seems to be something behind all this. I don't get it at all. What are you trying to say?"

"Just this. Unless conditions are bettered—and soon—

Venus will rise in revolt. In that case, I will have no choice but to place my services at her feet, and then Venus will no longer be defenceless."

These words served only to amuse the Earthman. "Come, Antil, your patriotism is admirable, and your grievances justi-fied, but melodrama and chauvinism don't go with me. I am, above all, a realist."

There was a terrible earnestness in the Venusian's voice.

"Believe me, Karl, when I say nothing is more real than what I tell you now. In case of a Venusian revolt, I cannot vouch for Earth's safety."

"Earth's safety!" The enormity of this stunned Karl. "Yes," continued Antil, "for I may be forced to destroy Earth. There you have it." With this, he wheeled and plunged into the underbrush on the way back to the little Venusian village outside the great dome.

Five years passed—years of turbulent unrest, and Venus stirred in its sleep like an awakening volcano. The short-sighted Terrestrial masters of Aphrodispolis, Venusia, and other domed cities cheerfully disregarded all danger signals. When they thought of the little green Venusians at all, it was with a disdainful grimace as if to say, "Oh, THOSE things!"

But "those things" were finally pushed beyond endurance, and the nationalistic Green Bands became increasingly vociferous with every passing day. Then, on one grey day, not unlike the grey days preceding, crowds of natives swarmed upon the cities in organized rebellion.

The smaller domes, caught by surprise, succumbed. In rapid succession New Washington, Mount Vulcan, and Sl.

Denis were taken, together with the entire eastern continent,

Before the reeling Terrestrials realized what was happening, half of Venus was no longer theirs.

Earth, shocked and stunned by this sudden emergency—which, of course, should have been foreseen—sent arms and supplies to the inhabitants of the remaining beleaguered towns and began to equip a great space fleet for the recovery of the lost territory.

Earth was annoyed but not frightened, knowing that ground

lost by surprise could easily be regained at leisure, and that ground not now lost would never be lost. Or such, at least, was the belief.

Imagine, then, the stupefaction of Earth's leaders as no pause came in the Venusian advance. Venusia City had been amply stocked with weapons and food; her outer defences were up, the men at their posts. A tiny army of naked, un-armed natives approached and demanded unconditional surrender. Venusia refused haughtily, and the messages to Earth were mirthful in their references to the unarmed natives who had become so recklessly flushed with success.

Then, suddenly, no more messages were received, and the natives took over Venusia.

The events at Venusia were duplicated, over and over again, at what should have been impregnable fortresses. Even Aphrodispolis itself, with half a million population, fell to a pitiful five hundred Venusians. This, in spite of the fact that every weapon known to Earth was available to the defenders.

The Terrestrial Government suppressed the facts, and Earth itself remained unsuspecting of the strange events on Venus; but in the inner councils, statesmen frowned as they listened to the strange words of Karl Frantor, son of the Minister of Education.

Jan Heersen, Minister of War, rose in anger at the conclusion of the report.

"Do you wish us to take seriously the random statement of a half-mad Greenie and make our peace with Venus on its own terms? That is definitely and absolutely impossible. What those damned beasts need is the mailed fist. Our fleet will blast them out of the Universe, and it is time that it were done."

"The blasting may not be so simple, Heersen," said the greyhaired, elder Frantor, rushing to his son's defence. "There are many of us who have all along claimed that the Government policy toward the Venusians was all wrong. Who knows what means of attack they have found and what, in revenge, they will do with it?"

"Fairy Tales!" exclaimed Heersen. "You treat the Greenies as if they were people. They're animals and should be thankful for the benefits of civilization we brought them. Remember, we're treating them much better than some of our own Earth races were treated in our early history, the Red Indians for example."

Karl Frantor burst in once more in an agitated voice. "We must investigate, sirs! Antil's threat is too serious to disregard, no matter how silly it sounds—and in the light of the Venusian conquests, it sounds anything but silly. I propose that you send me with Admiral von Blumdorff, as a sort of envoy. Let me get to the bottom of this before we attack them."

The saturnine Earth President, Jules Debuc, spoke now for the first time. "Frantor's proposal is reasonable, at least. It shall be done. Are there any objections?"

There were none, though Heersen scowled and snorted angrily. Thus, a week later, Kari Frantor accompanied the space armada of Earth when it set off for the inner planet.

It was a strange Venus that greeted Kari after his five years' absence. It was still its old soaking self, its old dreary, monotony of white and grey, its scattering of domed cities—and yet how different.

Where before the haughty Terrestrials had moved in disdainful splendour among the cowering Venusians, now the natives maintained undisputed sway. Aphrodopolis was a native city entirely, and in the office of the former governor sat —Antil.

Kari eyed him doubtfully, scarcely knowing what to say. "I rather thought you might be king-pin," he managed at length.

"You—the pacifist."

"The choice was not mine. It was that of circumstance," Antil replied. "But you, I did not expect you to be your planet's spokesman."

"It was to me that you made your silly threat years ago,

and so it is I who was most pessimistic concerning your rebellion. I come, you see, but not unaccompanied." His hand motioned vaguely upward, where spaceships lazed motionless and threatening.

"You come to menace me?"

"No! To hear your aims and your terms."

"That is easily accomplished. Venus demands its independence and we promise friendship, together with free and unrestricted trade."

"And you expect us to accept all that without a struggle."

"I hope you do—for Earth's own sake."

Kari scowled and threw himself back in his chair in annoyance, "For God's sake, Antil, the time for mysterious hints and bogies has passed. Show your hand. How did you overcome Aphrodopolis and the other cities so easily?"

"We were forced to it, Kari. We did not desire it." Antil's voice was shrill with agitation. "They would not accept our fair terms of surrender and began to shoot their Tonite guns. We—we had to use the—the weapon. We had to kill most of them afterward—out of mercy."

"I don't follow. What weapon are you talking about?"

"Do you remember that time in the ruins of Ash-tai-wr, Karl? The hidden room; the ancient inscription; the five little rods."

Kari nodded sombrely. "I thought so, but I wasn't sure."

"It was a horrible weapon, Kari." Antil hurried on as if the mere thought of it were not to be endured. "The ancients discovered it—but never used it. They hid it instead, and why they did not destroy it, I can't imagine. I wish they had destroyed it; I really do. But they didn't and I found it and I must use

it—for the good of Venus.”

His voice sank to a whisper, but with a manifest effort he nerved himself to the task of explanation. “The little harmless rods you saw then, Kari, were capable of producing a force field of some unknown nature (the ancients wisely refused to be explicit there) which has the power of disconnecting brain from mind.”

“What?” Kari stared in open-mouthed surprise. “What are you talking about?”

“Why, you must know that the brain is merely the seat of the mind, and not the mind itself. The nature of ‘mind’ is a mystery, unknown even to our ancients; but whatever it is, it uses the brain as its intermediary to the world of matter.”

“I see. And your weapon divorces mind from brain—renders mind helpless—a space-pilot without his controls.”

Antil nodded solemnly. “Have you ever seen a decerebrated animal?” he asked suddenly.

“Why, yes, a dog—in my bio course back in college.”

“Come, then, I will show you a decerebrated human.”

Kari followed the Venusian to an elevator. As he shot down-ward to the lowest level—the prison level—his mind was in a turmoil. Torn between horror and fury, he had alternate impulses of unreasoning desire to escape and almost insuperable yearnings to slay the Venusian at his side. In a daze, he left the cubicle and followed Antil down a gloomy corridor, winding its way between rows of tiny, barred cells.

There.” Antil’s voice roused Kari as would a sudden stream of cold water. He followed the pointing webbed hand and stared in fascinated revulsion at the human figure revealed.

It was human, undoubtedly, in form—but inhuman, never-theless. It (Kari could not imagine it as “he”) sat dumbly on the floor, large staring eyes never leaving the blank wall before him. Eyes that were empty of soul, loose lips from which saliva drooled, fingers that moved aimlessly. Nauseated, Kari turned his head hastily.

“He is not exactly decerebrated.” Antil’s voice was low. “Organically, his brain is perfect and unharmed. It is merely —disconnected.”

“How does it live, Antil? Why doesn’t it die?”

“Because the autonomic system is untouched. Stand him up and he will remain balanced. Push him and he will regain his balance. His heart beats. He breathes. If you put food in his mouth, he will swallow, though he would die of starvation before performing the voluntary act of eating food that has been placed before him. It is life—of a sort; but it were better dead, for the disconnection is permanent.”

“It is horrible—horrible.”

“It is worse than you think. I feel convinced that some-where within the shell of humanity, the mind, unharmed, still exists. Imprisoned helplessly in a body it cannot control, what must be that mind’s torture?”

Karl stiffened suddenly. “You shan’t overcome Earth by sheer unspeakable brutality. It is an

unbelievably cruel weapon but no more deadly than any of a dozen of ours. You shall pay for this.”

“Please, Karl, you have no conception of one-millionth of the deadliness of the ‘Disconnection Field’. The Field is independent of space, and perhaps of time, too, so that its range can be extended almost indefinitely. Do you know that it required merely one discharge of the weapon to render every warm-blooded creature in Aphrodispolis helpless?” Antil’s voice rose tensely. “Do you know that I am able to bathe ALL EARTH in the Field—to render all your teeming billions the duplicate of that dead-alive hulk in there AT ONE STROKE.”

Karl did not recognize his own voice as he rasped, “Fiend! Are you the only one who knows the secret of this damnable Field?”

Antil burst into a hollow laugh, “Yes, Karl, the blame rests on me, alone. Yet killing me will not help. If I die, there are others who know where to find the inscription, others who have not my sympathy for Earth. I am perfectly safe from you, Karl, for my death would be the end of your world.”

The Earthman was broken—utterly. Not a fragment of doubt as to the Venusian’s power was left within him. “I yield,” he muttered, “I yield. What shall I tell my people?”

“Tell them of my terms, and of what I could do if I wished.”

Karl shrank from the Venusian as if his very touch was death, “I will tell them that.”

“Tell them also, that Venus is not vindictive. We do not wish to use our weapon, for it is too dreadful to use. If they will give us our independence on our own terms, and allow us certain wise precautions against future re-enslavement, we will hurl each of our five guns and the explanatory inscription explaining it into the sun.”

The Terrestrial’s voice did not change from its toneless whisper. “I will tell them that.”

Admiral von Blumdorff was as Prussian as his name, and his military code was the simple one of brute force. So it was quite natural that his reactions to Karl’s report were explosive in their sarcastic derision.

“You forsaken fool,” he raved at the young man. “This is what comes of talk, of words, of tomfoolery. You dare come back to me with this old-wives’ tale of mysterious weapons, of untold force. Without any proof at all, you accept all that this damned Greenie tells you at absolute face value, and surrender abjectly. Couldn’t you threaten, couldn’t you bluff, couldn’t you lie?”

“He didn’t threaten, bluff, or lie,” Karl answered warmly.

“What he said was the gospel truth. If you had seen the

decerebrated man—“

“Bah! That is the most inexcusable part of the whole cursed business. To exhibit a lunatic to you, some perfectly normal mental defective, and to say, ‘This is our weapon!’ and for you to accept that without question! Did they do anything but talk? Did they demonstrate the weapon? Did they even show it to you?”

“Naturally not. The weapon is deadly. They’re not going to kill a Venusian to satisfy me. As for showing me the weapon—well, would you show your ace-in-the-hole to the enemy? Now you answer me a few

questions. Why is Antil so cocksure of himself? How did he conquer all Venus so easily?"

"I can't explain it I admit, but does that prove that theirs is the correct explanation? Anyhow, I'm sick of this talk. We're attacking now, and to hell with theories. I'll face them with Tonite projectiles and you can watch their bluff backfire in their ugly faces."

"But, Admiral, you must communicate my report to the President."

"I will—after I blow Aphrodopolis into kingdom come."

He turned on the central broadcasting unit. "Attention, all ships! Battle formation! We dive at Aphrodopolis with all To-nites blasting in fifteen minutes." Then he turned to the orderly. "Have Captain Larsen inform Aphrodopolis that they have fifteen minutes to hoist the white flag."

The minutes that ticked by after that were tense and nerve-wracking for Karl Frantor. He sat in bent silence, head buried in his hands and the faint click of the chronometer at the end of every minute sounded like a thunder-clap in his ears. He counted those clicks in a mumbling whisper—8—9—

10. God!

Only five minutes to certain death! Or was it certain death?

Was von Blumdorff right? Were the Venusians putting over a daring bluff?

An orderly catapulted into the room and saluted. "The Greenies have just answered, sir."

"Well," von Blumdorff leaned forward eagerly.

"They say, 'Urgently request fleet not to attack. If done, we shall not be responsible for the consequences.'"

"Is that all?" came the outraged shout

"Yes, sir."

The Admiral burst into a sulphurous stream of profanity.

"Why, the infernal gall of them," he shouted. "They dare bluff to the very end."

And as he finished, the fifteenth minute clicked off, and the mighty armada burst into motion. In streaking, orderly flight they shot down toward the cloudy shroud of the second planet.

Von Blumdorff grinned in a grisly appreciation of the awe-

some view spread over the television—until the mathematically

precise battle formation suddenly broke.

The Admiral stared and rubbed his eyes. The entire further half of the fleet had suddenly gone crazy. First, the ships wavered; then they veered and shot off at mad angles.

Then calls came in from the sane half of the fleet—reports that the left wing had ceased to respond to radio.

The attack on Aphrodopolis was immediately disrupted as the order went out to capture the ships that had run amok. Von Blumdorff stamped up and down and tore his hair. Karl Frantor cried out dully, “It is their weapon,” and lapsed back into his former silence.

From Aphrodopolis came no word at all.

For two solid hours the remnant of the Terrestrial fleet

battled their own ships. Following the aimless courses of the

stricken vessels, they approached and grappled. Bound to-

gether then by rigid force, rocket blasts were applied until the

insane flight of the others had been balanced and stopped,

Fully twenty of the fleet were never caught; some continuing on some orbit about the sun, some shooting off into unknown space, a few crashing down to Venus.

When the remaining ships of the left wing were boarded, the unsuspecting boarding parties stopped short in horror. Seventy-five staring witless shells of humanity in each ship.

Not a single human being left.

Some of the first to enter screamed in horror and fled in a panic. Others merely retched and turned away their eyes. One officer took in the situation at a glance, calmly drew his Atomo-pistol and rayed every decerebrate in sight.

Admiral von Blumdorff was a stricken man; a pitiful, limp wreck of his former proud and blustering self, when he heard the worst. One of the decerebrates was brought to him, and he reeled back.

Karl Frantor gazed at him with red-rimmed eyes, “Well, Admiral, are you satisfied?”

But the Admiral made no answer. He drew his gun, and before anyone could stop him, shot himself through the head.

Once again Karl Frantor stood before a meeting of the President and his Cabinet, before a dispirited, frightened group of men. His report was definite and left no doubt as to the course that must now be followed.

President Debuc stared at the decerebrate brought in as an exhibit. “We are finished,” he said. “We must surrender un-conditionally, throw ourselves upon their mercy. But some-day—,” his eyes kindled in retribution.

“No, Mr. President!” Karl’s voice rang out, “there shall be no someday. We must give the Venusians their simple due—liberty and independence. Bygones must be bygones—our dead have but paid for the half-century of Venusian slavery. After this, there must be a new order in the Solar System—the birth of a new day.”

The President lowered his head in thought and then raised it again. "You are right," he answered with decision; "there shall be no thought of revenge."

Two months later the peace treaty was signed and Venus became what it has remained ever since—an independent and sovereign power. And with the signing of the treaty, a whirling speck shot out toward the sun. It was—the weapon too dread-ful to use.

THE END

Amazing Stories was, at that time, heavily slanted toward adventure and action and disapproved of too much scientific exposition in the course of the story. I, of course, even then was writing the kind of science fiction that involved scientific extrapolation that was specifically described. What Raymond Palmer did in this case was to omit some of my scientific discussion and to place in footnotes a condensed version of passages that he could not omit without damaging the plot. This was an extraordinarily inept device, at which I chafed at the time. I took the only retaliation available to me. I placed Amazing at the bottom of the list, as far as the order in which to submit stories was concerned.

What I remember most clearly about the story, though, is Fred Pohl's remark concerning it. The story ends with Earth and Venus at peace, with Earth promising to respect Venus' independence and Venus destroying its weapon. Fred said, upon reading the published story, "And after the weapon was destroyed, Earth wiped the Venusians off the face of their planet."

He was quite right. I was naive enough then to suppose that words and good intentions are sufficient. (Fred also remarked that the weapon that was too dreadful to be used was, in fact, used. He was right in that case, too, and that helped sour me on titles that were too long and elaborate. I have tended toward shorter titles since, even one-word titles, something Campbell consistently encouraged, perhaps because short titles fit better on the cover and on the title page of a magazine.)

If I thought that my sale to Campbell had made me an expert in knowing what he wanted and in being able to supply that want, I was quite wrong. In February 1939 I wrote a story called "The Decline and Fall." I submitted it to Campbell on February 21 and it was back in my lap, quite promptly, on the twenty-fifth. It made the rounds thereafter without results and was never published. It no longer exists and I remember nothing at all about it.

On March 4, 1939, I began my most ambitious writing project to that date. It was a novelette (in which I named an important character after Russell Winterbotham) that was intended to be at least twice as long as any of my previous stories. I called the story "Pilgrimage." It was my first attempt to write "future history"; that is, a tale about a far future time written as though it were a historical novel. I was also my first attempt to write a story on a galactic scale.

I was very excited while working at it and felt somehow that it was an "epic." (I remember, though, that Winterbotham was rather dubious about it when I described the plot to him in a letter.) I brought it in to Campbell on March 21, 1939, with high hopes, but it was back on the twenty-fourth with a letter that said, "You have a basic idea which might be made into an interesting yarn, but as it is, it is not strong enough."

This time I would not let go. I was in to see Campbell again on the twenty-seventh and talked him into letting me revise it in order to strengthen the weaknesses he found in it. I brought in the second version on April 25, and it, too, was found wanting, but this time it was Campbell who asked for a revision. I tried again and the third version was sub-mitted on May 9 and rejected on the seventeenth. Campbell

admitted there was still the possibility of saving it, but, after three tries, he said, I should put it to one side for some months and then look at it from a fresh viewpoint.

I did as he said and waited two months (the minimum time I could interpret as “some months”) and brought in the fourth version on August 8.

This time, Campbell hesitated over it till September 6, and then rejected it permanently on the ground that Robert A. Heinlein had just submitted an important short novel (later published as “If This Goes On—”) that had a religious theme. Since “Pilgrimage” also had a religious theme, John couldn’t use it. Two stories on so sensitive a subject in rapid succession were one too many.

I had written the story four times, but I saw Campbell’s point. Campbell said Heinlein’s story was the better of the two and I could see that an editor could scarcely be expected to take the worse and reject the better simply because writing the worse had been such hard work.

There was nothing, however, to prevent me from trying to sell it elsewhere. I kept trying for two years, during which time I rewrote it twice more and retitled it “Galactic Crusade.”

Eventually I sold it to another of the magazines that were springing up in the wake of Campbell’s success with Astounding. This was Planet Stories, which during the 1940s was to make its mark as a home for the “space opera,” the blood-and-thunder tale of interplanetary war. My story was of this type, and the editor of Planet, Malcolm Reiss, was attracted.

The religious angle worried him, too, however. Would I go through the story, he asked during luncheon on August 18, 1941, and remove any direct reference to religion. Would I, in particular, refrain from referring to any of my characters as “priests.” Sighing, I agreed, and the story was re-written for a sixth time. On October 7, 1941, he accepted it and, after two and a half years that included ten rejections, the story was finally placed.

But, having put me to the trouble of that particular re-write-the-religion revision, what did Reiss do? Why, he re-titled it (without consulting me, of course) and called the story “Black Friar of the Flame.”

I might mention two points about this story before presenting it.

First, it was the only story I ever sold to Planet.

Second, it was illustrated by Frank R. Paul. Paul was the most prominent of all the science fiction illustrators of the pre-Campbell era, and, to the best of my knowledge, this is the only time our paths crossed professionally.

I did see him once from a distance, though. On July 2, 1939, I attended the First World Science Fiction Convention, which was held in Manhattan. Frank Paul was guest of honor. It was the first occasion on which I was publicly recognized as a professional, rather than as merely a fan. With three published stories under my belt (“Trends” had just appeared) I was pushed up to the platform to take a bow. Campbell was sitting in an aisle seat and he waved me toward the platform delightedly, I remember.

I said a few words, referring to myself as the “worst science fiction writer unlynched.” I didn’t mean it, of course, and I doubt that anyone thought for a moment that I did.

Black Friar of the Flame

Russell Tymball's eyes were filled with gloomy satisfaction as they gazed at the blackened ruins of what had been a cruiser of the Lhasinuic Fleet a few hours before. The twisted girders, scattered in all directions, were ample witness of the terrific force of the crash.

The pudgy Earthman re-entered his own sleek Strato-rocket

and waited. Fingers twisted a long cigar aimlessly for minutes

before lighting it. Through the up-drifting smoke, his eyes

narrowed and he remained lost in thought

He came to his feet at the sound of a cautious hail. Two men darted in with one last fugitive glance behind them. The door closed softly, and one stepped immediately to the controls. The desolate desert landscape was far beneath them almost at once, and the silver prow of the Strato-rocket pointed for the ancient metropolis of New York.

Minutes passed before Tymball spoke, "All clear?"

The man at the controls nodded. "Not a tyrant ship about. It's quite evident the 'Grahul' had not been able to radio for help."

"You have the dispatch?" the other asked eagerly.

"We found it easily enough. It is unharmed."

"We also found," said the second man bitterly, "one other thing—the last report of Sidi Peller."

For a moment, Tymball's round face softened and something almost like pain entered his expression. And then it hardened again, "He died! But it was for Earth, and so it was not death. It was martyrdom!"

Silence, and then sadly, "Let me see the report, Petri."

He took the single, folded sheet handed him and held it before him. Slowly, he read aloud:

"On September 4, made successful entry into 'Grahul' cruiser of the tyrant fleet. Maintained self in hiding during passage from Pluto to Earth. On September 5, located dispatch in question and assumed possession. Have just shorted rocket jets. Am sealing this report in with dispatch. Long live Earth!"

Tymball's voice was strangely moved as he read the last word. "The Lhasinuic tyrants have never martyred a greater man than Sidi Peller. But we'll be repaid, and with interest The Human Race is not quite decadent yet."

Petri stared out the window. "How did Peller do it all? One man—to stow away successfully upon a cruiser of the fleet and in the face of the entire crew to steal the dispatch and wreck the fleet. How was it done? And we'll never know; except for the bare facts in his report."

"He had his orders," said Willums, as he locked controls and turned about. "I carried them to him on Pluto myself. Get the dispatch! Wreck the 'Grahul' in the Gobi! He did it!"

"That's all!" He shrugged his shoulders wearily.

The atmosphere of depression deepened until Tymball him-self broke it was a growl. “Forget it. Did you take care of everything at the wreck?”

The other two nodded in unison. Petri’s voice was business-like, “All traces of Peller were removed and de-atomized. They will never detect the presence of a Human among the wreckage. The document itself was replaced by the prepared copy, and carefully burnt beyond recognition. It was even impregnated with silver salts to the exact amount contained in the official seal of the Tyrant Emperor. I’ll stake my head that no Lhasinu will suspect that the crash was no accident or that the dispatch was not destroyed by it.”

“Good! They won’t locate the wreck for twenty-four hours at least. It’s an airtight job. Let me have the dispatch now.”

He fondled the metalloid container almost with reverence. It was blackened and twisted, still faintly warm. And then with a savage twist of the wrist, he tore off the lid.

The document that he lifted out unrolled with a rustling sound. At the lower left hand corner was the huge silver seal of the Lhasinuic Emperor himself—the tyrant, who from Vega, ruled one third of the Galaxy. It was addressed to the Viceroy of Sol.

The three Earthmen regarded the fine print solemnly. The harshly angular Lhasinuic script glinted redly in the rays of the setting sun.

“Was I right?” whispered Tymball.

“As always,” assented Petri.

Night did not really fall. The sky’s black-purple deepened ever so slightly and the stars brightened imperceptibly, but aside from that the stratosphere did not differentiate between the absence and the presence of the sun.

“Have you decided upon the next step?” asked Willums, hesitantly.

“Yes—long ago. I’m going to visit Paul Kane tomorrow, with this,” and he indicated the dispatch.

“Loam Paul Kane!” cried Petri.

“That—that Loarist!” came simultaneously from Willums.

“The Loarist,” agreed Tymball. “He is our man!” “Say rather that he is the lackey of the Lhasinu,” ground out Willums. “Kane—the head of Loarism—consequently the head of the traitor Humans who preach submission to the Lhasinu.”

“That’s right,” Petri was pale but more calm. “The Lhasinu are our known enemies and are to be met in fair fight—but the Loarists are vermin. Great Space! I would rather throw myself on the mercy of the tyrant Viceroy himself than have anything to do with those snuffling students of ancient history, who praise the ancient glory of Earth and encompass its present degradation.”

“You judge too harshly.” There was the trace of a smile about Tymball’s lips. “I have had dealings with this leader of Loarism before. Oh—“ “he checked the cries of startled dis-may that rose, “I was quite

discreet about it. Even you two didn't know, and, as you see, Kane has not yet betrayed me. I failed in those dealings, but I learned a little bit. Listen to me!"

Petri and Willums edged nearer, and Tymball continued in crisp, matter-of-fact tones, "The first Galactic Drive of the Lhasinu ended two thousand years ago just after the capture of Earth. Since then, the aggression has not been resumed, and the independent Human Planets of the Galaxy are quite satisfied at the maintenance of the status quo. They are too divided among themselves to welcome a return of the struggle.

Loarism itself is only interested in its own survival against the encroachments of newer ways of thought, and it is no great moment to them whether Lhasinu or Human rules Earth as long as Loarism itself prospers. As a matter of fact, we—the Nationalists—are perhaps a greater danger to them in that respect than the Lhasinu."

Willums smiled grimly, "I'll say we are."

"Then, granting that, it is natural that Loarism assume the role of appeasement. Yet, if it were to their interests, they would join us at a second's notice. And this," he slapped the document before him, "is what will convince them where their interests lie."

The other two were silent.

Tymball continued, "Our time is short. Not more than three years, perhaps not more than two. And yet you know what the chances of success for a rebellion today are."

"We'd do it," snarled Petri, and then in a muffled tone, "if the only Lhasinu we had to deal with were those of Earth."

"Exactly. But they can call upon Vega for help, and we can call upon no one. No one of the Human Planets would stir in our defense, any more than they did five hundred years ago. And that's why we must have Loarism on our side."

"And what did Loarism do five hundred years ago during the Bloody Rebellion?" asked Willums, bitter hatred in his voice. "They abandoned us to save their own precious hides."

"We are in no position to remember that," said Tymball.

"We will have their help now—and then, when all is over, our reckoning with them—"

Willums returned to the controls, "New York in fifteen minutes!" And then, "But I still don't like it. What can those filthy Loarists do? Dried out husks fit for nothing but treason and platitudes!"

"They are the last unifying force of Humanity," answered Tymball. "Weak enough now and helpless enough, but Earth's only chance."

They were slanting downwards now into the thicker, lower atmosphere, and the whistling of the air as it streamed past them became shriller in pitch. Willums fired the braking rock-ets as they pierced a gray layer of clouds. There upon the horizon was the great diffuse glow of New York City.

“See that our passes are in perfect order for the Lhasinuic inspection and hide the document. They won’t search us, any-way.”

Loara Paul Kane leaned back in his ornate chair. The slender fingers of one hand played with the ivory paperweight upon his desk. His eyes avoided those of the smaller, rounder man before him, and his voice, as he spoke, took on solemn inflections.

“I cannot risk shielding you longer, Tymball. I have done so until now because of the bond of common Humanity be-tween us, but—“ his voice trailed away.

“But?” prompted Tymball.

Kane’s fingers turned his paperweight over and over. “The Lhasinu are growing harsher this past year. They are almost arrogant.” He looked up suddenly. “I am not quite a free agent, you know, and haven’t the influence and power you seem to think I have.”

His eyes dropped again, and a troubled note entered his voice, “The Lhasinu suspect. They are beginning to detect the workings of a tightly-knit conspiracy underground, and we cannot afford to become entangled in it.”

“I know. If necessary, you are quite willing to sacrifice us as your predecessor sacrificed the patriots five centuries ago. Once again, Loarism shall play its noble part.”

“What good are your rebellions?” came the weary reply. “Are the Lhasinu so much more terrible than the oligarchy of Humans that rules Santanni or the dictator that rules Trantor? If the Lhasinu are not Human, they are at least intelligent Loarism must live at peace with the rulers.”

And now Tymball smiled. There was no humor in it—rather mocking irony, and from his sleeve, he drew forth a small card.

“You think so, do you? Here, read this. It is a reduced pho-

tostat of—no, don’t touch it—read it as / hold it, and—“

His further remarks were drowned in the sudden hoarse cry from the other. Kane’s face twisted alarmingly into a mask of horror, as he snatched-desperately at the reproduction held out to him.

“Where did you get this?” He scarcely recognized his own voice.

“What odds? I have it, haven’t I? And yet it cost the life of a brave man, and a ship of His Reptilian Eminence’s navy. I believe you can see that there is no doubt as to the genuine-ness of this.”

“No—no!” Kane put a shaking hand to his forehead. “That is the Emperor’s signature and seal. It is impossible to forge them.”

“You see. Excellency,” there was sarcasm in the title, “the renewal of the Galactic Drive is a matter of two years—or three—in the future. The first step in the drive comes within the year—and it is concerning that first step,” his voice took on a poisonous sweetness, “that this order has been issued to the Viceroy.”

“Let me think a second. Let me think.” Kane dropped into his chair.

“Is there the necessity?” cried Tymball, remorselessly. “This is nothing but the fulfillment of my prediction of six months ago, to which you would not listen. Earth, as a Human world, is to be destroyed; its population scattered in groups through-out the Lhasinuic portions of the Galaxy; every trace of Human occupancy destroyed.”

“But Earth, Earth, the home of the Human Race; the be-ginning of our civilization.”

“Exactly! Loarism is dying and the destruction of Earth will kill it And with Loarism gone, the last unifying force is destroyed, and the human planets, invincible when united, shall be wiped out, one by one, in the Second Galactic Drive.

Unless—“

The other’s voice was toneless.

“I know what you’re going to say.”

“No more than I said before. Humanity must unite, and can do so only about Loarism. It must have a Cause for which to fight, and that Cause must be the liberation of Earth. / shall fire the spark here on Earth and you must convert the Human portion of the Galaxy into a powder-keg.”

“You wish a Total War—a Galactic Crusade,” Kane spoke in a whisper, “yet who should know better than I that a Total War has been impossible for these thousand years.” He laughed suddenly, harshly, “Do you know how weak Loarism is today?”

“Nothing is so weak that it cannot be strengthened. Al-though Loarism has weakened since its great days during the First Galactic Drive, you still have your organization and your discipline; the best in the Galaxy. And your leaders are, as a whole, capable men, I must say that for you. A thor-oughly centralized group of capable men, working desper-ately, can do much. It must do much, for it has no choice.”

“Leave me,” said Kane, brokenly, “I can do no more now. I must think.” His voice trailed away, but one finger pointed toward the door.

“What good are thoughts?” cried Tymball, irritably. “We need deeds!” And with that, he left.

The night had been a horrible one for Kane. His face was pale and drawn; his eyes hollow and feverishly brilliant. Yet he spoke loudly and firmly.

“We are allies, Tymball.”

Tymball smiled bleakly, took Kane’s outstretched hand for a moment, and dropped it, “By necessity. Excellency, only. I am not your friend.”

“Nor I yours. Yet we may work together. My initial orders have gone out and the Central Council will ratify them. In that direction, at least, I anticipate no trouble.”

“How quickly may I expect results?”

“Who knows? Loarism still has its facilities for propaganda. There are still those who will listen from respect and others from fear, and still others from the mere force of the propa-ganda itself. But who can

say? Humanity has slept, and Loarism as well. There is little anti-Lhasinuic feeling, and it will be hard to drum it up out of nothing.”

“Hate is never hard to drum up,” and Tymball’s moon-face seemed oddly harsh. “Emotionalism! Propaganda! Frank and unscrupulous opportunism! And even in its weakened state, Loarism is rich. The masses may be corrupted by words, but those in high places, the important ones, will require a bit of the yellow metal.”

Kane waved a weary hand, “You preach nothing new. That line of dishonor was Human policy far back in the misty dawn of history when only this poor Earth was Human and even it split into warring segments.” Then, bitterly, “To think that we must return to the tactics of that barbarous age.”

The conspirator shrugged his shoulders cynically, “Do you know any better?”

“And even so, with all that foulness, we may yet fail.”

“Not if our plans are well-laid.”

Loara Paul Kane rose to his feet and his hands clenched before him, “Fool! You and your plans! Your subtle, secret, snaky, tortuous plans! Do you think that conspiracy is re-bellion, or rebellion, victory? What can you do? You can ferret out information and dig quietly at the roots, but you can’t lead a rebellion. I can organize and prepare, but I can’t lead a rebellion.”

Tymball winced, “Preparation—perfect preparation—“ “—is nothing, I tell you. You can have every chemical in-gredient necessary, and all the proper conditions, and yet there may be no reaction. In psychology—particularly mob psychology—as in chemistry, one must have a catalyst.”

“What in space do you mean?”

“Can you lead a rebellion?” cried Kane. “A crusade is a war of emotion. Can you control the emotions? Why, you conspirator, you could not stand the light of open warfare an instant. Can I lead the rebellion? I, old and a man of peace? Then who is to be the leader, the psychological catalyst, that can take the dull worthless clay of your precious ‘preparation’ and breathe life into it?”

Russell Tymball’s jaw muscles quivered, “Defeatismi So soon?”

The answer was harsh, “No! Realismi”

There was angry silence and Tymball turned on his heel and left.

It was midnight, ship time, and the evening’s festivities were reaching their high point. The grand salon of the superiiner Flaming Nova was filled with whirling, laughing, glittering figures, growing more convivial as the night wore on.

“This reminds me of the triply-damned affairs my wife makes me attend back on Lacto,” muttered Sammel Maronni to his companion. “I thought I’d be getting away from some of it, at least out here in hyperspace, but evidently I didn’t.” He groaned softly and gazed at the assemblage with a faintly disapproving stare.

Maronni was dressed in the peak of fashion, from purple headsash to sky-blue sandals, and looked exceedingly uncom-fortable. His portly figure was crammed into a brilliantly red and terribly tight tunic

and the occasional jerks at his wide belt showed that he was only too conscious of its ill fit.

His companion, taller and slimmer, bore his spotless white uniform with an ease born of long experience, and his imposing figure contrasted strongly with the slightly ridiculous appearance of Sammel MaronnL

The Lactonian exporter was conscious of this fact. "Blast it, Drake, you've got one fine job here. You dress like a nob and do nothing but look pleasant and answer salutes. How much do you get paid, anyway?"

"Not enough." Captain Drake lifted one gray eyebrow and stared quizzically at the Lactonian. "I wish you had my job for a week or so. You'd sing mighty small after that. If you think taking care of fat dowager damsels and curly-headed

119

BLACK FRIAR OF THE FLAME

society snobs is a bed of roses, you're welcome to it." He muttered viciously to himself for a moment and then bowed politely to a bejeweled harridan who simpered past. "It's what's grayed my hair and furrowed my brow, by Rigel."

Maronni drew a long Karen smoke out of his waist-pouch and lit up luxuriously. He blew a cloud of apple-green smoke into the Captain's face and smiled impishly.

"I've never heard the man yet who didn't knock his own job, even when it was the pushover yours is, you hoary old fraud. Ah, if I'm not mistaken, the gorgeous Yien Surat is bearing down upon us."

"Oh, pink devils of Sirius! I'm afraid to look. Is that old hag actually moving in our direction?"

“She certainly is—and aren’t you the lucky one! She’s one of the richest women on Santanni and a widow, too. The uni-form gets them, I suppose. What a pity I’m married.”

Captain Drake twisted his face into a most frightful gri-mace, “I hope a chandelier falls on her.”

And with that he turned, his expression metamorphosed into one of bland delight in an instant, “Why, Madam Surat, I thought I’d never get the chance to see you tonight.”

Yien Surat, for whom the age of sixty was past experience, giggled girlishly, “Be still, you old flirt, or you’ll make me for-get that I’ve come here to scold you.”

“Nothing is wrong, I hope?” Drake felt a sinking of the

heart. He had had previous experience with Madam Surat’s

complaints. Things usually were wrong.

“A great deal is wrong. I’ve just been told that in fifty hours, we shall land on Earth—if that’s the way you pro-nounce the word.”

“Perfectly correct,” answered Captain Drake, a bit more at ease.

“But it wasn’t listed as a stop when we boarded.”

“No, it wasn’t. But then, you see, it’s .quite a routine affair.

We leave ten hours after landing.”

“But this is insupportable. It will delay me an entire day. It is necessary for me to reach Santanni within the week, and days are precious. Now, I’ve never heard of Earth. My guide book,” she extracted a leather-covered volume from her reticule and flipped its pages angrily, “doesn’t even mention the place. No one, I feel sure, has any interest in a halt there. If you persist in wasting the passengers’ time in a perfectly useless stop, I shall take it up with the president of the line. I’ll remind you that I have some little influence back home.”

120

BLACK FRIAR OF THE FLAME

Captain Drake sighed inaudibly. It had not been the first time he had been reminded of Yien Surat’s “little influence.” “My dear madam, you are right, entirely right, perfectly right—but I can do nothing. All ships on the Sirius, Alpha Centauri, and 61 Cygni lines must stop at Earth. It is by inter-stellar agreement, and even the president of the line, no matter how stimulated he may be by your argument, could do nothing.”

“Besides,” interrupted Maronni, who thought it time to come to the aid of the beleaguered captain, “I believe that we have two passengers who are actually headed for Earth.”

“That’s right. I had forgotten.” Captain Drake’s face bright-ened a bit. “There! We have concrete

reason for the stop as well.”

“Two passengers out of over fifteen hundred! Reason, in-deed!”

“You are unfair,” said Maronni, lightly. “After all, it was on Earth that the Human race originated. You know that, I suppose?”

Yien Surat lifted patently false eyebrows, “Did we?”

The blank look on her face twisted to one of disdain, “Oh, well, that was all thousands and thousands of years ago. It doesn’t matter any more.”

“It does to the Loarists and the two who wish to land are Loarists.”

“Do you mean to say,” sneered the widow, “that there are still people in this enlightened age who go about studying ‘our ancient culture.’ Isn’t that what they’re always talking about?”

“That’s what Filip Sanat is always talking about,” laughed Maronni. “He gave me a long sermon only a few days ago on that very subject. And it was interesting, too. There was a lot to what he said.”

He nodded lightly and continued, “He’s got a good head on him, that Filip Sanat. He might have made a good scientist or businessman.”

“Speak of meteors and hear them whizz,” said the Captain, suddenly, and nodded his head to the right.

“Well!” gasped Maronni. “There he is. But—but what in space is he doing here?”

Filip Sanat did make a rather incongruous picture as he stood framed in the far doorway. His long, dark purple tunic—mark of the Loarist—was a sombre splotch upon an other-wise gay scene. His grave eyes turned toward Maronni and he lifted his hand in immediate recognition.

121

BLACK FRIAR OF THE FLAME

Astonished dancers made way automatically as he passed, staring at him long and curiously afterwards. One could hear the wake of whispering that he left in his path. Filip Sanat, however, took no notice of this. Eyes fixed stonily ahead of him and expression stolidly immobile, he reached Captain Drake, Sammel Maronni, and Yien Surat. Filip Sanat greeted the two men warmly and then, in response to an introduction, bowed gravely to the widow, who

regarded him with surprise and open disdain.

“Pardon me for disturbing you. Captain Drake,” said the young man, in a low tone. “I only want to know at what time we are leaving hyperspace.”

The captain yanked out a corpulent pocket-chromo. “An hour from now. Not more.”

“And we shall then be—?”

“Just outside the orbit of Planet IX.”

“That would be Pluto. Sol will then be in sight as we enter

normal space?”

“If you’re looking in the right direction, it will be—toward the prow of the ship.”

“Thank you,” Pilip Sanat made as if to depart, but Maronni detained him.

“Hold on there, Filip, you’re not going to leave us, are you?

I’m sure Madam Surat here is fairly dying to ask you several questions. She has displayed a great interest in Loarism.”

There was more than the suspicion of a twinkle in the Lactonian’s eye.

Filip Sanat turned politely to the widow, who, taken aback for the moment, remained speechless, and then recovered.

“Tell me, young man,” she burst forth, “are there really still people like you left?—Loarists, I mean.”

Filip Sanat started and stared quite rudely at his questioner, but did lose his tongue. With calm distinctness, he said, “There

are still people left who try to maintain the culture and way of life of ancient Earth.”

Captain Drake could not forbear a tiny bit of irony, “Even down to the culture of the Lhasinuic masters?”

Yien Surat uttered a stifled scream, “Do you mean to say Earth is a Lhasinuic world? Is it?” Her voice rose to a fright-ened squeak.

“Why, certainly,” answered the puzzled captain, sorry that he had spoken. “Didn’t you know?”

“Captain,” there was hysteria in the woman’s voice. “You

122

BLACK FRIAR OF THE FLAME

must not land. If you do, I shall make trouble—plenty of trouble. I will not be exposed to hordes of those terrible Lhasinu—those awful reptiles from Vega.”

“You need not fear. Madam Surat,” observed Filip Sanat, coldly. “The vast majority of Earth’s population is very much human. It is only the one percent that rules that is Lhasinuic.”

“Oh—“ A pause, and then, in a wounded manner, “Well, I don’t think Earth can be so important, if it is not even ruled by Humans. Loarism indeed! Silly waste of time, I call it!”

Sanat’s face flushed suddenly, and for a moment he seemed to struggle vainly for speech. When he did speak, it was in an agitated tone, “You have a very superficial view. The fact that the Lhasinu control Earth has nothing to do with the fundamental problem of Loarism which—“

He turned on his heel and left.

Sammel Maronni drew a long breath as he watched the re-treating figure. “You hit him in a sore spot, Madam Surat, I never saw him squirm away from an argument or an attempt at an explanation in that way before.”

“He’s not a bad looking chap,” said Captain Drake.

Maronni chuckled, “Not by a long shot. We’re from the same planet, that young fellow and I. He’s a typical Lactonian, like me.”

The widow cleared her throat grumpily, “Oh, let us change the subject by all means. That person seems to have cast a shadow over the entire room. Why do they wear those awful purple robes? So unstylish!”

Loara Broos Porin glanced up as his young acolyte entered.

“Well?”

“In less than forty-five minutes, Loara Broos.”

And throwing himself into a chair, Sanat leaned a flushed and frowning face upon one balled fist.

Porin regarded the other with an affectionate smile, “Have you been arguing with Sammel Maronni again, Filip?”

“No, not exactly.” He jerked himself upright. “But what’s the use, Loara Broos? There, on the upper level, are hundreds of Humans, thoughtless, gaily dressed, laughing, frolicking;

and there outside is Earth, disregarded. Only we two of the entire ship’s company are stopping there to view the world of our ancient days.”

His eyes avoided those of the older man and his voice took

on a bitter tinge, “And once thousands of Humans from every

123

BLACK FRIAR OF THE FLAME

comer of the Galaxy landed on Earth every day. The great days of Loarism are over.”

Loara Broos laughed. One would not have thought such a hearty laugh to be in his spindly figure. “That is at least the hundredth time I have heard that said by you. Foolish! The day will come when Earth will once more be remembered. People will yet again flock. By the thousands and millions they’ll come.”

“No! It is over!”

“Bah! The croaking prophets of doom have said that over and over again through history. They have yet to prove them-selves right.”

“This time they will.” Sanat’s eyes blazed suddenly, “Do you know why? It is because Earth is profaned by the reptile conquerors. A woman has just said to me—a vain, stupid, shallow woman—that I don’t think Earth can be so important if it is not even ruled by Humans.’ She said what billions must say unconsciously, and I hadn’t the words to refute her. It was one argument I couldn’t answer.”

“And what would your solution be, Filip? Come, have you thought it out?”

“Drive them from Earth! Make it a Human planet once more! We fought them once during the First Galactic Drive two thousand years ago, and stopped them when it seemed as if they might absorb the Galaxy. Let us make a Second Drive of our own and hurl them back to Vega.”

Porin sighed and shook his head, “You young hothead! There never was a young Loarist who didn’t eat

fire on the subject. You'll outgrow it. You'll outgrow it."

"Look, my boy!" Loara Broos arose and grasped the other by the shoulders, "Man and Lhasinu have intelligence, and are the only two intelligent races of the Galaxy. They are brothers in mind and spirit. Be at peace with them. Don't hate; it is the most unreasoning emotion. Instead, strive to understand."

Filip Sanat stared stonily at the ground and made no indication that he heard. His mentor clicked his tongue in gentle rebuke.

"Well, when you are older, you will understand. Now, forget all this, Filip. Remember that the ambition of every real Loarist is about to be fulfilled for you. In two days, we shall reach Earth and its soil shall be under your feet. Isn't that enough to make you happy? Just think! When you return, you shall be awarded the title 'Loara.' You shall be one who has

124

BLACK FRIAR OF THE FLAME

visited Earth. The golden sun will be pinned to your shoulder."

Porin's hand crept to the staring yellow orb upon his own tunic, mute witness of his three previous visits to Earth.

"Loara Filip Sanat," said Sanat slowly, eyes glistening. "Loara Filip Sanat. It has a wonderful sound, hasn't it? And only a little ways off."

"Now, then, you feel better. But come, in a few moments we shall leave hyperspace and we will see Sol."

Already, even as he spoke, the thick, choking cloak of hyper-stuff that clung so closely to the sides of the Flaming Nova was going through those curious changes that marked the beginning of the shift to normal space. The blackness lightened a bit and concentric rings of various shades of gray chased each other across the port-view with gradually hastening speed. It was a weird and beautiful optical illusion that science has never succeeded in explaining.

Porin clicked off the lights in the room, and the two sat quietly in the dark, watching the feeble phosphorescence of the racing ripples as they sped into a blur. Then, with a terrifying silent suddenness, the whole structure of hyper-stuff seemed to burst apart in a whirling madhouse of brilliant color. And then all was peaceful again. The stars sparkled quietly, against the curved backdrop of normal space.

And up in the corner of the port blazed the brightest spark of the sky with a luminous yellow flame that lit up the faces of the two men into pale, waxen masks. It was Sol!

The birth-star of Man was so distant that it lacked a perceptible disc, yet it was incomparably the

brightest object to be seen. In its feeble yellow light, the two remained in quiet thought, and Pilip Sanat grew calmer.

In two days, the Flaming Nova landed on Earth.

Filip Sanat forgot the delicious thrill that had seized him. at the moment when his sandals first came into contact with the firm green sod of Earth, when he caught his first glimpse of a Lhasinuic official.

They seemed actually human—or humanoid, at least. At first glance, the predominantly Manlike characteristics drowned out all else. The body plan differed in no essential from Man's. The four-limbed, bipedal body; the middling-well proportioned arms and legs; the well-defined neck, were all astonishingly in evidence. It was only after a few minutes that the smaller details marking the difference between the two races were noticed at all.

BLACK FRIAR OF THE FLAME

Chief of these were the scales covering the head and a thick line down the backbone, halfway to the hips. The face itself, with its flat, broad, thinly-scaled nose and lidless eyes was rather repulsive, but in no way bestial. Their clothes were few and simple, and their speech quite pleasant to the ear. And, what was most important, there was no masking the intelligence that showed forth in their dark, luminous eyes.

Porin noted Sanat's surprise at this first glimpse of the Vegan reptiles with every sign of satisfaction.

"You see," he remarked, "their appearance is not at all monstrous. Why should hate exist between Human and Lhasinu, then?"

Sanat didn't answer. Of course, his old friend was right. The word "Lhasinu" had so long been coupled with the words "alien" and "monster" in his mind, that against all knowledge and reason, he had subconsciously expected to see some weird life-form.

Yet, overlying the foolish feeling this realization induced was the same haunting hate that clung closely to him, growing to fury as they passed inspection by an over-bearing English-speaking Lhasinu.

The next morning, the two left for New York, the largest city of the planet In the historic lore of the unbelievably ancient metropolis, Sanat forgot for a day the troubles of the

Galaxy outside. It was a great moment for him when he finally stood before a towering structure and said to himself, “This ‘is the Memorial.”

The Memorial was Earth’s greatest monument, dedicated to the birthplace of the Human race, and this was Wednesday, the day of the week when two men “guarded the Flame.”

Two men, alone in the Memorial, watched over the flickering yellow fire that symbolized Human courage and Human initiative—and Porin had already arranged that the choice should fall that day upon himself and Sanat, as being two newly-arrived Loarists.

And so, in the fading twilight, the two sat alone in the spacious Flame Room of the Memorial. In the murky semi-darkness, lit only by the fitful glare of a dancing yellow flame, a quiet peace descended upon them.

There was something about the brooding aura of the place that wiped all mental disturbance clean away. There was something about the wavering shadows as they weaved through the pillars of the long colonnade on either side, that cast a hypnotic spell.

126

BLACK FRIAR OF THE FLAME

Gradually, he fell into a half doze, and out of sleepy eyes regarded the Flame intently, until it became a living being of light weaving a dim, silent figure beside him.

But tiny sounds are sufficient to disturb a reverie, especially when contrasted with a hitherto deep silence. Sanat stiffened suddenly, and grasped Porin’s elbow in a fierce grip.

“Listen,” he hissed the warning quietly.

Porin started violently out of a peaceful day-dream, re-garded his young companion with uneasy intentness, then, without a word, trumpeted one ear. The silence was thicker than ever—also a tangible cloak. Then the faintest possible scraping of feet upon marble, far off. A low whisper, down at the limits of audibility, and then silence again.

“What is it?” he asked bewilderedly of Sanat, who had already risen to his feet.

“Lhasinu!” ground out Sanat, face a mask of hate-filled indignation.

“Impossible!” Porin strove to keep his voice coldly steady, but it trembled in spite of itself. “It would be an unheard-of event. We are just imagining things, now. Our nerves are rubbed raw by this silence, that is all. Perhaps it is some official of the Memorial.”

“After sunset, on Wednesday?” came Sanat’s strident voice. “That is as illegal as the entrance of Lhasinuic lizards, and far more unlikely. It is my duty as a Guardian of the Flame to investigate this.”

He made as if to walk toward the shadowed door, and Porin caught his wrist fearfully, “Don’t Filip. Let us forget this until sunrise. One can never tell what will happen. What can you do, even supposing that Lhasinu have entered the Memorial?

If you—“

But Sanat was no longer listening. Roughly, he shook off the other’s desperate grasp, “Stay here! The Flame must be guarded. I shall be back soon.”

He was already half way across the wide, marble-floored hall. Cautiously, he approached the glass-paned door to the dark, twisting staircase that circled its way upwards through the twilit gloom into the desert recesses of the tower.

Slipping off his sandals, he crept up the stairs, casting one last look back toward the softly luminous Flame, and toward the nervous, frightened figure standing beside it.

The two Lhasinu stared about them in the pearly light of the Atomo lamp.

127

BLACK FRIAR OF THE FLAME

“Dreary old place,” said Threg Ban Sola. His wrist camera clicked three times. “Take down a few of those books on the walls. They’ll serve as additional proof.”

“Do you think we ought to,” asked Cor Wen Hasta. “These

Human apes may miss them.”

“Let them!” came the cool response. “What can they do? Here, sit down!” He flicked a hasty glance upon his chro-nometer. “We’ll get fifty credits for every minute we stay, so we might as well pile up enough to last us for a while.”

“Pirat For is a fool. What made him think we wouldn’t

take the bet?”

“I think,” said Ban Sola, “he’s heard about the soldier torn

to pieces last year for looting a European museum. The Hu-mans didn’t like it, though Loarism is filthy rich, Vega knows.

The Humans were disciplined, of course, but the soldier was

dead. Anyway, what Pirat For doesn’t know is that the

Memorial is deserted Wednesdays. This is going to cost him

money.”

“Fifty credits a minute. And it’s been seven minutes now.”

“Three hundred and fifty credits. Sit down. We’ll play a game of cards and watch our money mount.”

Threg Ban Sola drew forth a worn pack of cards from his pouch which, though they were typically and essentially Lhasinuic, bore unmistakable traces of their Human deriva-tion.

“Put the Atomo-light on the table and I’ll sit between it and

the window,” he continued peremptorily, shuffling the cards as he spoke. “Hah! I’ll warrant no Lhasinu ever gamed in such an atmosphere. Why, it will triple the zest of the play.”

Cor Wen Hasta seated himself, and then rose again, “Did

you hear anything?” He stared into the shadows beyond the

half-open door.

“No,” Ban Sola frowned and continued shuffling. “You’re

not getting nervous, are you?”

“Of course not. Still, if they were to catch us here in this

blasted tower, it might not be pleasant.”

“Not a chance. The shadows are making you jumpy.” He dealt the hands.

“Do you know,” said Wen Hasta, studying his cards carefully, “it wouldn’t be so nice if the Viceroy were to get wind of this, either. I imagine he wouldn’t deal lightly with offenders of the Loarists, as a matter of policy. Back on Sirius, where I served before I was shifted, the scum—“

“Scum, all right,” grunted Ban Sola. “They breed like flies

128

BLACK FRIAR OF THE FLAME

and fight each other like mad bulls. Look at the creatures!” He turned his cards downward and grew argumentative. “I mean, look at them scientifically and impartially. What are they? Only mammals! Mammals that can think, in a way; but mammals just the same. That’s all.”

“I know. Did you ever visit one of the Human worlds?”

Ban Sola smiled, “I may, pretty soon.”

“Furlough?” Wen Hasta registered polite astonishment.

“Furlough, my scales. With my ship! And with guns shoot-ing!”

“What do you mean?” There was a sudden glint in Wen Hasta’s eyes.

Ban Sola’s grin grew mysterious. “This isn’t supposed to be known, even among us officers, but you know how things leak out.”

Wen Hasta nodded, “I know.” Both had lowered their voices instinctively.

“Well. The Second Drive will be on, now, any time.”

“No!”

“Fact! And we’re starting right here. By Vega, the Viceregal Palace is buzzing with nothing else. Some of the officers have even started a lottery on the exact date of the first move. I’ve got a hundred credits at twenty to one myself. But then, I drew only to the nearest week. You can get a hundred and fifty to one, if you’re nervy enough to pick a particular day.”

“But why here on this Galaxy-forsaken planet?”

“Strategy on the part of the Home Office.” Ban Sola leaned forward. “The position we’re in now has us facing a numerically superior enemy hopelessly divided amongst itself. If we can keep them so, we can take them over one by one. The Human Worlds would just naturally rather cut their own throats than co-operate with each other.”

Wen Hasta grinned agreement, “That’s typical mammalian behavior for you. Evolution must have laughed when she gave a brain to an ape.”

“But Earth has particular significance. It’s the center of Loarism, because the Humans originated here. It corresponds to our own Vegan system.”

“Do you mean that? But you couldn’t! This little two-by-four flyspeck?”

“That’s what they say. I wasn’t here at the time, so I wouldn’t know. But anyway, if we can destroy Earth, we can destroy Loarism, which is centered here. It was Loarism, the historians say, that united the Worlds against us at the end

129

BLACK FRIAR OF THE FLAME

of the First Drive. No Loarism; the last fear of enemy unification is gone; and victory is easy.”

“Damned clever! How are we going to go about it?” “Well, the word is that they’re going to pack up every last Human on Earth and scatter them through the subject worlds. Then we can remove everything else on Earth that smells of the Mammals and make it an entirely Lhasinuic world.”

“But when?”

“We don’t know; hence the lottery. But no one has placed his bet at a period more than two years in the future.”

“Hurrah for Vega! I’ll give you two to one I riddle a Human cruiser before you do, when the time comes.”

“Done,” cried Ban Sola. “I’ll put up fifty credits.”

They rose to touch fists in token and Wen Hasta grinned at his chronometer, “Another minute and we’ll have an even thousand credits coming to us. Poor Pirat For. He’ll groan. Let’s go now; more would be extortionate.”

There was low laughter as the two Lhasinu left, long cloaks swishing softly behind them. They did not notice the slightly darker shadow hugging the wall at the head of the stairs, though they almost brushed it as they passed. Nor did they sense the burning eyes focused upon them as they descended noiselessly.

Loara Broos Porin jerked to his feet with a sob of relief as he saw the figure of Filip Sanat stumble across the hall to-ward him. He ran to him eagerly, grasping both hands tightly.

“What kept you, Filip? You don’t know what wild thoughts have passed through my head this past hour. If you had been gone another five minutes, I would have gone mad for sheer suspense and uncertainty. But what’s wrong?”

It took several moments for Loara Broos’ wild relief to sub-side sufficiently to note the other’s trembling hands, his di-sheveled hair, his feverishly-glinting eyes; but when it did, all his fears returned.

He watched Sanat in dismay, scarcely daring to press his question for fear of the answer. But Sanat needed no urging. In short, jerky sentences he related the conversation he had overheard and his last words trailed into a despairing silence.

Loara Broos’ pallor was almost frightening, and twice he tried to talk with no success other than a few hoarse gasps.

Then, finally, “But it is the death of Loarism! What is to be done?”

Filip Sanat laughed, as men laugh when they are at last

130

BLACK FRIAR OF THE FLAME

convinced that nothing remains to laugh at. “What can be done? Can we inform the Central Council? You know only too well how helpless they are. The various Human govern-ments? You can imagine how effective those divided fools would be.”

“But it can’t be true! It simply can’t be!”

Sanat remained silent for seconds, and then his face twisted agonizedly and in a voice thick with passion, he shouted, “I won’t have it. Do you hear? It shan’t be! I’ll stop it!”

It was easy to see that he had lost control of himself; that wild emotion was driving him. Porin, large drops of perspira-tion on his brow, grasped him about the waist, “Sit down, Filip, sit down! Are you going crazy?”

“No!” With a sudden push, he sent Porin stumbling back-

wards into a sitting position, while the Flame wavered and

flickered madly in the rush of air, “I’m going sane. The time

for idealism and compromise and subservience is gone! The

time for force has come! We will fight and, by Space, we will win!”

He was leaving the room at a dead run.

Porin limped after, “Pilip! Pilip!” He stopped at the door-way in frightened despair. He could go no further. Though the Heavens fell, someone must guard the Flame.

But—but what was Filip Sanat going to do? And through Porin’s tortured mind flickered visions of a certain night, five hundred years before, when a careless word, a blow, a shot, had lit a fire over Earth that was finally drowned in Human blood.

Loara Paul Kane was alone that night. The inner office was

empty; the dim, blue light upon the severely simple desk the

only illumination in the room. His thin face was bathed in

the ghastly light, and his chin buried musingly between his hands.

And then there was a crashing interruption as the door was

flung open and a disheveled Russell Tymball knocked off the

restraining hands of half a dozen men and catapulted in. Kane

whirled in dismay at the intrusion and one hand flew up to his

throat as his eyes widened in apprehension. His face was one startled question.

Tymball waved his arm in a quieting gesture. “It’s all right.

Just let me catch my breath.” He wheezed a bit and seated

himself gently before continuing, “Your catalyst has turned

up, Loara Paul—and guess where. Here on Earth! Here in

131

BLACK FRIAR OF THE FLAME

New York! Not half a mile from where we’re sitting now!”

Loara Paul Kane eyed Tymball narrowly, “Are you mad?”

“Not so you can notice it. I’ll tell you about it, if you don’t mind turning on a light or two. You look like a ghost in the blue.” The room whitened under the glare of Atomos, and Tymball continued, “Femi and I were returning from the meeting. We were passing the Memorial when it happened, and you can thank Fate for the lucky coincidence that led us to the right spot at the right moment.

“As we passed, a figure shot out the side entrance, jumped on the marble steps in front, and shouted, ‘Men of Earth!’ Everyone turned to look—you know how filled Memorial Sector is at eleven—and inside of two seconds, he had a crowd.”

“Who was the speaker, and what was he doing inside the Memorial? This is Wednesday night, you know.”

“Why,” Tymball paused to consider, “now that you mention it, he must have been one of the two Guardians. He was a Loarist—you couldn’t mistake the tunic. He wasn’t Terres-trial, either!”

“Did he wear the yellow orb?”

“No.”

“Then I know who he was. He’s Porin’s young friend. Go ahead.”

“There he stood!” Tymball was warming to his task. “He was some twenty feet above street level. You have no idea what an impressive figure he made with the glare of the Luxites lighting his face. He was handsome, but not in an athletic, brawny way. He was the ascetic type, if you know what I mean. Pale, thin face, burning eyes, long, brown hair.

“And when he spoke! It’s no use describing it; in order to appreciate it really, you would have to hear him. He began telling the crowd of the Lhasinuic designs; shouting what / had been whispering. Evidently, he had gotten them from a good source, for he went into details—and how he put them! He made them sound real and frightening. He frightened me with them; had me standing there scared blue at what he was saying; and as for the crowd, after the second sentence, they were hypnotized. Every one of them had had ‘Lhasinuic Menace’ drilled into them over and over again, but this was the first time they listened—actually listened.

“Then he began damning the Lhasinu. He rang the changes on their bestiality, their perfidy, their criminality—only he had a vocabulary that raked them into the lowest mud of a Venu-

132

BLACK FRIAR OF THE FLAME

sian ocean. And every time he let loose with an epithet, the crowd stood upon its hind legs and let out a roar. It began to sound like a catechism. ‘Shall we allow this to go on?’ cried he. ‘Never!’ yelled the crowd. ‘Must we yield?’ ‘Never!’ ‘Shall we resist?’ ‘To the end!’ ‘Down with the Lhasinul’ he shouted.

KiU them!’ they howled.

“I howled as loud as any of them—forgot myself entirely. “I don’t know how long it lasted before Lhasinuic guards began closing in. The crowd turned on them, with the Loarist urging them on. Did you ever hear a mob yell for blood? No? It’s the most awful sound you can imagine. The guards thought so, too, for one look at what was before them made them turn and run for their lives, in spite of the fact that they were armed. The mob had grown into a matter of thousands and thousands by then.

“But in two minutes, the alarm siren sounded—for the first time in a hundred years. I came to my senses at last and made for the Loarist, who had not stopped his tirade a moment. It was plain that we couldn’t let him fall into the hands of the Lhasinu.

“The rest is pretty much of a mixup. Squadrons of motor-ized police were charging down on us, but somehow, Ferni and I managed between the two of us to grab the Loarist, slip out, and bring him here. I have him in the outer room, gagged and tied, to keep him quiet.”

During all the last half of the narrative, Kane had paced the floor nervously, pausing every once in a while in deep consideration. Little flecks of blood appeared on his lower lip.

“You don’t think,” he asked, “that the riot will get out of

hand? A premature explosion—“

Tymball shook his head vigorously, “They’re mopping up already. Once the young fellow disappeared, the crowd lost its spirit, anyway.”

“There will be many killed or hurt, but— Well, bring in the young firebrand.” Kane seated himself behind his desk and composed his face into a semblance of tranquility.

Filip Sanat was in sad shape as he kneeled before his superior. His tunic was in tatters, and his face scratched and bloody, but the fire of determination shone as brilliantly as ever in his fierce eyes. Russell Tymball regarded him breathlessly as though the previous hour’s magic still lingered.

Kane extended his arm gently, “I have heard of your wild

escapade, my boy. What was it that impelled you to do so

foolish an act? It might very well have cost you your life, to

133

BLACK FRIAR OF THE FLAME

say nothing of the lives of thousands of others.”

“For the second time that night, Sanat repeated the conversation he had overheard—dramatically and in the minutest detail.

“Just so, just so,” said Kane, with a grim smile, upon the conclusion of the tale, “and did you think we knew nothing of this? For a long time we have been preparing against this danger, and you have come near to upsetting all our carefully laid plans. By your premature appeal, you might have worked irreparable harm to our cause.”

Filip Sanat reddened, “Pardon my inexperienced enthusiasm—“

“Exactly,” exclaimed Kane. “Yet, properly directed, you might be of great aid to us. Your oratory and youthful fire might work wonders if well managed. Would you be willing to dedicate yourself to the task?”

Sanat’s eyes flashed, “Need you ask?”

Loara Paul Kane laughed and cast a jubilant side-glance at Russell Tymball, “You’ll do. In two days, you shall leave for the outer stars. With you, will go several of my own men. And now, you are tired. You will be taken to where you may wash and treat your cuts. Then, you had better sleep, for you shall need your strength in the days to come.”

“But—but Loara Broos Porin—my companion at the Flame?”

“I shall send a messenger to the Memorial immediately. He

will tell Loara Broos of your safety and serve as the second Guardian for the remainder of the night. Go, now!”

But even as Sanat, relieved and deliriously happy, rose to go, Russell Tymball leaped from his chair and grasped the older Loarist’s wrist in a convulsive grip.

“Great Space! Listen!”

The shrill, keening whine that pierced to the inner sanctum of Kane’s offices told its own story. Kane’s face turned haggard.

“It’s martial law!”

Tymball’s very lips had turned bloodless, “We lost out, after all. They’re using tonight’s disturbance to strike the first blow.

They’re after Sanat, and they’ll have him. A mouse couldn’t get through the cordon they’re going to throw about the city

now.”

“But they mustn’t have him.” Kane’s eyes glittered. “We’ll take him to the Memorial by the Passageway. They won’t dare violate the Memorial.”

BLACK FRIAR OF THE FLAME

“They have done it once already,” came Sanat’s impassioned cry. “I won’t hide from the lizards. Let us fight.”

“Quiet,” said Kane, “and follow silently.”

A panel in the wall had slid aside, and toward it Kane motioned.

And as the panel closed noiselessly behind them, leaving them in the cold glow of a pocket Atomo lamp, Tymball muttered softly, “If they are ready, even the Memorial will yield no protection.”

New York was in ferment. The Lhasinuic garrison had mustered its full strength and placed it in a state of siege. No one might enter. No one might leave. Through the key ave-nues, rolled the ground cars of the army, while overhead poised the Strato-cars that guarded the airways.

The Human population stirred restlessly. They percolated through the streets, gathering in little knots that broke up at the approach of the Lhasinu. The spell of Sanat lingered, and here and there frowning men exchanged angry whispers.

The atmosphere crackled with tension.

The Viceroy of New York realized that as he sat behind his desk in the Palace, which raised its spires upon Washing-ton Heights. He stared out the window at the Hudson River, flowing darkly beneath, and addressed the uniformed Lhasinu before him.

“There must be positive action. Captain. You are right in that. And yet, if possible, an outright break must be avoided. We are woefully undermanned and we haven’t more than five third-rate war-vessels on the entire planet.”

“It is not our strength but their own fear that keeps them helpless. Excellency. Their spirit has been thoroughly broken in these last centuries. The rabble would break before a single unit of Guardsmen. That is precisely the reason why we must strike hard now. The population has reared and they must feel the whip immediately. The Second Drive may as well begin tonight.”

“Yes,” the Viceroy grimaced wryly. “We are caught off-stride, but the—er—rabble-rouser must be made an example of. You have him, of course.”

The captain smiled grimly, “No. The Human dog had

powerful friends. He is a Loarist, you know. Kane—“

“Is Kane standing against us?” Two re3 spots burnt over the Viceroy’s eyes. “The fool presumes! The troops are to arrest the rebel in spite of him—and him, too, if he objects.”

BLACK FRIAR OF THE FLAME

“Excellency!” the captain’s voice rang metallically. “We have reason to believe the rebel may be skulking in the Memorial.”

The Viceroy half-rose to his feet. He scowled in indecision and seated himself once more, “The Memoriall That presents difficulties!”

“Not necessarily!”

“There are some things those Humans won’t stand.” His voice trailed off uncertainly.

The Captain spoke decisively, “The nettle seized firmly does not sting. Quickly done—a criminal could be dragged from the Hall of the Flame itself—and we kill Loarism at a stroke. There could be no struggle after that supreme defi-ance.”

“By Vega! Blast me, if you’re not right. Good! Storm the Memorial!”

The Captain bowed stiffly, turned on his heel, and left the Palace.

Filip Sanat re-entered the Hall of Flame, thin face set angrily, “The entire Sector is patrolled by the lizards. All avenues of approach to the Memorial have been shut off.”

Russell Tymball rubbed his jaw, “Oh, they’re not fools, They’ve treed us, and the Memorial won’t stop them. As a matter of fact, they may have decided to make this the Day.”

Filip frowned and his voice was thickly furious. “And we’re to wait here, are we? Better to die fighting, than to die hiding.”

“Better not to die at all, Filip.” responded Tymball quietly.

There was a moment of silence. Loara Paul Kane sat
staring at his fingers.

Finally, he said, "If you were to give the signal to strike
now, Tymball, how long could you hold out?"

"Until Lhasinuic reinforcements could arrive in sufficient numbers to crush us. The Terrestrial garrison, including, the entire Solar Patrol, is not enough to stop us. Without outside help, we can fight effectively for six months at the very least.

Unfortunately it's out of the question." His composure was
unruffled.

"Why is it out of the question?"

And his face reddened suddenly, as he sprang angrily to
his feet, "Because you can't just push buttons. The Lhasinu
are weak. My men know that, but Earth doesn't. The lizards
have one weapon, fear! We can't defeat them, unless the

136

BLACK FRIAR OF THE FLAME

populace is with us, at least passively." His mouth twisted, "You don't know the practical difficulties involved. Ten years, now, I've been planning, working, trying. I have an army;

and a respectable fleet in the Appalachians. I could set the wheels in motion in all five continents simultaneously. But what good would it do? It would be useless. If I had New York, now—if I were able to prove to the rest of Earth that the Lhasinu were not invincible."

"If I could banish fear from the hearts of Humans?" said Kane softly.

"I would have New York by dawn. But it would take a miracle."

"Perhaps! Do you think you can get through the cordon and reach your men?"

"I could if I had to. What are you going to do?"

"You will know when it happens." Kane was smiling fiercely. "And when it does happen, strike!"

There was a Tonite gun in Tymball's hand suddenly, as he
backed away. His plump face was not at all gentle, "I'll take

a chance, Kane. Good-bye 1”

The captain strode up the deserted marble steps of the Memorial arrogantly. He was flanked on each side by an armed adjutant.

He paused an instant before the huge double-door that loomed up before him and stared at the slender pillars that soared gracefully upwards at its sides.

There was faint sarcasm in his smile, “Impressive, all this, isn’t it?”

“Yes, Captain!” was the double reply.

“And mysteriously dark, too, except for the dim yellow of their Flame. You see its light?” He pointed toward the stained glass of the bottom windows, which glinted flickeringly.

“Yes, Captain!”

“It’s dark, and mysterious, and impressive—and it is about to fall in ruins.” He laughed, and suddenly brought the butt end of his saber down upon the metal carvings on the door in a clanging salvo.

It echoed through the emptiness within and sounded hol-lowly in the night, but there was no answer.

The adjutant at his left raised his televisor to his ear and caught the faint words issuing therefrom. He saluted, “Cap-tain, the Humans are crowding into the sector.”

The captain sneered, “Let them! Order the guns placed in

137

BLACK FRIAR OF THE FLAME

readiness and aimed along the avenues. Any Human attempt-ing to pass the cordon is to be rayed mercilessly.”

His barked command was murmured into the televisor, and a hundred yards beyond, Lhasinuic Guardsmen put guns in order and aimed them carefully. A low, inchoate murmur went up—a murmur of fear. Men pressed back.

“If the door does not open,” said the captain, grimly, “it is

to be broken down.” He raised his saber again, and again

there was the thunder of metal on metal.

Slowly, noiselessly, the door yawned wide, and the captain recognized the stem, purple-clad figure that stood before him.

“Who disturbs the Memorial on the night of the Guarding of the Flame?” demanded Loara Paul Kane solemnly.

“Very dramatic, Kane. Stand aside!”

“Back!” The words rang out loudly and clearly. “The Memorial may not be approached by the Lhasinu.”

“Yield us our prisoner, and we leave. Refuse, and we will take him by force.”

“The Memorial yields no prisoner. It is inviolate. You may not enter.”

“Make way!”

“Stand back!”

The Lhasinu growled throatily and became aware of a dim roaring. The streets about him were empty, but a block away in every direction was the thin line of Lhasinuic troops, stationed at their guns, and beyond were the Humans. They were massed in noisy thickness and the whites of their faces shone palely in the Chrome-lights.

“What,” gritted the captain to himself, “do the scum yet snarl?” His tough skin ridged at the jaws and the scales upon his head uptilted sharply. He turned to the adjutant with the televisor. “Order a round over their heads.”

The night was split in two by the purple blasts of energy and the Lhasinu laughed aloud at the silence that followed.

He turned to Kane, who remained standing upon the thresh-old. “So you see that if you expect help from your people, you will be disappointed. The next round will be aimed at head level. If you think that bluff, try me!”

Teeth clicked together sharply, “Make way!” A Tonite was leveled in his hand, and thumb was firm upon the trigger.

Loara Paul Kane retreated slowly, eyes upon the gun. The

captain followed. And as he did so, the inner door of the

anteroom swung open and the Hall of the Flame stood re-

vealed. In the sudden draft, the Flame staggered, and at the

BLACK FRIAR OF THE FLAME

sight of it, there came a huge shout from the distant spectators.

Kane turned toward it, face raised upwards. The motion of one of his hands was all but imperceptible.

And the Flame suddenly changed. It steadied and roared up to the vaulted ceiling, a blazing shaft fifty feet high. Loara Paul Kane's hand moved again, and as it did so, the Flame turned carmine. The color deepened and the crimson light of that flaming pillar streamed out into the city and turned the Memorial's windows into staring, bloody eyes.

Long seconds passed, while the captain froze in bewilderment; while the distant mass of Humanity fell into awed silence.

And then there was a confused murmur, which strengthened and grew and split itself into one vast shout.

"Down with the Lhasinul"

There was the purple flash of a Tonite from somewhere high above, and the captain came to life an instant too late. Caught squarely, he bent slowly to his death; cold, reptilian face a mask of contempt to the last.

Russell Tymball brought down his gun and smiled sardonically, "A perfect target against the Flame. Good for Kane! The changing of the Flame was just the emotion-stirring thing we needed. Let's go!"

From the roof of Kane's dwelling he aimed down upon the Lhasinu below. And as he did, all Hell erupted. Men mushroomed from the very ground, it seemed, weapons in hand. Tonites blazed from every side, before the startled Lhasinu could spring to their triggers.

And when they did so, it was too late, for the mob, white-hot with flaring rage, broke its bounds. Someone shrieked, "Kill the lizards!" and the cry was taken up in one roaring ululation that swelled to the sky.

Like a many-headed monster, the stream of Humanity surged forward, weaponless. Hundreds withered under the belated fury of the defending guns, and tens of thousands scrambled over the corpses, charging to the very muzzles.

The Lhasinu never wavered. Their ranks thinned steadily under the deadly sharp-shooting of the Tymballists, and those that remained were caught by the Human flood that surged over them and tore them to horrible death.

The Memorial sector gleamed in the crimson of the bloody Flame and echoed to the agony of the dying, and the shriek-ing fury of the triumphant.

BLACK FRIAR OF THE FLAME

It was the first battle of the Great Rebellion, but it was not really a battle, or even madness. It was concentrated anarchy.

Throughout the city, from the tip of Long Island to the mid-Jersey flatlands, rebels sprang from nowhere and Lhasinu went to their death. And as quickly as Tymball's orders spread to raise the snipers, so did the news of the changing of the Flame speed from mouth to mouth and grow in the telling. All New York heaved, and poured its separate lives into the single giant crucible of the "mob."

It was uncontrollable, unanswerable, irresistible. The Tym-ballists followed helplessly where it led, all efforts at direction hopeless from the start.

Like a mighty river, it lashed its way through the metrop-olis, and where it passed no living Lhasinu remained.

The sun of that fateful morning arose to find the masters of Earth occupying a shrinking circle in upper Manhattan. With the cool courage of bom soldiers, they linked arms and withstood the charging, shrieking millions. Slowly, they backed away; each building a skirmish; each block a desperate battle. They split into isolated groups; defending first a building, and then its upper stories, and finally its roof.

With the noonday sun boiling down, only the Palace itself remained. Its last desperate stand held the Humans at bay. The withering circle of fire about it paved the grounds with blackened bodies. The Viceroy himself from his throneroom directed the defense; his own hand upon the butt of a semi-portable.

And then, when the mob had finally come to a pause, Tym-ball seized his opportunity and took the lead. Heavy guns clanked to the front Atomos and delta-rays, from the rebel stock and from the stores captured the previous night, pointed their death-laden muzzles at the Palace.

Gun answered gun, and the first organized battle of machines flared into desperate fury. Tymball was an omnipresent figure, shouting, directing, leaping from gun-emplacement to gun-emplacement, firing his own band Tonite defiantly at the Palace.

Under a barrage of the heaviest fire, the Humans charged once more and pierced to the walls as the defenders fell back. An Atomo projectile smashed its way into the central tower and there was a sudden inferno of fire.

That blaze was the funeral pyre of the last of the Lhasinu

in New York. The blackening walls of the palace crumbled in,

in one vast crash; but to the very last, room blazing about him

140

BLACK FRIAR OF THE FLAME

face horribly cut, the Viceroy stood his ground, aiming into the thick of the besieging force. And when

his semi-portable expended the last dregs of its power and expired, he heaved it out the window in a last futile gesture of defiance, and plunged into the burning Hell at his back.

Above the Palace grounds at sunset, with a yet-roaring

furnace as the background, there floated the green flag of in-dependent Earth.

New York was once more Human.

Russell Tymball was a sorry figure when he entered the Memorial once more that night. Clothes in tatters, and bloody from head to foot from the undressed cut on his cheek, he surveyed the carnage about him with sated eyes.

Volunteer squads, occupied in removing the dead and tend-ing to the wounded had not yet succeeded in making more than a dent in the deadly work of the rebellion.

The Memorial was an improvised hospital. There were few wounded, for energy weapons deal death; and of these few, almost none slightly. It was a scene of indescribable confusion, and the moans of the hurt and dying mingled horribly with the distant yells of celebrating war-drunk survivors.

Loara Paul Kane pushed through the crowding attendants to Tymball.

Tell me;-is it over?" His face was haggard.

"The beginning is. The Terrestrial Flag flies over the ruins of the Palace."

"It was horrible! The day has—has—" He shuddered and closed his eyes, "If I had known in advance, I would rather have seen Earth dehumanized and Loarism destroyed."

"Yes, it was bad. But the results might have been much

more dearly bought, and yet have remained cheap at the price. Where's Sanat?"

"In the courtyard—helping with the wounded. We all are.

It—it—" Again his voice failed him.

There was impatience in Tymball's eyes, and he shrugged

weary shoulders, "I'm not a callous monster, but it had to be

done, and as yet it is only the beginning. Today's events

mean little. The uprising has taken place over most of Earth,

but without the fanatic enthusiasm of the rebellion in New

York. The Lhasinu aren't defeated, or anywhere near de-

feated; make no mistake about that Even now the Solar Guard is flashing to Earth, and the forces on the outer planets are being called back. In no time at all, the entire

141

BLACK FRIAR OF THE FLAME

Lhasinuic Empire will converge upon Earth and the reckoning will be a terrible and bloody one. We must have help!”

He grasped Kane by the shoulders and shook him roughly.

“Do you understand? We must have help! Even here in New York the first flush of victory will fade by tomorrow. We must have help!”

“I know,” said Kane tonelessly. “I’ll get Sanat and he can leave today.” He sighed, “If today’s action was any criterion of his power as a catalyst, we may expect great events.”

Sanat climbed into the little two-man cruiser half an hour later and took his seat beside Petri at the controls.

He extended his hand to Kane a last time, “When I come back it will be with a navy behind me.”

Kane grasped the young man’s hand tightly, “We depend upon you, Pilip.” He paused and said slowly, “Good luck, Loara Filip Sanat!”

Sanat flushed with pleasure at the title as he resumed his seat once more. Petri waved and Tymball called out, “Watch out for the Solar Guard!”

The airlock clanged shut, and then, with a coughing roar, the pigmy cruiser was off into the heavens.

Tymball followed it to where it dwindled into a speck and less and then turned to Kane. “All is now in

the hands of Fate. And, Kane, just how was that Changing of the Flame worked? Don't tell me the Flame turned red of itself."

Kane shook his head slowly, "No! That carmine blaze was the result of opening a hidden pocket of strontium salts, originally placed there to impress the Lhasinu in case of need.

The rest was chemistry."

Tymball laughed grimly, "You mean the rest was mob psychology! And the Lhasinu, I think, were impressed—

and how!"

Space itself gave no warning, but the mass-detector buzzed. It buzzed peremptorily and insistently. Petri stiffened in his seat and said, "We're in none of the meteor zones."

Filip Sanat held his breath as the other turned the knob

that rotated the peri-rotor. The star-field in the 'visor shifted

with slow dignity, and then they saw it.

It glinted in the sun like half a tiny, orange football, and

Petri growled, "If they've spotted us, we're sunk."

"Lhasinuic ship?"

"Ship? That's no ship! That's a fifty-thousand ton battle

142

BLACK FRIAR OF THE FLAME

cruiser! What in the Galaxy it's doing here, I don't know.

Tymball said the Patrol had made for Earth."

Sanat's voice was calm, "That one hasn't. Can we outrage it?"

"Fat chance!" Petri's fist clenched white on the G-stick.

"They're coming closer."

The words might have been a signal. The audiomitter jig-gled and the harsh Lhasinuic voice started from a whisper and ^ rose to stridence as the radio beam sharpened, "Fire reverse motors and prepare for boarding!"

Petri released the controls and shot a look at Sanat, "I'm

only the chauffeur. What do you want to do? We haven't the chance of a meteor against the sun—but if you like the gamble—“

“Well,” said Sanat, simply, “we’re not going to surrender, are we?”

The other grinned, as the decelerating rockets blasted, “Not bad for a Loarist! Can you shoot a mounted Tonite?” “I’ve never tried!”

“Well, then, learn how. Grab that little wheel over there and keep your eye on the small ‘visor above. See anything?” Speed was steadily dropping and the enemy ship was ap-proaching.

“Just stars!” \

“All right, rotate the wheel—go ahead, further. Try the other direction. Do you see the ship now?” “Yes! There it is.”

“Good! Now center it. Get it where the hairlines cross, and for the sake of Sol, keep it there. Now I’m going to turn to-ward the lizard scum,” siderockets blasted as he spoke, “and you keep it centered.”

The Lhasinuic ship was bloating steadily, and Petri’s voice descended to a tense whisper, “I’m dropping our screen and lunging directly at her. It’s a gamble. If they’re sufficiently startled, they may drop their screen and shoot; and if they shoot in a hurry, they may miss.”

Sanat nodded silently.

“Now the second you see the purple flash of the Tonite,

pull back on the wheel. Pull back hard; and pull back fast. If

you’re the tiniest trifle late, we’re through.” He shrugged, “It’s

a gamble!”

With that, he slammed the G-stick forward hard and shouted, “Keep it centered!”

Acceleration pushed Sanat back gaspingly, and-the wheel in

143

BLACK FRIAR OF THE FLAME

his sweating hands responded reluctantly to pressure. The orange football wobbled at the center of the visor. He could feel his hands trembling, and that didn't help any. Eyes winced with tension.

The Lhasinuic ship was swelling terribly now, and then, from its prow, a purple sword leaped toward them. Sanat closed his eyes and jerked backwards.

He kept his eyes closed and waited. There was no sound.

He opened them and started to his feet; for Petri, arms akimbo, was laughing down upon him.

"A beginner's own luck," he laughed. "Never held a gun before in his life and knocks out a heavy cruiser in as pretty a pink as I ever saw."

"I hit it?" gasped Sanat.

"Not on the button, but you did disable it. That's good enough. And now, just as soon as we get far enough away from the sun, we're going into hyperspace."

The tall, purple-clad figure standing by the central portview gazed longingly at the silent globe without. It was Earth, huge, gibbous, glorious.

Perhaps his thoughts were just a trifle bitter as he considered the six-month period that had just passed. It had begun with a nova-blaze. Enthusiasm kindled to white heat and spread, leaping the stellar gulfs from planet to planet as fast as the hyper-atomic beam. Squabbling governments, sudden putty before the outraged clamoring of their peoples, outfitted fleets. Enemies of centuries made sudden peace and flew under the same green flag of Earth.

Perhaps it would have been too much to expect this love-feast to continue. While it did the Humans were irresistible, One fleet was not two parsecs from Vega itself; another had captured Luna and hovered one light-second above the Earth, where Tymball's ragged revolutionaries still held on doggedly.

Filip Sanat sighed and turned at the sound of a step. White-haired Ion Smitt of the Lactonian contingent entered.

"Your face tells the story," said Sanat.

Smitt shook his head, "It seems hopeless."

Sanat turned away again, "Did you know that we've got-

ten word from Tymball today? They're fighting on what they

can filch from the Lhasinu. The lizards have captured Buenos

Aires, and all South America seems likely to go under their

heel. They're disheartened—the Tymballists—and disgusted,

and I am, too." He whirled suddenly, "You say that our new

BLACK FRIAR OF THE FLAME

needle-ships insure victory. Then, why don't we attack?"

"Well, for one thing," the grizzled soldier planted one

booted leg on the chair next to him, "the reinforcements from Santanni are not coming."

Sanat started, "I thought they were on their way. What happened?"

"The Santannian government has decided its fleet is re-quired for home defense." A wry smile accompanied his words.

"What home defense? Why, the Lhasinu are five hundred parsecs away from them."

Smitt shrugged, "An excuse is an excuse and need not make sense. I didn't say that was the real reason."

Sanat brushed his hair back and his fingers strayed to the

yellow sun upon his shoulder, "Even so! We could still fight,

with over a hundred ships. The enemy outnumber us two to

one, but with the needle-ships and with Lunar Base at our

backs and the rebels harassing them in the rear—" He fell into a brooding reverie.

"You won't get them to fight, Filip. The Trantorian squad-

ron favors retreat." His voice was suddenly savage, "Of the

entire fleet, I can trust only the twenty ships of my own

squadron—the Lactonian. Oh, Filip, you don't know the dirt

of it—you never have known. You've won the people to the

Cause, but you've never won the governments. Popular

opinion forced them in, but now that they are in, they're in only for what they can get."

"I can't believe that, Smitt. With victory in their grasp—" "Victory? Victory for whom? It is exactly over that bone that the planets are squabbling. At a secret convention of the nations, Santanni demanded control of all the Lhasinuic worlds of the Sirius sector—none of which have been recog-nized as yet—and was refused. Ah, you didn't know that Consequently, she decides that she must take care of her home defense, and withdraws her various squadrons."

Filip Sanat turned away in pain, but Ion Smitt's voice ham-mered on, hard, unmerciful.

“And then Trantor realizes that she hates and fears Santanni more than ever she did the Lhasinu and any day now she will withdraw her fleet to refrain from crippling them while her enemy’s ships remain quietly and safely in port. The Human nations are falling apart,” the soldier’s fist came down upon the table, “like rotten cloth. It was a fool’s dream to

145

BLACK FRIAR OF THE FLAME

think that the selfish idiots could ever unite for any worthy purpose long.”

Sanat’s eyes were suddenly calculating slits, “Wait a while! Things will yet work out all right, if we can only manage to seize control of Earth. Earth is the key to the whole situation.” His fingers drummed upon the table edge. “Its capture would provide the vital spark. It would drum up Human enthusiasm, now lagging, to the boiling point, and the Governments,—well, they would either have to ride the wave, or be dashed to pieces.”

“I know that. If we fought today, you have a soldier’s word we’d be on Earth tomorrow. They realize it, too, but they won’t fight”

“Then—then they must be made to fight. The only way they can be made to fight is to leave no alternative. They won’t fight now, because they can retreat whenever they wish, but if—“

He suddenly looked up, face aglow, “You know, I haven’t

been out of the Loarist tunic in years. Do you suppose your clothes will fit me?"

Ion Smitt looked down upon his ample girth and grinned, "Well, they might not fit you, but they'll cover you all right.

What are you thinking of doing?"

"I'll tell you. It's a terrible chance, but— Relay the following orders immediately to the Lunar Base garrison—"

The admiral of the Lhasinuic Solar squadron was a war-scarred veteran who hated two things above all else: Humans and civilians. The combination, in the person of the tall, slender Human in ill-fitted clothing, put a scowl of dislike upon his face.

Sanat wriggled in the grasp of the two Lhasinuic soldiers.

"Tell them to let go," he cried in the Vegan tongue. "I am unarmed."

"Speak," ordered the admiral in English. "They do not understand your language^'" Then, in Lhasinuic to the soldiers,

"Shoot when I give the word."

Sanat subsided, "I came to discuss terms."

"I judged as much when you hoisted the white flag. Yet you come in a one-man cruiser from the night side of your own fleet, like a fugitive. Surely, you cannot speak for your fleet."

"I speak for myself."

"Then I give you one minute. If I am not interested by the end of that time, you will be shot." His expression was stony.

146

BLACK FRIAR OF THE FLAME

Sanat tried once more to free himself, with little success.

His captors tightened their grips.

“Your situation,” said the Earthman, “is this. You can’t attack the Human squadron as long as they control Lunar Base, without serious damage to your own fleet, and you can’t risk that with a hostile Earth behind you. At the same time, I happen to know that the order from Vega is to drive the Humans from the Solar System at all costs, and that the Em-peror dislikes failures.”

“You have ten seconds left,” said the admiral, but tell-tale red spots appeared above his eyes.

“All right, then,” came the hurried response, “how’s this?”

What if I offer you the entire Human Fleet caught in a trap?”

There was silence. Sanat went on, “What if I show you how you can take over Lunar Base, and surround the Humans?”

“Go on!” It was the first sign of interest the admiral had permitted himself.

“I am in command of one of the squadrons and I have

certain powers. If you’ll agree to our terms, we can have the

Base deserted within twelve hours. Two ships,” the Human

raised two fingers impressively, “will take it”

“Interesting,” said the Lhasinu, slowly, “but your motive?”

What is your reason for doing this?”

Sanat thrust out a surly under-lip, “That would not interest you. I have been ill-treated and deprived of my rights. Be-sides,” his eyes glittered, “Humanity’s is a lost cause, anyway. For this I shall expect payment—ample payment. Swear to that, and the fleet is yours.”

The admiral glared his contempt “There is a Lhasinuic proverb: The Human is steadfast in nothing but his treachery. Arrange your treason, and I shall repay. I swear by the word of a Lhasinuic soldier. You may return to your ships.”

With a motion, he dismissed the soldiers and then stopped them at the doorway, “But remember, I risk two ships. They mean little as far as my fleet’s strength is concerned, but, nev-ertheless, if harm comes to a Lhasinuic head through Human treachery—“ The scales on his head were stiffly erect and Sanat’s eyes dropped beneath the other’s cold stare.

For a long while, the admiral sat alone and motionless. Then he spat ‘This Human filth! It is a disgrace even to fight them!’”

The Flagship of the Human fleet lazed one hundred miles

above Luna, and within it the captains of the Squadrons sat

BLACK FRIAR OF THE FLAME

about the table and listened to Ion Smitt's shouted indictment.

"—I tell you your actions amount to treason. The battle off Vega is progressing, and if the Lhasinu win, their Solar squadron will be strengthened to the point where we must retreat. And if the Humans win, our treachery here exposes their flank and renders the victory worthless. We can win, I tell you. With these new needle-ships—"

The sleepy-eyed Trantorian leader spoke up. "The needle-ships have never been tried before. We cannot risk a major battle on an experiment, when the odds are against us."

"That wasn't your original view, Porcut. You—yes, and the rest of you as well—are a cowardly traitor. Cowards!

Cravens!"

A chair crashed backwards as one arose in anger and others

followed. Loara Filip Sanat, from his vantage-point at the central port, from where he watched the bleak landscape of Luna below with devouring concentration, turned in alarm. But Jem Porcut raised a gnarled hand for order.

"Let's stop fencing," he said. "I represent Trantor, and I take orders only from her. We have eleven ships here, and Space knows how many at Vega. How many has Santanni got? None! Why is she keeping them at home? Perhaps to take advantage of Trantor's preoccupation. Is there anyone who hasn't heard of her designs against us? We're not going to destroy our ships here for her benefit. Trantor will not fight!

My division leaves tomorrow! Under the circumstances, the

Lhasinu will be glad to let us go in peace."

Another spoke up, "And Poritta, too. The treaty of Dra-conis has hung like neutronium around our neck these twenty years. The imperialist planets refuse revision, and we will not fight a war which is to their interest only."

One after another, surly exclamations dinned the perpetual refrain, “Our interests are against it! We will not fight!”

And suddenly, Loara Filip Sanat smiled. He had turned away from Luna and laughed at the snarling arguers.

“Sirs,” he said, “no one is leaving.”

Ion Smitt sighed with relief and sank back in his chair.

“Who will stop us?” asked Porcut with disdain.

“The Lhasinu! They have just taken Lunar Base and we are surrounded.”

The room was a babble of dismay. Shouting confusion held sway and then one roared above the rest, “What of the garri-son?”

“The garrison had destroyed the fortifications and evacuated

148

BLACK FRIAR OF THE FLAME

hours before the Lhasinu took over. The enemy met with no resistance.”

The silence that followed was much more terrifying than the cries that had preceded. “Treason,” whispered someone.

“Who is at the bottom of this?” One by one they ap-proached Sanat. Fists clenched. Faces flushed. “Who did this?”

“I did,” said Sanat, calmly.

A moment of stunned disbelief. “Dog!” “Pig of a Loarist!”

“Tear his guts out!”

And then they shrank back at the pair of Tonite guns that appeared in Ion Smitt’s fists. The burly Lactonian stepped be-fore the younger man.

“I was in on this, too,” he snarled. “You’ll have to fight now. It is necessary to fight fire with fire sometimes, and Sanat fought treason with treason.”

Jem Porcut regarded his knuckles carefully and suddenly chuckled, “Well, we can’t wriggle out now, so we might as well fight. Except for orders, I wouldn’t mind taking a crack at the damn lizards.”

The reluctant pause was followed by shamefaced shouts—proof-positive of the willingness of the rest.

In two hours, the Lhasinuic demand for surrender had been scornfully rejected and the hundred ships of the Human squadron spread outwards on the expanding surface of an imaginary sphere—the standard defense formation of a sur-rounded fleet—and the Battle for Earth was on.

A space-battle between approximately equal forces resembles in almost every detail a gigantic fencing match in which controlled shafts of deadly radiation are the rapiers and impermeable walls of etheric inertia are the shields.

The two forces advance to battle and maneuver for position. Then the pale purple of a Tonite beam lashes out in a blaze of fury against the screen of an enemy ship, and in so doing, its own screen is forced to blink out. For that one instant it is vulnerable and is a perfect target for an enemy ray, which, when loosed, renders its ship open to attack for the moment. In widening circles, it spreads. Each unit of the fleet, combining speed of mechanism with speed of human reaction, attempts to slip through at the crucial moment and yet maintain its own safety.

Loara Filip Sanat knew all this and more. Since his encounter with the battle cruiser on the way out from Earth, he

149

BLACK FRIAR OF THE FLAME

had studied space war, and now, as the battle fleets fell into line, he felt his very fingers twitch for action.

He turned and said to Smitt, “I’m going down to the big guns.”

Smitt’s eye was on the grand ‘visor, his hand on the ether-wave sender, “Go ahead, if you wish, but don’t get in the way.”

Sanat smiled. The captain’s private elevator carried him to the gun levels, and from there it was five hundred feet through an orderly mob of gunners and engineers to Tonite One. Space is at a premium in a battleship. Sanat could feel the crampedness of the room in which individual Humans dove-tailed their work smoothly to create the gigantic machine that was a giant dreadnaught.

He mounted the six steep steps to Tonite One and motioned the gunner away. The gunner hesitated; his eye fell upon the

purple tunic, and then he saluted and backed reluctantly down the steps.

Sanat turned to the co-ordinator at the gun's visiplat, "Do • you mind working with me? My speed of reaction has been tested and grouped 1-A. I have my rating card, if you'd care to see it."

The co-ordinator flushed and stammered, "No, sir! It's an honor to work with you, sir."

The amplifying system thundered, "To your stations!" and a deep silence fell, in which the cold purr of machinery sounded its ominous note.

Sanat spoke to the co-ordinator in a whisper, "This gun covers a full quadrant of space, doesn't it?" "Yes, sir."

"Good, see if you can locate a dreadnaught with the sign of a double sun in partial eclipse."

There was a long silence. The co-ordinator's sensitive hands were on the Wheel, delicate pressure turning it this way and that, so that the field in view on the visiplat shifted. Keen eyes scanned the ordered array of enemy ships.

"There it is," he said. "Why, it's the flagship."

"Exactly! Center that ship!"

As the Wheel turned, the space-field reeled, and the enemy flagship wobbled toward the point where the hairlines crossed.

The pressure of the co-ordinator's fingers became lighter and more expert.

"Centered!" he said. Where the hairlines crossed the tiny oval globe remained impaled.

150

BLACK FRIAR OF THE FLAME

"Keep it that way!" ordered Sanat, grimly. "Don't lose it for a second as long as it stays in our quadrant. The enemy admiral is on that ship and we're going to get him, you and I."

The ships were getting within range of each other and Sanat felt tense. He knew it was going to be

close—very close. The Humans had the edge in speed, but the Lhasinu were two to one in numbers.

A flickering beam shot out, another, ten more.

There was a sudden blinding flash of purple intensity!

“First hit,” breathed Sanat. He relaxed. One of the enemy ships drifted off helplessly, its stem a mass of fused and glowing metal.

The opposing ships were not at close grips. Shots were being exchanged at blinding speed. Twice, a purple beam showed at the extreme limits of the visiplat and Sanat realized with a queer sort of shiver down his spine that it was one of the adjacent Tonites of their own ship that was firing.

The fencing match was approaching a climax. Two flashes blazed into being, almost simultaneously, and Sanat groaned. One of the two had been a Human ship. And three times there came that disquieting hum as Atomo-engines in the lower level shot into high gear—and that meant that an enemy beam directed at their own ship had been stopped by the screen.

And, always, the co-ordinator kept the enemy flagship centered. An hour passed; an hour in which six Lhasinu and four Human ships had been whiffed to destruction; an hour in which the Wheel turned fractions of a degree this way, that way; in which it swivelled on its universal socket mere hair-lines in half a dozen directions.

Sweat matted the co-ordinator’s hair and got into his eyes;

his fingers half-lost all sensation, but that flagship never left the ominous spot where the hairlines crossed.

And Sanat watched; finger on trigger—watched—and waited.

Twice the flagship had glowed into purple luminosity, its guns blazing and its defensive screen down; and twice Sanat’s finger had quivered on the trigger and refrained. He hadn’t been quick enough.

And then Sanat rammed it home and rose to his feet tensely.

The co-ordinator yelled and dropped the Wheel.

In a gigantic funeral pyre of purple-hued energy, the flag-ship with the Lhasinuic Admiral inside had ceased to exist.

Sanat laughed. His hand went out, and the co-ordinator’s

BLACK FRIAR OF THE FLAME

came to meet it in a firm grasp of triumph.

But the triumph did not last long enough for the co-ordina-

tor to speak the first jubilant words that were welling up in

his throat, for the visiplat burst into a purple bombshell as

five Human ships detonated simultaneously at the touch of deadly energy shafts.

The amplifiers thundered, “Up screens! Cease firing! Ease into Needle formation!”

Sanat felt the deadly pall of uncertainty squeeze his throat.

He knew what had happened. The Lhasinu had finally managed to set up their big guns on Lunar Base; big guns with three times the range of even the largest ship guns—big guns that could pick off Human ships with no fear of reprisal.

And so the fencing match was over, and the real battle was to start. But it was to be a real battle of a type never before fought, and Sanat knew that that was the thought in every man’s mind. He could see it in their grim expressions and feel it in their silence.

It might work! And it might not!

The Earth squadron had resumed its spherical formation and drifted slowly outwards, its offensive batteries silent. The Lhasinu swept in for the kill. Cut off from power supply as the Earthmen were, and unable to retaliate with the gigantic guns of the Lunar batteries commanding near-by space, it seemed only a matter of time before either surrender or annihilation.

The enemy Tonite beams lashed out in continuous blasts of energy, and tortured screens on Human ships sparked and fluoresced under the harsh whips of radiation.

Sanat could hear the buzz of the Atomo-engines rise to a protesting squeal. Against his will, his eye flicked to the energy gauge, and the quivering needle sank as he watched, moving down the dial at perceptible speed.

The co-ordinator licked dry lips, “Do you think we’ll make it, sir?”

“Certainly!” Sanat was far from feeling his expressed confidence. “We need hold out for an hour—provided they don’t fall back.”

And the Lhasinu didn’t. To have fallen back would have

meant a thinning of the lines, with a possible break-through
and escape on the part of the Humans.

The Human ships were down to crawling speed—scarcely
above a hundred miles an hour. Idling along, they crept up

BLACK FRIAR OF THE FLAME

the purple beams of energy, the imaginary sphere increasing
in size, the distance between the opposing forces ever narrow-ing.

But inside the ship, the gauge-needle was dropping rapidly,
and Sanat's heart dropped with it. He crossed the gun level to
where hard-bitten soldiers waited at a gigantic and gleaming
lever, in anticipation of an order that had to come soon—or never.

The distance between opponents was now only a matter of one or two miles—almost contact from the
viewpoint of space warfare—and then that order shot over the shielded etheric beams from ship to ship.

It reverberated through the gun level:

“Out needles!”

A score of hands reached for the lever, Sanat's among them, and jerked downwards. Majestically, the
lever bent in a curving arc to the floor and as it did so, there was a vast scraping noise and a sharp thud
that shook the ship. The dreadnaught had become a “needle ship!” At the prow, a section of armor plate
had slid aside and a glittering shaft of metal had lunged outward viciously. One hundred feet long, it
narrowed gracefully from a base ten feet in diameter to a needle-sharp diamond point. In the sun-light,
the chrome-steel of the shaft gleamed in flaming splendor.

And every other ship of the Human squadron was likewise
equipped. Each had become ten, fifteen, twenty, fifty thousand tons of driving rapier.

Swordfish of space

Somewhere in the Lhasinuic fleet, frantic orders must have
been issued. Against this Oldest of all naval tactics—old even
in the dim dawn of history when rival triremes had maneu-
vered and rammed each other to destruction with pointed
prows—the super-modern equipment of a space-fleet has no defense.

Sanat forceol his way to the visiplat and strapped himself into an anti-acceleration seat, and he felt the springs absorb the backward jerk as the ship sprang into sudden acceleration. He didn't bother with that, though. He wanted to watch the battle! There wasn't one here, nor anywhere in the Galaxy, that risked what he did. They risked only their lives; and he risked a dream that he had, almost single-handed, created out of nothing.

BLACK FRIAR OF THE FLAME

He had taken an apathetic Galaxy and driven it into revolt against the reptile. He had taken an Earth on the point of destruction and dragged it from the brink, almost unaided. A Human victory would be a victory for Loara Filip Sanat and no one else.

He, and Earth, and the Galaxy were now lumped into one and thrown into the scale. And against it was weighed the outcome of this last battle, a battle hopelessly lost by his own purposeful treachery, unless the needles won.

And if they lost, the gigantic defeat—the ruin of Humanity was also his.

The Lhasinuic ships were jumping aside, but not fast enough. While they were slowly gathering momentum and drifting away, the Human ships had cut the distance by three-quarters. On the screen, a Lhasinuic ship had grown to colossal proportions. Its purple whip of energy had gone out as

every ounce of power had gone into a man-killing attempt at rapid acceleration.

And nevertheless its image grew and the shining point that could be seen at the lower end of the screen aimed like a glittering javelin at its heart.

Sanat felt he could not bear the tension. Five minutes and he would take his place as the Galaxy's greatest hero—or its greatest traitor! There was a horrible, unbearable pounding of blood in his temples.

Then it came.

Contact!!

The screen went wild in a chaotic fury of twisted metal. The anti-acceleration seats shrieked as springs absorbed the shock. Things cleared slowly. The screenview veered wildly as the ship slowly steadied. The ship's needle had broken, the jagged stump twisted awry, but the enemy vessel it had pierced was a gutted wreck.

Sanat held his breath as he scanned space. It was a vast sea ; of wrecked ships, and on the outskirts tattered remnants of the enemy were in flight, with Human ships in pursuit.

There was the sound of colossal cheering behind him and a pair of strong hands on his shoulders.

He turned. It was Smitt—Smitt, the veteran of five wars, with tears in his eyes.

"Filip," he said, "we've won. We've just received word from Vega. The Lhasinuic Home Fleet has been smashed—

and also with the needles. The war is over, and we've woo

You've won, Filip! You!"

154

BLACK FRIAR OF THE FLAME

His grip was painful, but Loara Filip Sanat did not mind that. For a single, ecstatic moment, he stood motionless, face transfigured.

Earth was free! Humanity was saved!

THE END

For some reason, possibly because of the awful title, for which I emphatically disclaim responsibility, "Black Friar of the Flame" is taken as the quintessence of my early in-competence. At least, fans who come across a copy think they can embarrass me by referring to it.

Well, it isn't good, I admit, but it has its interesting points. For one thing, it is an obvious precursor to my successful "Foundation" series. In "Black Friar of the Flame," as in the "Foundation" series, human beings occupy many planets;

and two worlds mentioned in the former, Trantor and San-tanni, also play important roles in the latter. (Indeed, the first of the "Foundation" series was to appear only a couple of months after "Black Friar of the Flame," thanks to the delay in selling the latter.)

Furthermore, there is also a strong suggestion in "Black Friar of the Flame" of my first book-length novel, *Pebble in the Sky*, which was to appear eight years later. In both, the situation I pictured on Earth was inspired by that of Judea under the Romans. The climactic battle in "Black Friar of the Flame," however, was inspired by that of the Battle of Salamis, the great victory of the Greeks over the Persians.

(In telling future-history I always felt it wisest to be guided

by past-history. This was true in the "Foundation" series, too.)

"Black Friar of the Flame" cured me forever, by the way, of attempting repeated revisions. There may well be a connection between the consensus that the story is a poor one and the fact that it was revised six times. I know that there are writers who revise and revise and revise, polishing everything to a high gloss, but I can't do that.

It is my habit now to begin by typing a first draft without

an outline. I compose freely on the typewriter though I

am frequently questioned about this by readers who seem

to think an initial draft can be only in pencil. Actually,

BLACK FRIAR OF THE FLAME

writing by hand begins to hurt my wrist after fifteen minutes or so, is very slow, and is hard to read. I can type, on the other hand, ninety words a minute and keep that up for hours without difficulty. As for outlines, I tried one once and it was disastrous, like trying to play the piano from inside a straitjacket.

Having completed the first draft, I go over it and correct

it in pen and ink. I then retype the whole thing as the final copy. I revise no more, of my own volition. If an editor asks for a clearly defined revision of a minor nature, with the philosophy of which I agree, I oblige. A request for a major, top-to-bottom revision, or a second revision after the first, is another matter altogether. Then I do refuse.

This is not out of arrogance or temperament. It is just that too large a revision, or too many revisions, indicate that the piece of writing is a failure. In the time it would take to salvage such a failure, I could write a new piece altogether and have infinitely more fun in the process. (Doing a revision is something like chewing used gum.) Failures are therefore put to one side and held for possible sale elsewhere—for what is a failure to one editor is not necessarily a failure to another.

About the time I was working on “Black Friar of the

Flame” I was becoming enmeshed in fan activities. I had

joined an organization called “The Futurians,” which con-

tained a group of ardent science fiction readers, almost all

of whom were to become important in the field as writers or

editors or both. Included among them were Frederik Pohl,

Donald A. Wollheim, Cyril Kornbluth, Richard Wilson,

Damon Knight, and so on.

As I had occasion to say before, I became particularly

friendly with Pohl. During the spring and summer of 1939,

he visited me periodically, looking over my manuscripts and

announcing that I had the “best bunch of rejected stories”

he had ever seen.

The possibility began to arise that he might be my agent.

He was no older than myself, but he had a great deal more

practical experience with editors and knew a great deal

more about the field. I was tempted, but was afraid this

156

BLACK FRIAR OF THE FLAME

might mean I would not be allowed to see Campbell any more, and I valued my monthly visits with him too much to risk it.

In May 1939 I wrote a story I called “Robbie,” and on the twenty-third of that month I submitted it to Campbell. It was the first robot story I had ever written and it contained the germ of what later came to be known as the “Three Laws of Robotics.” Fred read my carbon and at once said it was a good story but that Campbell would reject it because it had a weak ending plus other shortcomings. Campbell did reject it on June 6, for precisely the reasons Pohl had given me.

I was very impressed by that, and any hesitation I had with respect to letting him represent me vanished—but I specified that his agentship must be confined to editors other than Campbell.

I gave him “Robbie” after the rejection, but he didn’t

succeed in selling it either, though he even submitted it to

a British science fiction magazine (something I would my-

self never have thought of doing). In October 1939, how-

ever, he himself became editor of Astonishing Stories and

Super Science Stories, and he therefore ceased being my

agent.*

On March 25, 1940, however, he did as editor what he

couldn’t do as agent. He placed the story—by taking it him-self.

It appeared in Super Science Stories under a changed title. (Pohl was always changing titles.) He called the story “Strange Playfellow,” a miserable choice, in my opinion. Eventually the story was included as the first of the nine connected “positronic robot” series that made up my book *I, Robot*. In the book, I restored the title to the original “Robbie,” and it has appeared as “Robbie” in every form in which the story has been published since.

Fifteen years later, a daughter was born to me. She was

A decade later he became my agent again for a few years. I never enjoyed being represented, however, and except for Pohl on these two occasions, I have never had an agent, despite the vast and complicated nature of my writing commitments. Nor do I intend ever having one.

BLACK FRIAR OF THE FLAME

named Robyn and I call her Robbie. I have been asked more than once whether there is a connection. Did I de-liberately give her a name close to “robot” because I made such a success of my robot stories? The answer is a flat negative. The whole thing is pure coincidence.

One more thing— In the course of my meeting with Campbell on June 6, 1939 (the one in which he rejected “Rob-bie”), I met a by then quite well established science fiction writer, L. Sprague de Camp. That started a close friendship —perhaps my closest within the science fiction fraternity—• that has continued to this day.

In June 1939 I wrote “Half-Breed” and decided to give Fred Pohl a fair chance. I did not submit it to Campbell, but gave it to Pohl directly to see what he could do with it. He tried Amazing, which rejected it. So I took it back and tried Campbell in the usual direct fashion. Campbell rejected it,

too.

When Pohl became an editor, however, he announced the

fact to me (on October 27, 1939) by saying that he was taking “Half-Breed.” In later months he also took first “Robbie,” then “The Callistan Menace.” He bought seven stories from me altogether during his editorial tenure.

Half-Breed

Jefferson Scanlon wiped a perspiring brow and took a deep breath. With trembling finger, he reached for the switch—and changed his mind. His latest model, representing over three months of solid work, was very nearly his last hope. A good part of the fifteen thousand dollars he had been able to borrow was in it. And now the closing of a switch would show whether he won or lost

Scanlon cursed himself for a coward and grasped the switch

firmly. He snapped it down and flicked it open again with one swift movement. And nothing happened—his eyes, strain though they might, caught no flash of surging power. The pit of his stomach froze, and he closed the switch again, savagely, and left it closed. Nothing happened: the machine, again, was a failure.

He buried his aching head in his hands, and groaned. “Oh, God! It should work—it should. My math is right and I’ve produced the fields I want. By every law of science, those fields should crack the atom.” He arose, opening the useless switch, and paced the floor in deep thought.

His theory was right. His equipment was cut neatly to the pattern of his equations. If the theory was right, the equipment must be wrong. But the equipment was right, so the theory must... . “I’m getting out of here before I go crazy,” he said to the four walls. He snatched his hat and coat from the peg behind the door

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HALF-BREED

and was out of the house in a whirlwind of motion, slamming the door behind him in a gust of fury.

Atomic power. Atomic power 1 Atomic power!

The two words repeated themselves over and over again, singing a monotonous, maddening song in his brain. A siren song! It was luring him to destruction; for this dream he had given up a safe and comfortable professorship at M.I.T. For it, he had become a middle-aged man at thirty—the first flush

of youth long gone,—an apparent failure.

And now his money was vanishing rapidly. If the love of money is the root of all evil, the need of money is most certainly the root of all despair. Scanlon smiled a little at the thought—rather neat.

Of course, there were the beautiful prospects in store if he could ever bridge the gap he had found between theory and practice. The whole world would be his—Mars too, and even the unvisited planets. All his. All he had to do was to find out what was wrong with his mathematics—no, he'd checked that, it was in the equipment. Although— He groaned aloud once more.

The gloomy train of his thoughts was broken as he suddenly became aware of a tumult of boyish shouts not far off.

Scanlon frowned. He hated noise especially when he was in the dumps.

The shouts became louder and dissolved into scraps of words, “Get him, Johnny!” “Whee—look at him run!”

A dozen boys careened out from behind a large frame building, not two hundred yards away, and ran pell-mell in Scanlon's general direction.

In spite of himself, Scanlon regarded the yelling group curiously. They were chasing something or other, with the heartless glee of children. In the dimness he couldn't make out just what it was. He screened his eyes and squinted. A sudden motion and a lone figure disengaged itself from the crowd

and ran frantically.

Scanlon almost dropped his solacing pipe in astonishment,

for the fugitive was a Tweenie—an Earth-Mars half-breed.

There was no mistaking that brush of wiry, dead-white hair

that rose stiffly in all directions like porcupine-quills. Scanlon

marvelled—what was one of those things doing outside an

asylum?

The boys had caught up with the Tweenie again, and the

fugitive was lost to sight. The yells increased in volume,

160

HALF-BREED

Scanlon, shocked, saw a heavy board rise and fall with a thud. A profound sense of the enormity of his own actions in stand-ing idly by while a helpless creature was being hounded by a crew of gamins came to him, and before he quite realized it he was charging down upon them, fists waving threateningly in the air.

“Seat, you heathens! Get out of here before I—“ the point of his foot came into violent contact with the seat of the near-est hoodlum, and his arms sent two more tumbling.

The entrance of the new force changed the situation con-siderably. Boys, whatever their superiority in numbers, have an instinctive fear of adults,—especially such a shouting, ferocious adult as Scanlon appeared to be. In less time than it took Scanlon to realize it they were gone, and he was left alone with the Tweenie, who lay half-prone, and who between panting sobs cast fearful and uncertain glances at his de-liverer.

“Are you hurt?” asked Scanlon gruffly.

“No, sir.” The Tweenie rose unsteadily, his high silver crest of hair swaying incongruously. “I twisted my ankle a bit, but I can walk. I’ll go now. Thank you very much for helping me.”

“Hold on! Wait!” Scanlon’s voice was much softer, for it dawned on him that the Tweenie, though almost full-grown, was incredibly gaunt; that his clothes were a mere mass of dirty rags; and that there was a heart-rending look of utter weariness on his thin face.

“Here,” he said, as the Tweenie turned towards him again, “Are you hungry?”

The Tweenie’s face twisted as though he were fighting a battle within himself. When he spoke it was in a low, em-barrassed voice. “Yes—I am, a little.”

“You look it. Come with me to my house,” he jerked a thumb over his shoulder. “You ought to eat. Looks like you can do with a wash and a change of clothes, too.” He turned and led the way.

He didn’t speak again until he had opened his front door and entered the hall. “I think you’d better take a bath first, boy. There’s the bathroom. Hurry into it and lock the door before Beulah sees you.”

His admonition came too late. A sudden, startled gasp caused Scanlon to whirl about, the picture of guilt, and the Tweenie to shrink backwards into the shadow of a hat-rack.

Beulah, Scanlon’s housekeeper, scurried towards them, her

161

HALF-BREED

mild face aflame with indignation and her short, plump body exuding exasperation at every pore.

“Jefferson Scanlon! Jeffersoni!” She glared at the Tweenie with shocked disgust. “How can you bring such a thing into this house! Have you lost your sense of morals?”

The poor Tweenie was washed away with the flow of her

anger, but Scanlon, after his first momentary panic, collected

himself. “Come come, Beulah. This isn’t like you. Here’s a

poor fellow-creature, starved, tired, beaten by a crowd of

boys, and you have no pity for him. I’m really disappointed

in you, Beulah.”

“Disappointed!” sniffed the housekeeper, though touched. “Because of that disgraceful thing. He should be in an institu-tion where they keep such monsters!”

“All right, we’ll talk about it later. Go ahead, boy, take

your bath. And, Beulah, see if you can’t rustle up some old

clothes of mine.”

With a last look of disapproval, Beulah flounced out of the

room.

“Don’t mind her, boy,” Scanlon said when she left “She was my nurse once and she still has a sort of proprietary interest in me. She won’t harm you. Go take your bath.”

The Tweenie was a different person altogether when he finally seated himself at the dining-room table. Now that the layer of grime was removed, there was something quite hand-some about his thin face, and his high, clear forehead gave him a markedly intellectual look. His hair still stood erect, a foot tall, in spite of the moistening it had received. In the light its brilliant whiteness took an imposing dignity, and to Scanlon it seemed to lose all ugliness.

“Do you like cold chicken?” asked Scanlon.

“Oh, yes!” enthusiastically.

“Then pitch in. And when you finish that, you can have more. Take anything on the table.”

The Tweenie’s eyes glistened as he set his jaws to work;

and, between the two of them, the table was bare in a few minutes.

“Well, now,” exclaimed Scanlon when the repast had reached its end, “I think you might answer some questions now. What’s your name?”

“They called me Max.”

“Ah! And your last name?”

The Tweenie shrugged his shoulders. “They never called

HALF-BREED

me anything but Max—when they spoke to me at all. I don’t suppose a half-breed needs a name.” There was no mistaking the bitterness in his voice.

“But what were you doing running wild through the country? Why aren’t you where you live?”

“I was in a home. Anything is better than being in a home

even the world outside, which I had never seen. Especially after Tom died.”

“Who was Tom, Max?” Scanlon spoke softly. “He was the only other one like me. He was younger—fifteen—but he died.” He looked up from the table, fury in his eyes. “They killed him, Mr. Scanlon. He was such a young fellow, and so friendly. He couldn’t stand being alone the way I could. He needed friends and fun, and—all he had was me. No one else would speak to him, because he was a half-breed.

And when he died I couldn’t stand it anymore either. I left”

“They meant to be kind. Max. You shouldn’t have done that. You’re not like other people; they don’t understand you. And they must have done something for you. You talk as though you’ve had some education.”

“I could attend classes, all right,” he assented gloomily. “But I had to sit in a corner away from all the others. They let me read all I wanted, though, and I’m thankful for that.”

“Well, there you are. Max. You weren’t so badly off, were you?”

Max lifted his head and stared at the other suspiciously.

“You’re not going to send me back, are you?” He half rose, as

though ready for instant flight

Scanlon coughed uneasily. “Of course, if you don’t want to

go back I won’t make you. But it would be the best thing for

you.”

“It wouldn’t!” Max cried vehemently.

“Well, have it your own way. Anyway, I think you’d better go to sleep now. You need it. We’ll talk in the morning.”

He led the still suspicious Tweenie up to the second floor,

and pointed out a small bedroom. “That’s yours for the night

I’ll be in the next room later on, and if you need anything just

shout.” He turned to leave, then thought of something. “But

remember, you mustn’t try to run away during the night”

“Word of honor. I won’t”

Scanlon retired thoughtfully to the room he called his study.

He lit a dim lamp and seated himself in a worn armchair. For

ten minutes he sat without moving, and for the first time in

HALF-BREED

six years thought about something besides his dream of atomic power.

A quiet knock sounded, and at his grunted acknowledgment Beulah entered. She was frowning, her lips pursed. She planted herself firmly before him.

“Oh, Jefferson! To think that you should do this! If your dear mother knew...”

“Sit down, Beulah,” Scanlon waved at another chair, “and don’t worry about my mother. She wouldn’t have minded.”

“No. Your father was a good-hearted simpleton, too. You’re just like him, Jefferson. First you spend all your money on silly machines that might blow the house up any day—and now you pick up that awful creature from the streets. . . . Tell me, Jefferson,” there was a solemn and fearful pause, “are you thinking of keeping it?”

Scanlon smiled moodily. “I think I am, Beulah. I can’t very well do anything else.”

A week later Scanlon was in his workshop. During the night before, his brain, rested by the change in the monotony brought about by the presence of Max, had thought of a possible solution to the puzzle of why his machine wouldn’t work. Perhaps some of the parts were defective, he thought. Even a very slight flaw in some of the parts could render the machine inoperative.

He plunged into work ardently. At the end of half an hour the machine lay scattered on his workbench, and Scanlon was sitting on a high stool, eying it disconsolately.

He scarcely heard the door softly open and close. It wasn’t until the intruder had coughed twice that the absorbed inventor realized another was present.

“Oh—it’s Max.” His abstracted gaze gave way to recognition. “Did you want to see me?”

“If you’re busy I can wait, Mr. Scanlon.” The week had not removed his shyness. “But there were a lot of books in my room. . . .”

“Books? Oh, I’ll have them cleaned out, if you don’t want them. I don’t suppose you do,—they’re mostly textbooks, as I remember. A bit too advanced for you just now.”

“Oh, it’s not too difficult,” Max assured him. He pointed to a book he was carrying. “I just wanted you to explain a bit here in Quantum Mechanics. There’s some math with Integral Calculus that I don’t quite understand. It bothers me. Here—wait till I find it.”

164

HALF-BREED

He ruffled the pages, but stopped suddenly as he became aware of his surroundings. “Oh say—are you breaking up your model?”

The question brought the hard facts back to Scanlon at a bound. He smiled bitterly. “No, not yet. I just thought there might be something wrong with the insulation or the connections that kept it from functioning. There isn’t—I’ve made a mistake somewhere.”

“That’s too bad, Mr. Scanlon.” The Tweenie’s smooth brow wrinkled mournfully.

“The worst of it is that I can’t imagine what’s wrong. I’m positive the theory’s perfect—I’ve checked every way I can.

I’ve gone over the mathematics time and time again, and each

time it says the same thing. Space-distortion fields of such and

such an intensity will smash the atom to smithereens. Only they don’t.”

“May I see the equations?”

Scanlon gazed at his ward quizzically, but could see nothing in his face other than the most serious interest. He shrugged his shoulders. “There they are—under that ream of yellow paper on the desk. I don’t know if you can read them, though.

I’ve been too lazy to type them out, and my handwriting is pretty bad.”

Max scrutinized them carefully and flipped the sheets one by one. “It’s a bit over my head, I guess.”

The inventor smiled a little. “I rather thought they would be. Max.”

He looked around the littered room, and a sudden sense of anger came over him. Why wouldn’t the thing work? Abruptly he got up and snatched his coat. “I’m going out of here. Max,” he said. “Tell Beulah not to make me anything hot for lunch. It would be cold before I got back.”

It was afternoon when he opened the front door, and hunger was sharp enough to prevent him from realizing with a puzzled start that someone was at work in his laboratory.

There came to his ears a sharp buzzing sound followed by a

momentary silence and then again the buzz which this time

merged into a sharp crackling that lasted an instant and was gone.

He bounded down the hall and threw open the laboratory door. The sight that met his eyes froze him into an attitude of sheer astonishment—stunned incomprehension.

Slowly, he understood the message of his senses. His

HALF-BREED

precious atomic motor had been put together again, but this time in a manner so strange as to be senseless, for even his trained eye could see no reasonable relationship among the various parts.

He wondered stupidly if it were a nightmare or a practical joke, and then everything became clear to him at one bound, for there at the other end of the room was the unmistakable sight of a brush of silver hair protruding from above a bench, swaying gently from side to side as the hidden owner of the brush moved.

“Max!” shouted the distraught inventor, in tones of fury.

Evidently the foolish boy had allowed his interest to inveigle him into idle and dangerous experiments.

At the sound, Max lifted a pale face which upon the sight of his guardian turned a dull red. He approached Scanlon with reluctant steps.

“What have you done?” cried Scanlon, staring about him angrily. “Do you know what you’ve been playing with? There’s enough juice running through this thing to electrocute you twice over.”

I’m sorry, Mr. Scanlon. I had a rather silly idea about all

this when I looked over the equations, but I was afraid to say

anything because you know so much more than I do. After you went away, I couldn't resist the temptation to try it out, though I didn't intend to go this far. I thought I'd have it apart again before you came back."

There was a silence that lasted a long time. When Scanlon spoke again, his voice was curiously mild, "Well, what have you done?"

"You won't be angry?"

"It's a little too late for that. You couldn't have made it much worse, anyway."

"Well, I noticed here in your equations," he extracted one sheet and then another and pointed, "that whenever the ex-pression representing the space-distortion fields occurs, it is always referred to as a function of $x^2 + y^2 + z^2$ ". Since the fields, as far as I could see, were always referred to as con-stants, that would give you the equation of a sphere."

Scanlon nodded, "I noticed that, but it has nothing to do with the problem."

"Well, I thought it might indicate the necessary arrangement of the individual fields, so I disconnected the distorters and hooked them up again in a sphere."

The inventor's mouth fell open. The mysterious rearrange-

166

HALF-BREED

ment of his device seemed clear now—and what was more, eminently sensible.

"Does it work?" he asked.

"I'm not quite sure. The parts haven't been made to fit this arrangement so that it's only a rough set-up at best. Then there's the constant error—"

“But does it work? Close the switch, damn it!” Scanlon was all fire and impatience once more.

“All right, stand back. I cut the power to one-tenth normal so we won’t get more output than we can handle.”

He closed the switch slowly, and at the moment of contact, a glowing ball of blue-white flame leaped into being from the recesses of the central quartz chamber. Scanlon screened his eyes automatically, and sought the output gauge. The needle was climbing steadily and did not stop until it was pressing the upper limit. The flame burned continuously, releasing no heat seemingly, though beside its light, more intensely brilliant than a magnesium flare, the electric lights faded into dingy yellowness.

Max opened the switch once more and the ball-of flame reddened and died, leaving the room comparatively dark and red. The output gauge sank to zero once more and Scanlon felt his knees give beneath him as he sprawled onto a chair.

He fastened his gaze on the flustered Tweenie and in that look there was respect and awe, and something more, too, for there was fear. Never before had he really realized that the Tweenie was not of Earth or Mars but a member of a race apart. He noticed the difference now, not in the comparatively minor physical changes, but in the profound and searching mental gulf that he only now comprehended.

“Atomic power!” he croaked hoarsely. “And solved by a boy, not yet twenty years old.”

Max’s confusion was painful, “You did all the real work, Mr. Scanlon, years and years of it. I just happened to notice a little detail that you might have caught yourself the next day.” His voice died before the fixed and steady stare of the inventor.

“Atomic power—the greatest achievement of man so far, and we actually have it, we two.”

Both—guardian and ward—seemed awed at the grandeur and power of the thing they had created.

And in that moment—the age of Electricity died.

167

HALF-BREED

Jefferson Scanlon sucked at his pipe contentedly. Outside, the snow was falling and the chill of winter was in the air, but inside, in the comfortable warmth, Scanlon sat and smoked and smiled to himself. Across the way, Beulah, likewise quietly happy, hummed softly in time to clicking knitting needles, stopping only occasionally as her fingers flew through an unusually intricate portion of the pattern. In the corner next the window sat Max, occupied in his usual pastime of reading, and Scanlon reflected with faint surprise that of late Max had confined his reading to light novels.

Much had happened since that well-remembered day over a year ago. For one thing, Scanlon was now a world-famous and world-adored scientist, and it would have been strange had he not been sufficiently

human to be proud of it. Sec-ondly, and scarcely less important, atomic power was remak-ing the world.

Scanlon thanked all the powers that were, over and over again, for the fact that war was a thing of two centuries past, for otherwise atomic power would have been the final ruination of civilization. As it was, the coalition of World Powers that now controlled the great force of Atomic Power proved it a real blessing and were introducing it into Man's life in the slow, gradual stages necessary to prevent economic upheaval

Already, interplanetary travel had been revolutionized. From hazardous gambles, trips to Mars and Venus had be-come holiday jaunts to be negotiated in a third of the previous time, and trips to the outer planets were at last feasible.

Scanlon settled back further in his chair, and pondered once more upon the only fly in his wonderful pot of ointment Max had refused all credit; stormily and violently refused to have his name as much as mentioned. The injustice of it galled Scanlon, but aside from a vague mention of "capable assis-tants" he had said nothing; and the thought of it still made him feel an ace of a cad.

A sharp explosive noise brought him out of his reverie and he turned startled eyes towards Max, who had suddenly closed his book with a peevish slap.

"Hello," exclaimed Scanlon, "and what's wrong now?"

Max tossed the book aside and stood up, his underlip thrust out in a pout, "I'm lonely, that's all."

Scanlon's face fell, and he felt at an uncomfortable loss for words. "I guess I know that. Max," he said softly, at length.

"I'm sorry for you, but the conditions—are so—"

168

HALF-BREED

Max relented, and brightening up, placed an affectionate arm about his foster-father's shoulder, "I didn't mean it that way, you know. It's just—well, I can't say it but it's that—you get to wishing you had someone your own age to talk to—someone of your own kind."

Beulah looked up and bestowed a penetrating glance upon the young Tweenie but said nothing.

Scanlon considered, "You're right, son, in a way. A friend and companion is the best thing a fellow can have, and I'm afraid Beulah and I don't qualify in that respect. One of your own kind, as you say, would

be the ideal solution, but that's a tough proposition." He rubbed his nose with one finger and gazed at the ceiling thoughtfully.

Max opened his mouth as if he were going to say something more, but changed his mind and turned pink for no evident reason. Then he muttered, barely loud enough for Scanlon to hear, "I'm being silly!" With an abrupt turn he marched out of the room, banging the door loudly as he left.

The older man gazed after him with undisguised surprise,

"Well! What a funny way to act. What's got into him lately, anyway?"

Beulah halted the nimbly-leaping needles long enough to

remark acidly, "Men are bom fools and blind into the bar-gain."

"Is that so?" was the somewhat nettled response, "And do you know what's biting him?"

"I certainly do. It's as plain as that terrible tie you're wearing. I've seen it for months now. Poor fellow!"

Scanlon shook his head, "You're speaking in riddles, Beulah."

The housekeeper laid her knitting aside and glanced at the

inventor wearily, "It's very simple. The boy is twenty. He needs company."

"But that's just what he said. Is that your marvelous pene-tration?"

"Good land, Jefferson. Has it been so long since you were twenty yourself? Do you mean to say that you honestly think he's referring to male company?"

"Oh," said Scanlon, and then brightening suddenly, "Oh!"

He giggled in an inane manner.

"Well, what are you going to do about it?"

"Why—why, nothing. What can be done?"

"That's a fine way to speak of our ward, when you're rich enough to buy five hundred orphan asylums from basement

169

to roof and never miss the money. It should be the easiest thing in the world to find a likely-looking young lady Tweenie to keep him company.”

Scanlon gazed at her, a look of intense horror on his face, “Are you serious, Beulah? Are you trying to suggest that I go shopping for a female Tweenie for Max? Why—why, what do I know about women—especially Tweenie women. I don’t know his standards. I’m liable to pick one he’ll consider an ugly hag.”

“Don’t raise silly objections, Jefferson. Outside of the hair, they’re the same in looks as anyone else, and I’ll leave it to you to pick a pretty one. There never was a bachelor old and crabbed enough not to be able to do that.”

“No! I won’t do it. Of all the horrible ideas—“ “Jefferson! You’re his guardian. You owe it to him.”

The words struck the inventor forcibly, “I owe it to him,” he repeated. “You’re right there, more right than you know.” He sighed, “I guess it’s got to be done.”

Scanlon shifted uneasily from one trembling foot to the other under the piercing stare of the vinegar-faced official, whose name-board proclaimed in large letters—Miss Martin, Superintendent.

“Sit down, sir,” she said sourly. “What do you wish?”

Scanlon cleared his throat. He had lost count of the asy-lums visited up to now and the task was rapidly becoming too much for him. He made a mental vow that this would be the last—either they would have a Tweenie of the proper sex, age, and appearance or he would throw up the whole thing as a bad job.

“I have come to see,” he began, in a carefully-prepared, but stammered speech, “if there are any Twee—Martian half-breeds in your asylum. It is—.”

“We have three,” interrupted the superintendent sharply.

“Any females?” asked Scanlon, eagerly.

“All females,” she replied, and her eye glittered with disap-proving suspicion.

“Oh, good. Do you mind if I see them. It is—.”

Miss Martin’s cold glance did not weaver, “Pardon me, but before we go any further, I would like to know, whether you’re thinking of adopting a half-breed.”

“I would like to take out guardianship papers if I am suited.

Is that so very unusual?”

“It certainly is,” was the prompt retort. “You understand

170

HALF-BREED

that in any such case, we must first make a thorough investi-gation of the family’s status, both financial and social. It is the opinion of the government that these creatures are better off under state supervision, and adoption would be a difficult matter.”

“I know, madam, I know. I’ve had practical experience in this matter about fifteen months ago> I believe I can give you satisfaction as to my financial and social status without much trouble. My name is Jefferson Scanlon—.”

“Jefferson Scanlon!” her exclamation was half a scream. In a trice, her face expanded into a servile smile, “Why of course. I should have recognized you from the many pictures I’ve seen of you. How stupid of me. Pray do not trouble yourself with any further references. I’m sure that in your case,” this with a particularly genial expression, “no red tape need be necessary.”

She sounded a desk-bell furiously. “Bring down Madeline and the two little ones as soon as you can,” she snapped at the frightened maid who answered. “Have them cleaned up and warn them to be on their best behavior.”

With this, she turned to Scanlon once more, “It will not take long, Mr. Scanlon. It is really such a great honor to have you here with us, and I am so ashamed at my abrupt treat-ment of you earlier. At first I didn’t recognize you, though I saw immediately that you were someone of importance.”

If Scanlon had been upset by the superintendent’s former harsh haughtiness, he was entirely unnerved by her effusive geniality. He wiped his profusely-perspiring brow time and time again, answering in incoherent monosyllables the viva-cious questions put to him. It was just as he had come to the wild decision of taking to his heels and escaping from the she-dragon by flight that the maid announced the three Tweenies and saved the situation.

Scanlon surveyed the three half-breeds with interest and sudden satisfaction. Two were mere children, perhaps ten years of age, but the third, some eighteen years old, was eligible from every point of view.

Her slight form was lithe and graceful even in the quiet attitude of waiting that she had assumed, and Scanlon, “dried-up, dyed-in-the-wool bachelor” though he was, could not restrain a light nod of approval.

Her face was certainly what Beulah would call “likely-looking” and her eyes, now bent towards the floor in shy con-

171

HALF-BREED

fusion, were of a deep blue, which seemed a great point to Scanlon.

Even her strange hair was beautiful. It was only moderately high, not nearly the size of Max’s lordly male crest, and its silky-white sheen caught the sunbeams and sent them back in glistening highlights.

The two little ones grasped the skirt of their elder companion with tight grips and regarded the two adults in wide-eyed fright which increased as time passed.

“I believe, Miss Martin, that the young lady will do,” re-» marked Scanlon. “She is exactly what I had in mind. Could you tell me how soon guardianship papers could be drawn up?”

“I could have them ready for you tomorrow, Mr. Scanlon. In an unusual case such as yours, I could easily make special arrangements.”

“Thank you. I shall be back then—,” he was interrupted. by a loud snuffle. One of the little Tweenies could stand it no longer and had burst into tears, followed soon by the other.

“Madeline,” cried Miss Martin to the eighteen-year-old. “Please keep Rose and Blanche quiet This is an abominable exhibition.”

Scanlon intervened. It seemed to him that Madeline was rather pale and though she smiled and soothed the youngsters he was certain that there were tears in her eyes.

“Perhaps,” he suggested, “the young lady has no wish to leave the institution. Of course, I wouldn’t think of taking her on any but a purely voluntary basis.”

Miss Martin smiled superciliously, “She won’t make any trouble.” She turned to the young girl, “You’ve heard of the great Jefferson Scanlon, haven’t you?”

“Ye-es, Miss Martin,” replied the girl, in a low voice.

“Let me handle this. Miss Martin,” urged Scanlon. “Tell me, girl, would you really prefer to stay here?”

“Oh, no,” she replied earnestly, “I would be very glad to leave, though,” with an apprehensive glance at Miss Martin, “I have been very well treated here. But you see—what’s to be done with the two little ones? I’m all they have, and if I left, they—they—“

She broke down and snatched them to her with a sudden, fierce grip, “I don’t want to leave them, sir!” She kissed each softly, “Don’t cry, children. I won’t leave you. They won’t take me away.”

Scanlon swallowed with difficulty and groped for a handker-

172

HALF-BREED

chief with which to blow his nose. Miss Martin gazed on with disapproving hauteur.

“Don’t mind the silly thing, Mr. Scanlon,” said she. “I believe I can have everything ready by tomorrow noon.”

“Have ready guardianship papers for all three,” was the gruff reply.

“What? All three? Are you serious?”

“Certainly. I can do it if I wish, can’t I?” he shouted.

“Why, of course, but—“

Scanlon left precipitately, leaving both Madeline and Miss Martin petrified, the latter with utter stupefaction, the former in a sudden upsurge of happiness. Even the ten-year-olds sensed the change in affairs and subsided into occasional sobs.

Beulah’s surprise, when she met them at the airport and saw three Tweenies where she had expected one, is not to be described. But, on the whole, the surprise was a pleasant one, for little Rose and Blanche took to the elderly housekeeper immediately. Their first greeting was to bestow great, moist kisses upon Beulah’s lined cheeks at which she glowed with joy and kissed them in turn.

With Madeline she was enchanted, whispering to Scanlon

that he knew a little more about such matters than he pre-tended.

“If she had decent hair,” whispered Scanlon in reply, “I’d

marry her myself. That I would,” and he smiled in great self-satisfaction.

The arrival at home in mid-afternoon was the occasion of great excitement on the part of the two oldsters. Scanlon inveigled Max into accompanying him on a long walk together in the woods, and when the unsuspecting Max left, puzzled but willing, Beulah busied herself with setting the three new-comers at their ease.

They were shown over the house from top to bottom, the rooms assigned to them being indicated. Beulah prattled away continuously, joking and chaffing, until the Tweenies had lost all their shyness and felt as if they had known her forever.

Then, as the winter evening approached, she turned to Madeline rather abruptly and said, "It's getting late. Do you want to come downstairs with me and help prepare supper for the men?"

Madeline was taken aback, "The men. Is there, then, someone besides Mr. Scanlon?"

"Oh, yes. There's Max. You haven't seen him yet,"

173

HALF-BREED

"Is Max a relation of yours?"

"No, child. He's another of Mr. Scanlon's wards."

"Oh, I see." She blushed and her hand rose involuntarily to her hair.

Beulah saw in a moment the thoughts passing through her head and added in a softer voice, "Don't worry, dear. He won't mind your being a Tweenie. He'll be glad to see you."

It turned out, though, that "glad" was an entirely inadequate adjective when applied to Max's emotions at the first sight of Madeline.

He tramped into the house in advance of Scanlon, taking off his overcoat and stamping the snow off his shoes as he did so.

“Oh, boy,” he cried at the half-frozen inventor who followed him in, “why you were so anxious to saunter about on a freezer like today I don’t know.” He sniffed the air appreciatively, “Ah, do I smell lamb chops?” and he made for the dining-room in double-quick time.

It was at the threshold that he stopped suddenly, and gasped for air as if in the last throes of suffocation. Scanlon dipped by and sat down.

“Come on,” he said, enjoying the other’s brick-red visage. ‘Sit down. We have company today. This is Madeline and this is Rose and this is Blanche. And this,” he turned to the seated girls and noted with satisfaction that Madeline’s pink face was turning a fixed glance of confusion upon the plate before her, “is my ward. Max.”

“How do you do,” murmured Max, eyes like saucers, “I’m pleased to meet you.”

Rose and Blanche shouted cheery greetings in reply but Madeline only raised her eyes fleetingly and then dropped them again.

The meal was a singularly quiet one. Max, though he had complained of a ravenous hunger all afternoon, allowed his chop and mashed potatoes to die of cold before him, while Madeline played with her food as if she did not know what it was there for. Scanlon and Beulah ate quietly and well, exchanging sly glances between bites.

Scanlon sneaked off after dinner, for he rightly felt that the more tactful touch of a woman was needed in these matters, and when Beulah joined him in his study some hours later, he saw at a glance that he had been correct.

“I’ve broken the ice,” she said happily, “they’re telling each

other their life histories now and are getting along wonder-

174

HALF-BREED

fully. They’re still afraid of each other, though, and insist on sitting at opposite ends of the room, but that’ll wear off—and pretty quickly, too.”

“It’s a fine match, Beulah, eh?”

“A finer one I’ve never seen. And little Rose and Blanche are angels. I’ve just put them to bed.”

There was a short silence, and then Beulah continued softly, “That was the only time you were right and I was wrong—that time you first brought Max into the house and I objected—but that one time makes up for everything else. You are a credit to your dear mother, Jefferson.”

Scanlon nodded soberly, “I wish I could make all Tweenies

on earth so happy. It would be such a simple thing. If we

treated them like humans instead of like criminals and gave
them homes built especially for them and calculated especially
for their happiness—“

“Well, why don’t you do it?” interrupted Beulah. Scanlon turned a serious eye upon the old housekeeper, “That’s exactly what I was leading up to.” His voice lapsed into a dreamy murmur, “Just think. A town of Tweenies—run by them and for them—with its own governing officials and its own schools and its own public utilities. A little world within a world where the Tweenie can consider himself a human being—instead of a freak surrounded and looked down upon by endless multitudes of pure-bloods.”

He reached for his pipe and filled it slowly, “The world owes a debt to one Tweenie which it can never repay—and I owe it to him as well. I’m going to do it. I’m going to create Tweenietown.”

That night he did not go to sleep. The stars turned in then-
grand circles and paled at last. The grey of dawn came and
grew, but still Scanlon sat unmoving—dreaming and plan-ning.

At eighty, age sat lightly upon Jefferson Scanlon’s head. The spring was gone from his step, the sturdy straightness from his shoulders, but his robust health had not failed him, and his mind, beneath the shock of hair, now as white as any Tweenie’s, still worked with undiminished vigor.

A happy life is not an aging one, and for forty years now,

Scanlon had watched Tweenietown grow, and in the watching, had found happiness.

He could see it now stretched before him like a large,

beautiful painting as he gazed out the window. A little gem of

175

HALF-BREED

a town with a population of slightly more than a thousand, nestling amid three hundred square miles of fertile Ohio land.

Neat and sturdy houses, wide, clean streets, parks, theatres, schools, stores—a model town, bespeaking decades of intelli-gent effort and co-operation.

The door opened behind him and he recognized the soft step without needing to turn, “Is that you, Madeline?”

“Yes, father,” for by no other title was he known to any inhabitant of Tweenietown. “Max is returning with Mr. Johanson.”

“That’s good,” he gazed at Madeline tenderly. “We’ve seen Tweenietown grow since those days long ago, haven’t we?”

Madeline nodded and sighed.

“Don’t sigh, dear. It’s been well worth the years we’ve given to it. If only Beulah had lived to see it now.”

He shook his head as he thought of the old housekeeper, dead now a quarter of a century.

“Don’t think such sad thoughts,” admonished Madeline in her turn. “Here comes Mr. Johanson. Remember it’s the fortieth anniversary and a happy day; not a sad one.”

Charles B. Johanson was what is known as a “shrewd” man. That is, he was an intelligent, far-seeing person, com-paratively well-versed in the sciences, but one who was wont to put these good qualities into practice only in order to advance his own interest. Consequently, he went far in politics and was the first appointee to the newly created Cabinet post of Science and Technology.

It was the first official act of his to visit the world’s greatest scientist and inventor, Jefferson Scanlon, who, in his old age, still had no peer in the number of useful inventions turned over to the government every year. Tweenietown was a con-siderable surprise to him. It was known rather vaguely in the outside world that the town existed, and it was considered a hobby of the old scientist—a harmless eccentricity. Johanson found it a well-worked-out project of sinister connotations.

His attitude, however, when he entered Scanlon’s room in company with his erstwhile guide. Max, was one of frank geniality, concealing well certain thoughts that swept through his mind.

“Ah, Johanson,” greeted Scanlon, “you’re back. What do you think of all this?” his arm made a wide sweep.

“It is surprising—something marvelous to behold,” Johan-son assured him.

176

HALF-BREED

Scanlon chuckled, “Glad to hear it. We have a population of 1154 now and growing every day. You’ve seen what we’ve done already but it’s nothing to what we are going to do in the future—even after my death. However, there is something I wish to see done before I die and for that I’ll need your help.

“And that is?” questioned the Secretary of Science and Technology guardedly.

“Just this. That you sponsor measures giving these Tweenies, these so long despised half-breeds, full equality,—political,—legal,—economic,—social,—with Terrestrials and Martians.”

Johanson hesitated, "It would be difficult. There is a certain amount of perhaps understandable prejudice against them, and until we can convince Earth that the Tweenies deserve equality—" he shook his head doubtfully.

"Deserve equality!" exclaimed Scanlon, vehemently, "Why, they deserve more. I am moderate in my demands." At these words. Max, sitting quietly in a corner, looked up and bit his lip, but said nothing as Scanlon continued, "You don't know the true worth of these Tweenies. They combine the best of Earth and Mars. They possess the cold, analytical reasoning powers of the Martians together with the emotional drive and boundless energy of the Earthman. As far as intellect is concerned, they are your superior and mine, every one of them. I ask only equality."

The Secretary smiled soothingly, "Your zeal misleads you perhaps, my dear Scanlon."

"It does not. Why do you suppose I turn out so many successful gadgets—like this gravitational shield I created a few years back. Do you think I could have done it without my Tweenie assistants? It was Max here," Max dropped his eyes before the sudden piercing gaze of the Cabinet member, "that put the final touch upon my discovery of atomic power itself."

Scanlon threw caution to the winds, as he grew excited, "Ask Professor Whitsun of Stanford and he'll tell you. He's a world authority on psychology and knows what he's talking about. He studied the Tweenie and he'll tell you that the Tweenie is the coming race of the Solar System, destined to take the supremacy away from us pure-bloods as inevitably as night follows day. Don't you think they deserve equality in that case?"

"Yes, I do think so,—definitely," replied Johanson. There

was a strange glitter in his eyes, and a crooked smile upon his

Ups, "This is of extreme importance, Scanlon. I shall attend to

HALF-BREED

it immediately. So immediately, in fact, that I believe I had better leave in half an hour, to catch the 2:10 strato-car."

Johanson had scarcely left, when Max approached Scanlon and blurted out with no preamble at all, "There is something I have to show you, father—something you have not known about before."

Scanlon stared his surprise, "What do you mean?" "Come with me, please, father. I shall explain." His grave expression was almost frightening. Madeline joined the two at the door, and at a sign from Max, seemed to comprehend the situation. She said nothing but her eyes grew sad and the lines in her forehead seemed to deepen.

In utter silence, the three entered the waiting Rocko-car and were sped across the town in the direction of the Hill o' the Woods. High over Lake Clare they shot to come down once more in the wooded patch at the foot of the hill.

A tall, burly Tweenie sprang to attention as the car landed, and started at the sight of Scanlon.

"Good afternoon, father," he whispered respectfully, and cast a questioning glance at Max as he did so.

"Same to you, Emmanuel," replied Scanlon absently. He suddenly became aware that before him was a cleverly-camouflaged opening that led into the very hill itself.

Max beckoned him to follow and led the way into the opening which after a hundred feet opened into an enormous man-made cavern. Scanlon halted in utter amazement, for before him were three giant space-ships, gleaming silvery-white and equipped, as he could plainly see, with the latest atomic power.

"I'm sorry, father," said Max, "that all this was done with-out your knowledge. It is the only case of the sort in the history of Tweenietown." Scanlon scarcely seemed to hear, standing as if in a daze, and Max continued, "The center one is the flagship—the Jefferson Scanlon. The one to the right is the Beulah Goodkin and the one to the left the Madeline."

Scanlon snapped out of his bemusement, "But what does this all mean and why the secrecy?"

"These ships have been lying ready for five years now,
fully fuelled and provisioned, ready for instant take-off. To-
night. we blast away the side of the hill and shoot for Venus
—tonight. We have not told you till now, for we did not wish
to disturb your peace of mind with a misfortune we knew
long ago to be inevitable. We had thought that perhaps," his

178

HALF-BREED

voice sank lower, "its fulfillment might have been postponed until after you were no longer with us."

"Speak out," cried Scanlon suddenly. "I want the full de-tails. Why do you leave just as I feel sure I can obtain full equality for you?"

"Exactly," answered Max, mournfully. "Your words to Johanson swung the scale. As long as Earthmen and Martians merely thought us different and inferior, they despised us and tolerated us. You have told Johanson we were superior and would ultimately supplant Mankind. They have no alternative now but to hate us. There shall be no further toleration; of that I can assure you. We leave before the storm breaks."

The old man's eyes widened as the truth of the other's statements became apparent to him, "I see. I must get in touch with Johanson. Perhaps, we can together correct that terrible mistake." He clapped a hand to his forehead.

"Oh, Max," interposed Madeline, tearfully, "why don't you
come to the point? We want you to come with us, father. In
Venus, which is so sparsely settled, we can find a spot where
we can develop unharmed for an unlimited time. We can

establish our nation, free and untrammelled, powerful in our own right, no longer dependent on—“

Her voice died away and she gazed anxiously at Scanlon's face, now grown drawn and haggard. “No,” he whispered, “no! My place is here with my own kind. Go, my children, and establish your nation. In the end, your descendants shall rule the System. But I—I shall stay here.”

“Then I shall stay, too,” insisted Max. “You are old and someone must care for you. I owe you my life a dozen times over.”

Scanlon shook his head firmly, “I shall need no one. Dayton is not far. I shall be well taken care of there or anywhere else I go. You, Max, are needed by your race. You are their leader. Go!”

Scanlon wandered through the deserted streets of Tweenietown and tried to take a grip upon himself. It was hard. Yesterday, he had celebrated the fortieth anniversary of its founding—it had been at the peak of its prosperity. Today, it was a ghost town.

Yet, oddly enough, there was a spirit of exultation about him. His dream had shattered—but only to give way to a brighter dream. He had nourished foundlings and brought up a race in its youth and for that he was someday to be recog-

179

HALF-BREED

nized as the founder of the superrace.

It was his creation that would someday rule the system. Atomic power—gravity nullifiers—all faded into insignificance. This was his real gift to the Universe.

This, he decided, was how a God must feel.

THE END

As in “The Weapon Too Dreadful to Use,” the story dealt with racial prejudice on an interplanetary

scale. I kept coming back to this theme very frequently—something not surprising in a Jew growing up during the Hitler era.

Once again my naivete shows, since I assume not only an intelligent race on Mars, where such a thing is most unlikely even by 1939 evidence, but assume the Martians to be sufficiently like Earthmen to make interbreeding possible. (I can only shake my head wearily. I knew better in 1939;

I really did. I just accepted science fictional cliches, that's all. Eventually, I stopped doing that.)

My treatment of atomic power was also primitive in the extreme, and I knew better than that, too, even though at the time I wrote the story, uranium fission had not been discovered. The Tweenie's mysterious reference to "a function of x" plus y" plus z" merely means that I had taken analytic geometry at Columbia not long before and was flaunting my knowledge of the equation for the sphere.

This was the first story in which I tried to introduce the romantic motif, however light. It had to be a failure. At the time of the writing of this story, I had still never had a date with a girl.

And yet the greatest embarrassment in a story simply littered with embarrassments was the following line in the seventh paragraph: "... For it, he had become a middle-aged man at thirty—the first flush of youth long gone—"

Well, I wrote it at nineteen. To me, the first flush of youth was long gone by the time one reached thirty. I know better now, of course, since more than thirty years later, I find that I am still in the first flush of youth.

There was some reason for self-congratulation in connection with "Half-Breed," however. My fourth published story, it was the longest to appear up to then. With a length of

180

HALF-BREED

nine thousand words, it was listed on the table of contents as a "novelette," my first published story in that class.

My name also appeared on the cover of the magazine.

It was the first time that had ever happened.

Almost immediately after finishing “Half-Breed,” I began “The Secret Sense,” submitting it to John Campbell on June 21, 1939, and receiving it back on the twenty-eighth. Pohl could not place it either.

Toward the end of 1940, however, a pair of sister maga-zines, Cosmic Stories and Stirring Science Stories, were being planned, with Don Wollheim, a fellow Futurian, selected as editor. The magazines were starting on a micro-budget, however, and the only way they could come into being was to get stories for nothing—at least for the initial issues. For the purpose, Wollheim appealed to the Futurians and they came through. The first issues consisted entirely (I think) of stories by Futurians, under their own names or pseudonyms.

I, too, was asked, and since by that time I was convinced I could sell “The Secret Sense” nowhere, I donated it to Wollheim, who promptly accepted it.

That was that, except that, at the time, yet another maga-zine, Comet Stories, was coming into existence, under the editorship of F. Orlin Tremaine, who had been Campbell’s predecessor at Astounding.

I went to see Tremaine several times, since I thought I might sell him a story or two. On the second visit, on December 5, 1940, Tremaine spoke with some heat concerning the forthcoming birth of Wollheim’s magazines. While he himself was paying top rates, he said, Wollheim was getting stories for nothing and with these could put out magazines that would siphon readership from those maga-zines that paid. Any author who donated stories to Wollheim, and thus contributed to the destruction of competing magazines who paid, should be blacklisted in the field.

I listened with horror, knowing that I had donated a story for nothing. It was a story, to be sure, that I had felt to be worth nothing, but it had not occurred to me that I was undercutting other authors by setting up unfair competition.

181

HALF-BREED

I did not quite have the nerve to tell Tremaine I was one of the guilty ones, but as soon as I got home I wrote to Wollheim asking him to accept one of two alternatives:

either he could run the story under a pseudonym so that my guilt would be hidden, or if he insisted on using my name he could pay me five dollars so that if the question ever arose I could honestly deny having given him the story for nothing.

Wollheim chose to use my name and sent me a check for five dollars, but did so with remarkably poor grace (and, to be sure, he was not, in those days, noted for any suavity of character). He accompanied the check with an angry letter that said, in part, that I was being paid an enormous word rate because it was only my name that had value and for that I was receiving \$2.50 a word. Perhaps he was correct. If so, the word rate was indeed a record, one that I have not surpassed to this very day. On the other hand, the total payment also set a record. No other story I have written commanded so low a payment.

Years later, the well-known science fiction historian Sam Moskowitz wrote a short biography of me, which appeared in the April 1962 *Amazing*. In the course of the biography, he describes a version of the above events and mistakenly states that it was John Campbell who was angry at the donation of stories without pay and that it was he who threatened me with blacklisting.

Not so!

Campbell had nothing to do with it, and, what's more, would have been incapable of making threats. If he had known in advance that I intended to donate a story for nothing to a competing magazine, he would have pointed out my stupidity to me in a perfectly friendly way and would have let it go at that.

As a matter of fact, while I tried to keep my guilt a secret from Tremaine, I had no intention of hiding it from Campbell. On my very next visit to him, on December 16, 1940, I confessed in full, and he shrugged it off.

“ Campbell, I imagine, was quite certain that no magazine

that had to depend on free stories could last for long,

since the only stories so available would have been rejected

182

HALF-BREED

by everyone else. And he would be right. *Cosmic Stories* lasted only three issues, and *Stirring Science Stories* only four. “The Secret Sense” remained the only story of mine they published.

As for *Comet Stories*, that lasted five issues, and though Tremaine hesitated over a couple of my stories, he never bought one.

183

The Secret Sense

The lilting strains of a Strauss waltz filled the room. The music waxed and waned beneath the sensitive fingers of Lincoln Fields, and through half-closed eyes he could almost see whirling figures pirouetting about the waxed floor of some luxurious salon.

Music always affected him that way. It filled his mind with dreams of sheer beauty and transformed his room into a paradise of sound. His hands flickered over the piano in the last delicious combinations of tones and then slowed reluctantly to a halt.

He sighed and for a moment remained absolutely silent as if trying to extract the last essence of beauty from the dying echoes. Then he turned and smiled faintly at the other occupant of the room.

Garth Jan smiled in turn but said nothing. Garth had a great liking for Lincoln Fields, though little understanding. They were worlds apart—literally—for Garth hailed from the giant underground cities of Mars while Fields was the product of sprawling Terrestrial New York.

“How was that. Garth, old fellow?” questioned Fields doubt-fully.

Gaith shook his head. He spoke in his precise, painstaking manner, “I listened attentively and can truly say that it was not unpleasant. There is a certain rhythm, a cadence of sorts, which, indeed, is rather soothing. But beautiful? Nol”

Cosmic Stories, March 1941

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184

THE SECRET SENSE

There was pity in Fields’ eyes—pity almost painful in its intensity. The Martian met the gaze and understood all that it meant, yet there was no answering spark of envy. His bony giant figure remained doubled up in a chair that was too small for him and one thin leg swung leisurely back and forth.

Fields lunged out of his seat impetuously and grasped his companion by the arm. “Here! Seat yourself on the bench.”

Garth obeyed genially. “I see you want to carry out some little experiment.”

“You’ve guessed it. I’ve read scientific works which tried to explain all about the difference in sense-equipment between Earthman and Martian, but I never could quite grasp it all.”

He tapped the notes C and F in a single octave and glanced at the Martian inquiringly.

“If there’s a difference,” said Garth doubtfully, “it’s a very slight one. If I were listening casually, I would certainly say you had hit the same note twice.”

The Earthman marvelled. “How’s this?” He tapped C and G.

“I can hear the difference this time.”

“Well, I suppose all they say about your people is true. You poor fellows—to have such a crude sense of bearing. You don’t know what you’re missing.”

The Martian shrugged his shoulders fatalistically. “One misses nothing that one has never possessed.”

Garth Jan broke the short silence that followed. “Do you realize that this period of history is the first in which two intelligent races have been able to communicate with each other? The comparison of sense equipment is highly inter-esting—and rather broadens one’s views on life.”

“That’s right,” agreed the Earthman, “though we seem to have all the advantage of the comparison. You know a Ter-restrial biologist stated last month that he was amazed that a race so poorly equipped in the matter of sense-perception could develop so high a civilization as yours.”

“All is relative, Lincoln. What we have is sufficient for us.”

Fields felt a growing frustration within him. “But if you only knew, Garth, if you only knew what you were missing.

“You’ve never seen the beauties of a sunset or of dancing

fields of flowers. You can’t admire the blue of the sky, the

green of the grass, the yellow of ripe corn. To you the

world consists of shades of dark and light.” He shuddered

at the thought “You can’t smell a flower or appreciate its

delicate perfume. You can’t even enjoy such a simple thing as

185

THE SECRET SENSE

a good, hearty meal. You can’t taste nor smell nor see color.

I pity you for your drab world.”

“What you say is meaningless, Lincoln. Waste no pity on me, for I am as happy as you.” He rose and reached for his cane—necessary in the greater gravitational field of Earth.

“You must not judge us with such easy superiority, you know.” That seemed to be the galling aspect of the matter. “We do not boast of certain accomplishments of our race of which you know nothing.”

And then, as if heartily regretting his words, a wry grimace overspread his face, and he started for the door.

Fields sat puzzled and thoughtful for a moment, then jumped up and ran after the Martian, who was stumping his way towards the exit. He gripped Garth by the shoulder and insisted that he return.

“What did you mean by that last remark?”

The Martian turned his face away as if unable to face his questioner. “Forget it, Lincoln. That was just a moment of in-discretion when your unsolicited pity got on my nerves.”

Fields gave him a sharp glance. “It’s true, isn’t it? It’s logi-cal that Martians possess senses Earthmen do not, but it passes the bounds of reason that your people should want to keep it secret.”

“That is as it may be. But now that you’ve found me out through my own utter stupidity, you will perhaps agree to let it go no further?”

“Of course! I’ll be as secret as the grave, though I’m darned if I can make anything of it. Tell me, of what nature is this secret sense of yours?”

Garth Jan shrugged listlessly. “How can I explain? Can you define color to me, who cannot even conceive it?”

“I’m not asking for a definition. Tell me its uses. Please,” he gripped the other’s shoulder, “you might as well. I have given my promise of secrecy.”

The Martian sighed heavily. “It won’t do you much good.

Would it satisfy you to know that if you were to show me two containers, each filled with a clear liquid, I could tell you at once whether either of the two were poisonous? Or, if you were to show me a copper wire, I could tell instantly whether an electric current were passing through it, even if it were as little as a thousandth of an ampere? Or I could tell you the temperature of any substance within three degrees of the true

THE SECRET SENSE

value even if you held it as much as five yards away? Or I could—well, I’ve said enough.”

“Is that all?” demanded Fields, with a disappointed cry.

“What more do you wish?”

“All you’ve described is very useful—but where is the beauty in it? Has this strange sense of yours no value to the spirit as well as to the body?”

Garth Jan made an impatient movement. “Really, Lincoln, you talk foolishly. I have given you only that for which you asked—the uses I put this sense to. I certainly didn’t attempt to explain its nature. Take your color sense. As far as I can see its only use is in making certain fine distinctions which I cannot. You can identify certain chemical solutions, for in-stance, by something you call color when I would be forced to run a chemical analysis. Where’s the beauty in that?”

Fields opened his mouth to speak but the Martian motioned him testily into silence. “I know. You’re going to babble fool-ishness about sunsets or something. But what do you know of beauty? Have you ever known what it was to witness the beauty of the naked copper wires when an AC current is turned on? Have you sensed the delicate loveliness of induced currents set up in a solenoid when a magnet is passed through it? Have you ever attended a Martian portwem?”

Garth Jan’s eyes had grown misty with the thoughts he was conjuring up, and Fields stared in utter amazement. The shoe was on the other foot now and his sense of superiority left him of a sudden.

“Every race has its own attributes,” he mumbled with a fatalism that had just a trace of hypocrisy in it, “but I ‘see no reason why you should keep it such a blasted secret. We Earthmen have kept no secrets from your race.”

“Don’t accuse us of ingratitude,” cried Garth Jan vehe-mently. According to the Martian code of ethics, ingratitude was the supreme vice, and at the insinuation of that Garth’s caution left him. “We never act without reason, we Martians. And certainly it is not for our own sake that we hide this magnificent ability.”

The Earthman smiled mockingly. He was on the trail of something—he felt it in his bones—and the only way to get it out was to tease it out.

“No doubt there is some nobility behind it all. It is a strange attribute of your race that you can always find some altruistic motive for your actions.”

THE SECRET SENSE

Garth Jan bit his lip angrily. "You have no right to say that." For a moment he thought of pleading worry over Fields' future peace of mind as a reason for silence, but the latter's mocking reference to "altruism" had rendered that im-possible. A feeling of anger crept over him gradually and that forced him to his decision.

There was no mistaking the note of frigid unfriendliness that entered his voice. "I'll explain by analogy." The Martian stared straight ahead of him as he spoke, eyes half-closed.

"You have told me that I live in a world that is composed merely of shades of light and dark. You try to describe a world of your own composed of infinite variety and beauty. I listen but care little concerning it. I have never known it and never can know it. One does not weep over the loss of what one has never owned.

"But—what if you were able to give me the ability to see color for five minutes? What if, for five minutes, I reveled in wonders undreamed of? What if, after those five minutes, I have to return it forever? Would those five minutes of para-dise be worth a lifetime of regret afterwards—a lifetime of dissatisfaction because of my own shortcomings? Would it not have been the kinder act never to have told me of color in the first place and so have removed its ever-present tempta-tion?"

Fields had risen to his feet during the last part of the Martian's speech and his eyes opened wide in a wild surmise. "Do you mean an Earthman could possess the Martian sense if so desired?"

"For five minutes in a lifetime," Garth Jan's eyes grew

dreamy, "and in those five minutes sense—"

He came to a confused halt and glared angrily at his com-panion, "You know more than is good for you. See that you don't forget your promise."

He rose hastily and hobbled away as quickly as he could, leaning heavily upon the cane. Lincoln Fields made no move to stop him. He merely sat there and thought.

The great height of the cavern shrouded the roof in misty obscurity in which, at fixed intervals, there floated luminescent globes of radite. The air, heated by this subterranean volcanic stratum, wafted past gently. Before Lincoln Fields stretched the wide, paved avenue of the principal city of Mars, fading away into the distance.

He clumped awkwardly up to the entrance of the home of

188

THE SECRET SENSE

Garth Jan, the six-inch-thick layer of lead attached to each shoe a nuisance unending. Though it was still better than the uncontrollable bounding Earth muscles brought about in this lighter gravity.

The Martian was surprised to see his friend of six months ago but not altogether joyful. Fields was not slow to notice this but he merely smiled to himself. The opening formalities passed, the conventional remarks were made, and the two seated themselves.

Fields crushed the cigarette in the ash-tray and sat upright suddenly serious. "I've come to ask for those five minutes you claim you can give me! May I have them?"

"Is that a rhetorical question? It certainly doesn't seem to require an answer." Garth's tone was openly contemptuous.

The Earthman considered the other thoughtfully. "Do you mind if I outline my position in a few words?"

The Martian smiled indifferently. "It won't make any difference," he said.

"I'll take my chance on that. The situation is this: I've been born and reared in the lap of luxury and have been most disgustingly spoiled. I've never yet had a reasonable desire that I have not been able to fulfill, and I don't know what it means not to get what I want. Do you see?"

There was no answer and he continued, "I have found my happiness in beautiful sights, beautiful words, and beautiful sounds. I have made a cult of beauty. In a word, I am an aesthete."

"Most interesting," the Martian's stony expression did not change a whit, "but what bearing has all this on the problem at hand?"

"Just this: You speak of a new form of beauty—a form unknown to me at present and entirely inconceivable even, but one which could be known if you so wished. The notion attracts me. It more than attracts me—it makes its demands of me. Again I remind you that when a notion begins to make demands of me, I yield—I always have."

"You are not the master in this case," reminded Garth Jan.

"It is crude of me to remind you of this, but you cannot

force me, you know. Your words, in fact, are almost offensive in their implications."

"I am glad you said that, for it allows me to be crude in my turn without offending my conscience." Garth Jan's only reply to this was a self-confident grimace.

189

THE SECRET SENSE ‘•

"I make my demand of you," said Fields, slowly, "in the name of gratitude."

"Gratitude?" the Martian started violently.

Fields grinned broadly, "It's an appeal no honorable Mar-tian can refuse—by your own ethics. You owe me gratitude, now, because it was through me you gained entrance into the houses of the greatest and most honorable men of Earth."

"I know that," Garth Jan flushed angrily. "You are impo-lite to remind me of it."

"I have no choice. You acknowledged the gratitude you owe

me in actual words, back on Earth. I demand the chance to possess this mysterious sense you keep so secret—in the name of this acknowledged gratitude. Can you refuse now?"

"You know I can't," was the gloomy response. "I hesitated

only for your own sake."

The Martian rose and held out his hand gravely, "You have me by the neck, Lincoln. It is done. Afterwards, though, I owe you nothing more. This will pay my debt of gratitude.

Agreed?"

"Agreed!" The two shook hands and Lincoln Fields continued in an entirely different tone. "We're still friends, though, aren't we? This little altercation won't spoil things?"

"I hope not. Come! Join me at the evening meal and we can discuss the time and place of your—er—five minutes."

Lincoln Fields tried hard to down the faint nervousness that filled him as he waited in Garth Jan's private "concert"-room.

He felt a sudden desire to laugh as the thought came to him

that he felt exactly as he usually did in a dentist's waiting

room.

He lit his tenth cigarette, puffed twice and threw it away,

"You're doing this very elaborately, Garth."

The Martian shrugged, "You have only five minutes so I might as well see to it that they are put to the best possible use. You're going to 'hear' part of a portwem, which is to our sense what a great symphony (is that the word?) is to sound."

"Have we much longer to wait? The suspense, to be trite, is terrible."

"We're waiting for Novi Lon, who is to play the portwem,

and for Done Vol. my private physician. They'll be along

soon.”

Fields wandered onto the low dais that occupied the center of the room and regarded the intricate mechanism thereupon with curious interest. The fore-part was encased in gleaming aluminum leaving exposed only seven tiers of shining black

190

THE SECRET SENSE

knobs above and five large white pedals below. Behind, how-ever, it lay open, and within there ran crossings and recross-ings of finer wires in incredibly complicated paths.

“A curious thing, this,” remarked the Earthman.

The Martian joined him on the dais, “It’s an expensive in-strument. It cost me ten thousand Martian credits.”

“How does it work?”

“Not so differently from a Terrestrial piano. Each of the upper knobs controls a different electric circuit. Singly and to-gether an expert portwem player could, by manipulating the knobs, form any conceivable pattern of electric current. The pedals below control the strength of the current.”

Fields nodded absently and ran his fingers bver the knobs at random. Idly, he noticed the small galvanometer located just above the keys kick violently each time he depressed a knob. Aside from that, he sensed nothing.

“Is the instrument really playing?”

The Martian smiled, “Yes, it is. And a set of unbelievably atrocious discords too.”

He took a seat before the instrument and with a murmured “Here’s howl” his fingers skimmed rapidly and accurately over the gleaming buttons.

The sound of a reedy Martian voice crying out in strident accents broke in upon him, and Garth Jan ceased in sudden embarrassment. “This is Novi Lon,” he said hastily to Fields, “As usual, he does not like my playing.”

Fields rose to meet the newcomer. He was bent of shoulder and evidently of great age. A fine tracing of wrinkles, espe-cially about eyes and mouth, covered his face.

“So this is the young Earthman,” he cried, in strongly-accented English. “I disapprove your rashness but sympathize with your desire to attend a portwem. It is a great pity you can own our sense for no more than five minutes. Without it no one can truly be said to live.”

Garth Jan laughed, “He exaggerates, Lincoln. He’s one of the greatest musicians of Mars, and thinks

anyone doomed to damnation who would not rather attend a portwem than breathe.” He hugged the older man warmly, “He was my teacher in my youth and many were the long hours in which he struggled to teach me the proper combination of circuits.”

“And I have failed after all, you dunce,” snapped the old

Martian. “I heard your attempt at playing as I entered. You

still have not learned the proper fortgass combination. You

191

THE SECRET SENSE

were desecrating the soul of the great Bar Damn. My pupil!

Bah! It is a disgrace!”

The entrance of the third Martian, Done Vol, prevented Novi Lon from continuing his tirade. Garth, glad of the re-prieve, approached the physician hastily.

“Is all ready?”

“Yes,” growled Vol surlily, “and a particularly uninterest-ing experiment this will be. We know all the results before-hand.” His eyes fell upon the Earthman, whom he eyed con-temptuously. “Is this the one who wishes to be inoculated?”

Lincoln Fields nodded eagerly and felt his throat and mouth

go dry suddenly. He eyed the newcomer uncertainly and felt

uneasy at the sight of a tiny bottle of clear liquid and a hypo-

dermic which the physician had extracted from a case he was

carrying.

“What are you going to do?” he demanded.

“He’ll merely inoculate you. It’ll take a second,” Garth Jan assured him. “You see, the sense-organs in this case are sev-eral groups of cells in the cortex of the brain. They are ac-tivated by a hormone, a synthetic preparation of which is used to stimulate the dormant cells of the occasional Martian who is bom—er—‘blind.’ You’ll receive the same treatment.”

“Oh!—then Earthmen possess those cortex cells?”

“In a very rudimentary state. The concentrated hormone will activate them, but only for five minutes. After that time, they are literally blown out as a result of their unwonted activity. After that, they can’t be re-activated under any circumstances.”

Done Vol completed his last-minute preparations and approached Fields. Without a word. Fields extended his right arm and the hypodermic plunged in.

With the operation completed, the Terrestrial waited a moment or two and then essayed a shaky laugh, “I don’t feel any change.”

“You won’t for about ten minutes,” explained Garth. -“It takes time. Just sit back and relax. Novi Lon has begun Bar Damn’s ‘Canals in the Desert’—it is my favorite—and when the hormone begins its work you will find yourself in the middle of things.”

Now that the die was cast irrevocably. Fields found himself stonily calm. Novi Lon played furiously, and Garth Jan, at the Earthman’s right, was already lost in the composition. Even Done Vol, the fussy doctor, had forgotten his peevish-ness for the nonce.

192

THE SECRET SENSE

Fields snickered under his breath. The Martians listened attentively but to him the room was devoid of sound and—almost—of all other sensation as well. What—no, it was impossible, of course—but what if it were just an elaborate practical joke? He stirred uneasily and put the thought from his mind angrily.

The minutes passed; Novi Lon’s fingers flew; Garth Jan’s expression was one of unfeigned delight.

Then Lincoln Fields blinked his eyes rapidly. For a moment a nimbus of color seemed to surround the musician and his instrument. He couldn’t identify it—but it was there. It grew and spread until the room was full of it. Other hues came to join it and still others. They wove and wavered;

expanding and contracting; changing with lightning speed and yet staying the same. Intricate patterns of brilliant tints formed and faded, beating in silent bursts of color upon the young man’s eyeballs.

Simultaneously, there came the impression of sound. From a whisper it rose into a glorious, ringing shout that wavered up and down the scale in quivering tremolos. He seemed to hear every instrument from fife to bass viol simultaneously, and yet, paradoxically, each rang in his ear in solitary clear-ness.

And together with this, there came the more subtle sensation of odor. From a suspicion, a mere trace, it waxed into a phantasmal field of flowers. Delicate spicy scents followed each other in ever stronger

succession; in gentle wafts of pleasure.

Yet all this was nothing. Fields knew that. Somehow, he knew that what he saw, heard, and smelt were mere delusions —mirages of a brain that frantically attempted to interpret an entirely new conception in the old, familiar ways.

Gradually, the colors and the sounds and the scents died. His brain was beginning to realize that that which beat upon it was something hitherto unexperienced. The effect of the hormone became stronger, and suddenly—in one burst—Fields realized what it was he sensed.

He didn't see it—nor hear it—nor smell it—nor taste it—nor feel it. He knew what it was but he couldn't think of the word for it. Slowly, he realized that there wasn't any word for it. Even more slowly, he realized that there wasn't even any concept for it.

Yet he knew what it was.

There beat upon his brain something that consisted of pure

193

THE SECRET SENSE

waves of enjoyment—something that lifted him out of him-self and pitched him headlong into a universe unknown to him earlier. He was falling through an endless eternity of—something. It wasn't sound or sight but it was—something.

Something that enfolded him and hid his surroundings from

him—that's what it was. It was endless and infinite in its

variety, and with each crashing wave, he glimpsed a farther

horizon, and the wonderful cloak of sensation became thicker

and softer—and more beautiful.

Then came the discord. Like a little crack at first—marring a perfect beauty. Then spreading and branching and growing wider, until, finally, it split apart thunderously—though without a sound.

Lincoln Fields, dazed and bewildered, found himself back in the concert room again.

He lurched to his feet and grasped Garth Jan by the arm violently, "Garth! Why did he stop? Tell him to continue! Tell him!"

Garth Jan's startled expression faded into pity, "He is still playing, Lincoln."

The Earthman's befuddled stare showed no signs of understanding. He gazed about him with unseeing eyes. Novi Lon's fingers sped across the keyboard as nimbly as ever; the expression on his face was as rapt as ever. Slowly, the truth seeped in, and the Earthman's empty eyes filled with horror.

He sat down, uttering one hoarse cry, and buried his head in his hands.

The five minutes had passed! There could be no return!

Garth Jan was smiling—a smile of dreadful malice, "I had pitied you just a moment ago, Lincoln, but now I'm glad—glad! You forced this out of me—you made me do this. I hope you're satisfied, because I certainly am. For the rest of your life," his voice sank to a sibilant whisper, "you'll remember these five minutes and know what it is you're missing what it is you can never have again. You are blind, Lincoln—blind!"

The Earthman raised a haggard face and grinned, but it was no more than a horrible baring of the teeth. It took every ounce of willpower he possessed to maintain an air of composure.

He did not trust himself to speak. With wavering step, he marched out of the room, head held high to the end.

And within, that tiny, bitter voice, repeating over and over

194

THE SECRET SENSE

again, "You entered a normal man! You leave blind—blind—

BLIND."

THE END

The summer of 1939 was full of doubts and uncertainty for me.

In June I had graduated from Columbia and obtained my bachelor of science degree. So far, so good. However, my second round of attempts to enter medical school had failed, as the first had. To be sure, I hadn't really been anxious to go to medical school and I had tried only half-heartedly, but it still left me at loose ends. .

What did I do now? I did not wish to look for some non-descript job, even if these were to be found, so I had to continue with my schooling. I had been majoring in chemistry, so, failing medical school, the natural next step was to go for my degree of doctor of philosophy in that field.

The first question was whether I would be able to swing this financially. (It would have been the first question, even more so, if I had gotten into medical school.) College itself had been touch and go all four years, and my small writing income of about \$200 during my senior year had been a considerable help.

Naturally, I would have to continue writing and, just as naturally, my depression made it very difficult to write. I managed one story during that summer; it was called "Life Before Birth."

"Life Before Birth" was my first attempt at anything other than science fiction. It was in the allied field of fantasy (as imaginative as science fiction, but without the restriction of requiring scientific plausibility).

The reason for my attempting fantasy was that at the beginning of 1939, Street & Smith began the publication of a new magazine, *Unknown*, of which Campbell was editor.

Unknown caught my fancy at once. It featured stories of what are now called "adult fantasy," and the writing seemed to my nineteen-year-old self to be even more advanced and literate than that in *Astounding*. Of course I wanted desperately to place a story in this new and wonderful magazine.

"Life Before Birth" was an attempt in this direction, but

195

THE SECRET SENSE

aside from the mere fact that it was a fantasy, I remember nothing more about it. It was submitted to Campbell on July 11 and was back in my hands on the nineteenth. It never placed anywhere and no longer exists.

August was even worse. All Europe rang with the hideous possibility of war, and on September 1, World War II began with the German Invasion of Poland. I could do nothing during the crisis but listen to the radio. It was not till September 11 that I could settle down long enough to start another story, "The Brothers."

"The Brothers" was science fiction, and all I remember

is that it was about two brothers, a good one and an evil one,

and a scientific invention that one or the other was con-

structing. On October 5 I submitted it to Campbell, and

on October 11 it was rejected. It, too, never placed and no longer exists.

So the summer had passed fruitlessly and now I had to face another problem. Columbia University was not in the least anxious to take me on as a graduate student. They felt I was going to use the position as a mere way of marking time till I could try once more to get into medical school.

I swore that this was not so, but my position was vulnerable because as a premedical student I had not been required to take a course in physical chemistry and had therefore not done so. Physical chemistry was, however, required for graduate work in chemistry.

I persisted, and finally the admissions board made the following suggestion: I would have to take a full year's selection of graduate courses, and, at the same time, I would have to take physical chemistry and get at least a B in that. If I failed to get the B, I was out on my ear and my tuition money would, of course, not be refunded.

One of the members of the board told me, some years later, that I was offered this in the belief that I would not accept a set of terms so loaded against me. However, since I had never had trouble with passing courses, it never occurred to me that a set of requirements that merely asked that I achieve certain grades, was loaded against me.

I agreed, and when at the end of the first semester there were only three A's in physical chemistry out of a class of 196

THE SECRET SENSE

sixty, and I was one of them, the probation was lifted.

By December I had gotten deeply enough into my course work to be quite certain I would fulfill all grade requirements. The only uncertainty remaining was financial. I had to get back to writing.

On December 21 I began "Homo Sol" and completed it on January 1, 1940, the day before my twentieth birthday. I submitted it on January 4, and on that day, in Campbell's office, I met Theodore Sturgeon and L. Ron Hubbard, two established members of Campbell's stable of writers. (Hubbard has since then become world famous, in a fashion, as the originator of the cults of Dianetics and Scientology.)

There is no sign in my diary of any discouragement, but after a year and a half of assiduous efforts, I had failed to sell Campbell more than one story out of the eighteen I had by then written. He had rejected eight stories before buying "Trends," and he had rejected seven stories since. (Two stories, which I sold elsewhere, he never saw and had no chance to reject. Had he seen them he would certainly have rejected them.)

One factor in the lack of discouragement was Campbell's unfailing interest. As long as he didn't get tired reading my stories and advising me about them so kindly, why should I get tired writing them? Then, too, my occasional sales to magazines other than Astounding (there had been six by then) and, especially, the opening up of a new and sympathetic market in the form of Pohl's magazines, helped keep my spirits up.

For “Homo Sol,” my nineteenth story, there was no out-right rejection. Again, Campbell asked for revisions. I had to revise it twice, but it was not to be another “Black Friar of the Flame.” The second revision was satisfactory, and on April 17, 1940, I received my second check from Campbell (and, by that time, my seventh check, all told). What’s more, it was for seventy-two dollars, the story being 7,200 words long, and was the largest check I had ever received for a story up to that time.

Oddly enough, the clearest thing I remember about that

check is an incident that took place that evening in my

197

THE SECRET SENSE

father’s candy store, where I still worked every day and where I was to continue working for two more years. A customer took offense at my neglecting to say “Thank you” after his purchase—a crime I frequently committed because, very often, I was working without conscious attention but was concentrating deeply on the plot permutations that were sounding hollowly within the cavern of my skull.

The customer decided to scold me for my obvious inattention and apparent lack of industry. “My son,” he said, “made fifty dollars through hard work last week. What do you do to earn a living?”

“I write,” I said, “and I got this for a story today,” and I held up the check for him to see.

It was a very satisfactory moment.

9

Homo Sol

198

The seven thousand and fifty-fourth session of the Galactic Congress sat in solemn conclave in the vast semicircular hall on Eon, second planet of Arcturus.

Slowly, the president delegate rose to his feet. His broad Arcturian countenance flushed slightly with excitement as he surveyed the surrounding delegates. His sense of the dramatic caused him to pause a moment or so before making the official announcement—for, after all, the entrance of a new planetary system into the great Galactic family is not a thing likely to happen twice in any one man’s lifetime.

A dead silence prevailed during that pause. The two hundred and eighty-eight delegates—one from each of the two hundred and eighty-eight oxygen-atmosphere, water-chemistry worlds of the System—waited patiently for him to speak.

Beings of every manlike type and shape were there. Some were tall and polelike, some broad and burly, some short and stumpy. There were those with long, wiry hair, those with scanty gray fuzz covering head and face, others with thick, blond curls piled high, and still others entirely bald. Some possessed long, hair-covered trumpets of ears, others had tympanum membranes flush with their temples. There were those present with large gazellelike eyes of a deep-purple luminosity, others with tiny optics of a beady black. There was a delegate with green skin, one with an eight-inch pro-Astounding Science Fiction, September 1940 Copyright © 1940 by Street & Smith Publications, Inc.

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199

HOMO SOL

boscis and one with a vestigial tail. Internally, variation was almost infinite.

But all were alike in two things.

They were all Humanoid. They all possessed intelligence.

The president delegate's voice boomed out then: "Delegates! The system of Sol has discovered the secret of inter-stellar travel and by that act becomes eligible for entrance into the Galactic Federation."

A storm of approving shouts arose from those present and the Arcturian raised a hand for silence.

"I have here," he continued, "the official report from Alpha Centauri, on whose fifth planet the Humanoids of Sol have landed. The report is entirely satisfactory and so the ban upon travel into and communication with the Solarian System is lifted. Sol is free, and open to the ships of the Federation. Even now, there is in preparation an expedition to Sol, under the leadership of Joselin Arn of Alpha Centauri, to tender that System the formal invitation into the Federation."

He paused, and from two hundred and eighty-eight throats came the stentorian shout: "Hail, Homo Sol! Hail, Homo Sol! Hail!"

It was the traditional welcome of the Federation for all new worlds.

Tan Porus raised himself to his full height of five feet two—he was tall for a Rigellian—and his sharp, green eyes snapped with annoyance.

"There it is, Lo-fan. For six months that damned freak squid from Beta Draconis IV has stumped me."

Lo-fan stroked his forehead gently with one long finger, and one hairy ear twitched several times. He had traveled eighty-five light years to be here on Arcturus II with the great-est psychologist of the Federation—and, more specifically, to see this strange mollusk whose reactions had stumped the great Rigellian.

He was seeing it now: a puffy, dull-purple mass of soft flesh that writhed its tentacular form in placid unconcern through the huge tank of water that held it. With unruffled serenity, it fed on the green fronds of an underwater fern.

“Seems ordinary enough,” said Lo-fan.

“Ha!” snorted Tan Porus. “Watch this.”

He drew the curtain and plunged the room into darkness. Only a dim blue light shone upon the tank, and in the murk the Draconian squid could barely be discerned.

200

HOMO SOL

“Here goes the stimulus,” grunted Porus. The screen above his head burst into soft green light, focused directly upon the tank. It persisted a moment and gave way to a dull red and then almost at once to a brilliant yellow. For half a minute it shot raggedly through the spectrum and then, with a final glare of glowing white, a clear bell-like tone sounded.

And as the echoes of the note died away, a shudder passed over the squid’s body. It relaxed and sank slowly to the bot-tom of the tank.

Porus pulled aside the curtain. “It’s sound asleep,” he growled. “Hasn’t failed yet. Every specimen we’ve ever had drops as if shot the moment that note sounds.”

“Asleep, eh? That’s strange. Have you got the figures on the stimulus?”

“Certainly! Right here. The exact wave lengths of the lights required are listed, plus the length of duration of each light unit, plus the exact pitch of the sounded note at the end.”

The other surveyed the figures dubiously. His forehead wrinkled and his ears rose in surprise. From an inner pocket, he drew forth a slide rule.

“What type nervous system has the animal?”

“Two-B. Plain, simple, ordinary Two-B. I’ve had the anato-mists, physiologists, and ecologists check that until they were blue in the face. Two-B is all they get. Damn fools!”

Lo-fan said nothing, but pushed the center bar of the rule back and forth carefully. He stopped and peered closely, shrugged his shoulders, and reached for one of the huge vol-umes on the shelf above his head. He leafed through the pages and picked out numbers from among the close print. Again the slide rule.

Finally he stopped. “It doesn’t make sense,” he said help-lessly.

“I know that! I’ve tried six times in six different ways to explain that reaction—and I failed each time. Even. if I rig up a system that will explain its going to sleep, I can’t get it to explain the specificity of the stimulus.”

“It’s highly specific?” questioned Lo-fan, his voice reaching the higher registers.

“That’s the worst part of it,” shouted Tan Porus. He leaned forward and tapped the other on the knee. “If you shift the wave length of any of the light units by fifty angstroms either way—any one of them—it doesn’t sleep. Shift the length of duration of a light unit two seconds either way—it doesn’t sleep. Shift the pitch of the tone at the end an eighth of an

201

HOMO SOL

octave either way—itv doesn’t sleep. But get the right combina-tion, and it goes straight into a coma.”

Lo-fan’s ears were two hairy trumpets, stiffly erect. “Gal-axy!” he whispered. “How did you ever stumble on the com-bination?”

“I didn’t. It happened at Beta Draconis. Some hick college

was putting its freshmen through a lab period on light-sound reactions of molluscoids—been doing it for years. Some stu-dent runs through his light-sound combinations and his blasted specimen goes to sleep. Naturally, he’s scared out of his wits and brings it to the instructor. The instructor tries it again on another squid—it goes to sleep. They shift the combination—nothing happens. They go back to the original—it goes to sleep. After they fooled around with it long enough to know they couldn’t make head or tail of it, they sent it to Arcturus and wished it on me. It’s six months since / had a real night’s sleep.”

A musical note sounded and Porus turned impatiently.

“What is it?”

“Messenger from the president delegate of Congress, sir,” came in metallic tones from the telecaster on his desk.

“Send him up.”

The messenger stayed only long enough to hand Porus an impressively sealed envelope and to say in hearty tone:

“Great news, sir. The system of Sol has qualified for entrance.”

“So what?” snorted Porus beneath his breath as the other left “We all knew it was coming.”

He ripped off the outer sheath of cello-fiber from the envelope and removed the sheaf of papers from within. He glanced through them and grimaced.

“Oh, Rigel!”

“What’s wrong?” asked Lo-fan.

“Those politicians keep bothering me with the most inconsequential things. You’d think there wasn’t another psycholo-gist on Eron. Look! We’ve been expecting the Solarian System to solve the principle of the hyperatomo any century now. They’ve finally done it and an expedition of theirs landed on Alpha Centauri. At once, there’s a politicians’ holiday! We must send an expedition of our own to ask them to join the Federation. And, of course, we must have a psychologist along to ask them in a nice way so as to be sure of getting the right reaction, because, to be sure, there isn’t a man in the army that ever gets proper training in psychology.”

202

HOMO SOL

Lo-fan nodded seriously. “I know, I know. We have the same trouble out our way. They don’t need psychology until they get into trouble and then they come running.”

“Well, it’s a cinch I’m not going to Sol. This sleeping squid is too important to neglect. It’s a routine job, anyway—this business of raking in new worlds; a Type A reaction that any sophomore can handle.”

“Whom will you send?”

“I don’t know. I’ve got several good juniors under me that can do this sort of thing with their eyes closed. I’ll send one of them. And meanwhile, I’ll be seeing you at the faculty meeting tomorrow, won’t I?”

“You will—and hearing me, too. I’m making a speech on the finger-touch stimulus.”

“Good! I’ve done work on it, so I’ll be interested in hearing what you have to say. Till tomorrow, then.”

Left alone, Porus turned once more to the official report on the Solarian System which the messenger had handed him. He leafed through it leisurely, without particular interest, and finally put it down with a sigh.

“Lor Haridin could do it,” he muttered to himself. “He’s a good kid—deserves a break.”

He lifted his tiny bulk out of the chair and, with the report under his arm, left his office and trotted down the long corri-dor outside. As he stopped before a door at the far end, the automatic flash blazed up and a voice within called out to him to enter.

The Rigellian opened the door and poked his head inside.

“Busy, Haridin?”

Lor Haridin looked up and sprang to his feet at once. “Great space, boss, no! I haven’t had anything to do since I finished work on anger reactions. You’ve got something for me, maybe?”

“I have—if you think you’re up to it. You’ve heard of the Solarian System, haven’t you?”

“Sure! The visors are full of it. They’ve got interstellar travel, haven’t they?”

“That’s right. An expedition is leaving Alpha Centauri for Sol in a month. They’ll need a psychologist to do the fine work, and I was thinking of sending you.”

The young scientist reddened with delight to the very top of his hairless dome. “Do you mean it, boss?”

“Why not? That is—if you think you can do it.”

203

HOMO SOL

“Of course I can.” Haridin drew himself up in offended hauteur. “Type A reaction! I can’t miss.”

“You’ll have to learn their language, you know, and administer the stimulus in the Solarian tongue. It’s not always an easy job.”

Haridin shrugged. “I still can’t miss. In a case like this, translation need only be seventy-five percent effective to get ninety-nine and six tenths percent of the desired result. That was one of the problems I had to solve on my qualifying exam. So you can’t trip me up that way.”

Porus laughed. “All right, Haridin, I know you can do it. Clean up everything here at the university and sign up for indefinite leave. And if you can, Haridin, write some sort of paper on these Solarians. If it’s any good, you might get senior status on the basis of it.”

The junior psychologist frowned, “But, boss, that’s old stuff. Humanoid reactions are as well known as ... as— You can’t write anything on them.”

“There’s always something if you look hard enough, Hari-din. Nothing is well known; remember that. If you’ll look at Sheet 25 of the report, for instance, you’ll find an item concerning the care with which the Solarians armed themselves on leaving their ship.”

The other turned to the proper page. “That’s reasonable,” said he. “An entirely normal reaction.”

“Certainly. But they insisted on retaining their weapons throughout their stay, even when they were greeted and welcomed by fellow Humanoids. That’s quite a perceptible deviation from the normal. Investigate it—it might be worth while.”

“As you say, boss. Thanks a lot for the chance you’re giving me. And say—how’s the squid coming along?”

Porus wrinkled his nose. “My sixth try folded up and died yesterday. It’s disgusting.” And with that, he was gone.

Tan Porus of Rigel trembled with rage as he folded the handful of papers he held in two and tore them across. He plugged in the telecaster with a jerk.

“Get me Santins of the math department immediately,” he snapped.

His green eyes shot fire at the placid figure that appeared on the visor almost at once. He shook his fist at the image.

“What on Eron’s the idea of that analysis you sent me just now, you Betelgeusian slime worm?”

The image’s eyebrows shot up in mild surprise. “Don’t

204

HOMO SOL

blame me, Porus. They were your equations, not mine. Where did you get them?”

“Never mind where I got them. That’s the business of the psychology department.”

“All right! And solving them is the business of the mathematics department. That’s the seventh set of the damndest sort of screwy equations I’ve ever seen. It was the worst yet.

You made at least seventeen assumptions which you had no

right to make. It took us two weeks to straighten you out, and

finally we boiled it down—“

Porus jumped as if stung. “I know what you boiled it down to. I just tore up the sheets. You take eighteen independent variables in twenty equations, representing two months of work, and solve them out at the bottom of the last, last page with that gem of oracular wisdom—‘a’ equals ‘a.’ All that work—and all I get is an identity.”

“It’s still not my fault, Porus. You argued in circles, and in mathematics that means an identity and there’s nothing you can do about it.” His lips twitched in a slow smile. “What are you kicking about, anyway? ‘A’ does equal ‘a,’ doesn’t it?”

“Shut up!” The telecaster went dead, and the psychologist closed his lips tightly and boiled inwardly. The light signal above the telecaster flashed to life again.

“What do you want now?”

It was the calm, impersonal voice of the receptionist below that answered him. “A messenger from the government, sir.”

“Damn the government! Tell them I’m dead.”

“It’s important, sir. Lor Haridin has returned from Sol and wants to see you.”

Porus frowned. “Sol? What Sol? Oh, I remember. Send him up, but tell him to make it snappy.”

“Come in, Haridin,” he said a little later, voice calmer, as

the young Arcturian, a bit thinner, a bit more weary than he

had been six months earlier when he left the Arcturian Sys-tem, entered.

“Well, young man? Did you write the paper?”

The Arcturian gazed intently upon his fingernails. “No,

sir!”

“Why not?” Porus’ green eyes peered narrowly at the other.

“Don’t tell me you’ve had trouble.”

“Quite, a bit, boss.” The words came with an effort. “The psychological board itself has sent for you after hearing my report. The fact of the matter is that the Solarian System has ... has refused to join the Federation.”

HOMO SOL

Tan Porus shot out of his chair like a jack-in-the-box and landed, purely by chance, on his feet.

“What!!”

Haridin nodded miserably and cleared his throat.

“Now, by the Great Dark Nebula,” swore the Rigellian, distractedly, “if this isn’t one sweet day! First, they tell me that ‘a’ equals ‘a,’ and then you come in and tell me you muffed a Type A reaction—muffed it completely!”

The junior psychologist fired up. “I didn’t muff it. There’s something wrong with the Solarians themselves. They’re not normal. When I landed they went wild over us. There was a fantastic celebration—entirely unrestrained. Nothing was too good for us. I delivered the invitation before their parliament in their own language—a simple one which they call Espe-ranto. I’ll stake my life that my translation was ninety-five percent effective.”

“Well? And then?”

“I can’t understand the rest, boss. First, there was a neutral

reaction and I was a little surprised, and then”—he shuddered

in retrospect—"in seven days—only seven days, boss—the entire planet had reversed itself completely. I couldn't follow their psychology, not by a hundred miles. I've brought home copies of their newspapers of the time in which they objected to joining with 'alien monstrosities' and refused to be 'ruled by inhumans of worlds parsecs away.' I ask you, does that make sense?

"And that's only the beginning. It was light years worse than that. Why, good Galaxy, I went all the way into Type G reactions, trying to figure them out, and couldn't. In the end, we had to leave. We were in actual physical danger from those . . . those Earthmen, as they call themselves."

Tan Porus chewed his lip a while. "Interesting! Have you your report with you?"

"No. The psychological board has it. They've been going over it with a microscope all day."

"And what do they say?"

The young Arcturian winced. "They don't say it openly, but they leave a strong impression of thinking the report an inaccurate one."

"Well, I'll decide about that after I've read it. Meanwhile, come with me to Parliamentary Hall and you can answer a few questions on the way."

Joselin Arn of Alpha Centauri rubbed stubbled jaws with

206

HOMO SOL

his huge, six-fingered hand and peered from under beetling brows at the semicircle of diversified faces that stared down upon him. The psychological board was composed of psychol-ogists of a score of worlds, and their united gaze was not the easiest thing in the world to withstand.

"We have been informed," began Friar Obel, head of the board and native of Vega, home of the green-skinned men, "that those sections of the report dealing with Sol's military state are your work."

Joselin Arn inclined his head in silent agreement.

"And you are prepared to confirm what you have stated here, in spite of its inherent improbability? You

are no psy-chologist, you know.”

“No! But I’m a soldier!” The Centaurian’s jaws set stub-bornly as his bass voice rumbled through the hall. “I don’t know equations and I don’t know graphs—but I do know spaceships. I’ve seen theirs and I’ve seen ours, and theirs are better. I’ve seen their first interstellar ship. Give them a hun-dred years and they’ll have a better hyperatomos than we have. I’ve seen their weapons. They’ve got almost everything we have, at a stage in their history millennia before us. What they haven’t got—they’ll get, and soon. What they have got, they’ll improve.

“I’ve seen their munitions plants. Ours are more advanced, but theirs are more efficient. I’ve seen their soldiers—and I’d rather fight with them than against them.

“I’ve said all that in the report. I say it again now.”

His brusque sentences came to an end and Friar Obel waited for the murmur from the men about him to cease.

“And the rest of their science; medicine, chemistry, phys-ics? What of them?”

“I’m not the best judge of those. You have the report there of those who know, however, and to the best of my knowl-edge I confirm them.”

“And so these Solarians are true Humanoids?”

“By the circling worlds of Centauri, yes!”

The old scientist drew himself back in his chair with a peevish gesture and cast a rapid, frowning glance up and down the length of the table.

“Colleagues,” he said, “we make little progress by rehash-
ing this mess of impossibilities. We have a race of Humanoids
of a superlatively technological turn; possessing at the same
time an intrinsically unscientific belief in supernatural forces,
an incredibly childish predilection toward individuality, singly

207

HOMO SOL

and in groups, and, worst of all, lack of sufficient vision to

embrace a galaxy-wide culture.”

He glared down upon the lowering Centaurian before him.

“Such a race must exist if we are to believe the report—and fundamental axioms of psychology must crumble. But I, for one, refuse to believe any such—to be vulgar about it—comet gas. This is plainly a case of mismanagement to be investigated by the proper authorities. I hope you all agree with me when I say that this report be consigned to the scrap heap and that a second expedition led by an expert in his line, not by an inexperienced junior psychologist or a soldier—“

The drone of the scientist’s voice was buried suddenly in the crash of an iron fist against the table. Joselin Am, his huge bulk writhing in anger, lost his temper and gave vent to martial wrath.

“Now, by the writhing spawn of Templis, by the worms that crawl and the gnats that fly, by the cesspools and the plague spots, and by the hooded death itself, / won’t allow this. Are you to sit there with your theories and your long-range wisdom and deny what I have seen with my eyes? Are my eyes”—and they flashed fire as he spoke—“to deny themselves because of a few wriggling marks your palsied hands trace on paper?”

“To the core of Centauri with these armchair wise men, say I—and the psychologists first of all. Blast these men who bury themselves in their books and their laboratories and are blind to what goes on in the living world outside. Psychology,

is it? Rotten, putrid—“

A tap on his belt caused him to whirl, eyes staring, fists clenched. For a moment, he looked about vainly. Then, turn-ing his gaze downward, he found himself looking into the enig-matic green eyes of a pygmy of a man, whose piercing stare seemed to drench his anger with ice water.

“I know you, Joselin Am,” said Tan Porus slowly, picking his words carefully. “You’re a brave man and a good soldier, but you don’t like psychologists, I see. That is wrong of you, for it is on psychology that the political success of the Federation rests. Take it away and our Union crumbles, our great Federation melts away, the Galactic System is shattered.” His voice descended into a soft, liquid croon. “You have sworn an oath to defend the System against all its enemies, Joselin Am—and you yourself have now become its greatest. You strike at its foundations. You dig at its roots. You poison it

208

HOMO SOL

at its source. You are dishonored. You are disgraced. You are a traitor.”

The Centaurian soldier shook his head helplessly. As Poms spoke, deep and bitter remorse filled him. Recollection of his words of a moment ago lay heavy on his conscience. When the psychologist finished, Am bent his head and wept. Tears ran down those lined, war-scarred cheeks, to which for forty years now they had been a stranger.

Porus spoke again, and this time his voice boomed like a thunderclap: “Away with your mewling whine, you coward. Danger is at hand. Man the guns!”

Joselin Am snapped to attention; the sorrow that had filled him a bare second before was gone as if it had never existed.

The room rocked with laughter and the soldier grasped the situation. It had been Poms’ way of punishing him. With his complete knowledge of the devious ins and outs of the Hu-manoid mind, he had only to push the proper button, and—

The Centaurian bit his lip in embarrassment, but said nothing.

But Tan Poms, himself, did not laugh. To tease the soldier was one thing; to humiliate him, quite another.

With a bound, he was on a chair and laid his small hand on the other's massive shoulder.

"No offense, my friend—a little lesson, that is all. Fight the sub-humanoids and the hostile environments of fifty worlds. Dare space in a leaky rattletrap of a ship. Defy whatever dangers you wish. But never, never offend a psychologist. He might get angry in earnest the next time."

Arn bent his head back and laughed—a gigantic roar of mirth that shook the room with its earthquakelike lustiness.

"Your advice is well taken, psychologist. Bum me with an atomo, if I don't think you're right." He strode from the room with his shoulders still heaving with suppressed laughter.

Porus hopped off the chair and turned to face the board.

"This is an interesting race of Humanoids we have stumbled upon, colleagues."

"Ah," said Obel, dryly, "the great Poms feels bound to come to his pupil's defense. Your digestion seems to have im-proved, since you feel yourself capable of swallowing Hari-din's report."

Haridin, standing, head bowed, in the corner, reddened angrily, but did not move.

Poms frowned, but his voice kept to its even tone. "I do,

HOMO SOL

and the report, if properly analyzed, will give rise to a revolu-tion in the science. It is a psychological gold mine; and Homo Sol, the find of the millenium."

"Be specific. Tan Porus," drawled someone. "Your tricks are all very well for a Centaurian blockhead, but we remain unimpressed."

The fiery little Rigellian emitted a gurgle of anger. He shook one tiny fist in the direction of the last speaker.

"I'll be more specific, Inar Tubal, you hairy space bug." Prudence and anger waged a visible battle within him. "There is more to a Humanoid than you think—certainly far more than you mental cripples can understand. Just to show you what you don't know, you desiccated group of fossils, I'll un-dertake to show you a bit of psycho-technology that'll knock the guts right out of you. Panic, morons, panic! Worldwide panic!"

There was an awful silence. "Did you say world-wide panic?" stuttered Friar Obel, his green skin turning gray. "Panic?"

"Yes, you parrot. Give me six months and fifty assistants and I'll show you a world of Humanoids in panic."

Obel attempted vainly to answer. His mouth worked in a heroic attempt to remain serious—and failed. As though by signal, the entire board dropped its dignity and leaned back in a single burst of laughter.

"I remember," gasped Inar Tubal of Sirius, his round face streaked with tears of pure joy, "a student of mine who once claimed to have discovered a stimulus that would induce world-wide panic. When I

checked his results, I came across an exponent with a misplaced decimal point. He was only ten orders of magnitude out of the way. How many decimal points have you misplaced, Colleague Porus?"

"What of Kraut's Law, Porus, which says you can't panic more than five Humanoids at a time? Shall we pass a resolution repealing it? And maybe the atomic theory as well, while we're about it?" and Semper Gor of Capella cackled glee-fully.

Porus climbed onto the table and snatched Obel's gavel.

"The next one who laughs is getting this over his empty head."

There was sudden silence.

"I'm taking fifty assistants," shouted the green-eyed Rigellian,

"and Joselin Am is taking me to Sol. I want five of you to

come with me—Inar Tubal, Semper Gor and any three others

—so that I can watch their stupid faces when I've done what

210

HOMO SOL

I said I would." He hefted the gavel, threateningly. "Well?"

Frian Obel gazed at the ceiling placidly. "All right, Porus. Tubal. Gor. Helvin, Prat, and Winson can go with you. At the end of the specified time, we'll witness world-wide panic which will be very gratifying—or we'll watch you eat your words, and how much more gratifying that would be." And with that, he chuckled very quietly to himself.

Tan Porus stared thoughtfully out the window. Terrapolis, capital city of Earth, sprawled beneath him to the very edge of the horizon. Its muted roar reached even to the half-mile height at which he stood.

There was something over that city, invisible and intangible but none the less real. Its presence was only too evident to the small psychologist. The choking, cloak of dank fear that spread over the metropolis beneath was one of his own weaving—a horrible cloak of dark uncertainty, that clutched with clammy fingers at the hearts of Mankind and stopped short—just short—of actual panic.

The roar of the city had voices in it, and the voices were tiny ones of fear.

The Rigellian turned away in disgust. "Hey, Haridin," he roared.

The young Arcturian turned away from the televisor. "Call-ing me, boss?"

"What do you think I'm doing? Talking to myself? What's the latest from Asia?"

"Nothing new. The stimuli just aren't strong enough. The yellow men seem to be more stolid of disposition than the white dominants of America and Europe. I've sent out orders not to increase the stimuli, though."

“No, they mustn’t,” agreed Porus. “We can’t risk active panic.” He ruminated in silence. “Listen, we’re about through. Tell them to hit a few of the big cities—they’re more suscep-tible—and quit.”

He turned to the window again. “Space, what a world—what a world! An entirely new branch of psychology has opened up—one we never dreamed of. Mob psychology, Haridin, mob psychology.” He shook his head impressively.

“There’s lots of suffering, though, boss,” muttered the younger man. “This passive panic has completely paralyzed trade and commerce. The business life of the entire planet is stagnant. The poor government is helpless—they don’t know what’s wrong.”

211

HOMO SOL

“They’ll find out—when I’m ready.~A’nd, as for the suffer-
ing—well, I don’t like it, either, but it’s all a means to an end,
a damned important end.”

There followed a short silence, and then Porus’ lips twitched into a nasty smile. “Those five nitwits returned from Europe yesterday, didn’t they?”

Haridin smiled in turn and nodded vigorously, “And hop-ping sore! Your predictions have checked to the fifth decimal place. They’re fit to be tied.”

“Good! I’m only sorry I can’t see Obel’s face right now, after the last message I sent him. And, incidentally”—his voice dropped lower—“what’s the latest on them?”

Haridin raised two fingers. “Two weeks, and they’ll be
here.”

“Two weeks . . . two weeks,” gurgled Porus jubilantly. He

rose and made for the door. “I think I’ll find my dear, dear colleagues and pass the time of day.”

The five scientists of the board looked up from their notes and fell into an embarrassed silence as Porus entered.

The latter smiled impishly. “Notes satisfactory, gentlemen? Found some fifty or sixty fallacies in my fundamental assump-tions, no doubt?”

Hybron Prat of Alpha Cepheus rumbled the gray fuzz he called hair. “I don’t trust the unholy tricks this crazy mathe-matical notation of yours plays.”

The Rigellian emitted a short bark of laughter. “Invent a better, then. So far, it’s done a good job of handling reactions, hasn’t it?”

There was an unmusical chorus of throat-clearings but no definite answer.

“Hasn’t it?” thundered Porus.

“Well, what if it has,” returned Kim Winson, desperately. “Where’s your panic? All this is well and good. These Huma-noids are cosmic freaks, but where’s the big show you were going to put on? Until you break Kraut’s Law, this entire exhibition of yours isn’t worth a pinhead meteor.”

“You’re beaten, gentlemen, you’re beaten,” crowed the small master psychologist. “I’ve proven my point—this passive panic is as impossible according to classic psychology as the active form. You’re trying to deny facts and save face now, by harping on a technicality. Go home; go home, gentlemen, and hide under the bed.”

Psychologists are only human. They can analyze the motives

212

HOMO SOL

that drive them, but they are the slave of those motives just as much as the commonest mortal of all. These galaxy-famous psychologists writhed under the lash of wounded pride and shattered vanity, and their blind stubbornness was the me-chanical reaction due therefrom. They knew it was and they knew Porus knew it was—and that made it all the harder.

Inar Tubal stared angrily from red-rimmed eyes. “Active panic or nothing. Tan Porus. That’s what you promised, and that’s what we’ll have. We want the letter of the bond or, by space and time, we’ll balk at any technicality. Active panic or we report failure!”

Porus swelled ominously and, with a tremendous effort, spoke quietly. “Be reasonable, gentlemen. We haven’t the equipment to handle active panic. We’ve never come up against this superform they have here on Earth. What if it gets beyond control?” He shook his head violently.

“Isolate it, then,” snarled Semper Gor. “Start it up and put it out. Make all the preparations you want, but do it!”

“If you can,” grunted Hybron Prat.

But Tan Porus had his weak point. His brittle temper lay in splintered shards about him. His agile tongue blistered the atmosphere and inundated the sullen psychologist with wave after wave of concentrated profanity.

“Have your way, vacuumheads! Have your way and to outer space with you!” He was breathless with passion. “We’ll set it off right here in Terrapolis as soon as all the men are back home. Only you’d all better get from under!”

And with one last parting snarl, he stalked from the room.

Tan Porus parted the curtains with a sweep of his hand, and the five psychologists facing him averted their eyes. The streets of Earth’s capital were deserted of civilian population. The ordered tramp of the military patrolling the highways of the city sounded like a dirge. The wintry sky hung low over a scene of strewn bodies—and silence; the silence that follows an orgy of wild destruction.

“It was touch and go for a few hours there, c’olleagues.” Porus’ voice was tired. “If it had passed the city limits, we could never have stopped it.”

“Horrible, horrible!” muttered Hybron Prat. “It was a scene a psychologist would have given his right arm to witness—and his life to forget.”

“And these are Humanoids!” groaned Kim Winson.

Semper Gor rose to his feet in sudden decision. “Do you

213

HOMO SOL

see the significance of this, Porus? These Earthmen are sheer uncontrolled atomite. They can’t be handled. Were they twice the technological geniuses they are, they would be useless. With their mob psychology, their mass panics, their superemo-tionalism, they simply won’t fit into the Humanoid picture.”

Porus raised an eyebrow. “Comet gas! Individually, we are as emotional as they are. They carry it into mass action and we don’t; that’s the only difference.”

“And that’s enough!” exclaimed Tubal. “We’ve made our decision, Porus. We made it last night, at the height of the ... the ... of it. The Solar System is to be left to itself. It is a plague spot and we want none of it. As far as the Galaxy is concerned. Homo Sol will be placed in strict quarantine. That is final!”

The Rigellian laughed softly. “For the Galaxy, it may be final. But for Homo Sol?”

Tubal shrugged. “They don’t concern us.”

Porus laughed again. “Say, Tubal. Just between the two of us, have you tried a time integration of Equation 128 fol-lowed by expansion with Karolean tensors?”

“No-o. I can’t say I have.”

“Well, then, just glance up and down these calculations and enjoy yourself.”

The five scientists of the board grouped themselves about the sheets of paper Porus had handed them. Expressions changed from interest to bewilderment and then to something approaching panic.

Nam Helvin tore the sheets across with a spasmodic move-ment. “It’s a lie,” he screeched.

“We’re a thousand years ahead of them now, and by that time we’ll be advanced another two hundred years!” Tubal snapped. “They won’t be able to do anything against the mass of the Galaxy’s people.”

Tan Porus laughed in a monotone, which is hard to do, but very unpleasant to hear. “You still don’t believe mathematics.

That’s in your behavior pattern, of course. All right, let’s see

if experts convince you—as they should, unless contact with

these off-normal Humanoids has twisted you. Joselin—Joselin

Am—come in herel”

The Centaurian commander came in, saluted automatically, and looked expectant.

“Can one of your ships defeat one of the Sol ships in battle, if necessary?”

214

HOMO SOL

Arn grinned sourly. “Not a chance, sir. These Humanoids break Kraut’s Law in panic—and also in fighting. We have a corps of experts manning our ships; these people have a single crew that functions as a unit, without individuality. They manifest a form of fighting—panic, I imagine, is the best word. Every individual on a ship becomes an organ of the ship. With us, as you know, that’s impossible.

“Furthermore, this world’s a mass of mad geniuses. They have, to my certain knowledge, taken no less than twenty-two interesting but useless gadgets they saw in the Thalsoon Museum when they visited us, turned ‘em inside out, and pro-duced from them some of the most unpleasant military de-vices I’ve seen.

You know of Julmun Thill's gravitational line tracer? Used—rather ineffectively—for spotting ore deposits before the modern electric potential method came in?

“They've turned it—somehow—into one of the deadliest automatic fire directors it's been my displeasure to see. It will automatically lay a gun or projector on a completely invisible target in space, air, water or rock, for that matter.”

“We,” said Tan Porus, gleefully, “have far greater fleets than they. We could overwhelm them, could we not?”

Joselin Am shook his head. “Defeat them now—probably. It wouldn't be overwhelming, though, and I wouldn't bet on it too heavily. Certainly wouldn't invite it. The trouble is, in a military way, this collection of gadget maniacs invent things at a horrible rate. Technologically, they're as unstable as a wave in water; our civilization is more like a sanddune. I've seen their ground-car plants install a complete plant of machine tools for production of a new model of automobile—and rip it out in six months because it's completely obsolete!

“Now we've come in contact with their civilization briefly. We've learned the methods of one new civilization to add to our previous two hundred and eighty-odd—a small percentage advantage. They've added one new civilization to their previous one—a one-hundred-percent advance!”

“How about,” Porus asked gently, “our military position if we simply ignore them completely for two hundred years?”

Joselin Am gave an explosive little laugh. “// we could—which means if they'd let us—I'd answer offhand and with assurance. They're all I'd care to tackle right now. Two hundred years of exploring the new tracks suggested by their brief contact with us and they'd be doing things I can't imagine. Wait two hundred years and there won't be a battle; there'll be an annexation.”

215

HOMO SOL

Tan Porus bowed formally. “Thank you, Joselin Arn. That was the result of my mathematical work.”

Joselin Arn saluted and left the room.

Turning to the five thoroughly paralyzed scientists, Porus went on: “And I hope these learned gentlemen still react in a vaguely Humanoid way. Are you convinced that it is not up to us to decide to end all intercourse with this race? We may—but they won't!

“Fools”—he spat out the word—“do you think I'm going to waste time arguing with you? I'm laying down the law, do you understand? Homo Sol shall enter the Federation. They are going to be trained into maturity in two hundred years. And I'm not asking you; I'm telling you!” The Rigellian stared up at them truculently.

“Come with me!” he growled brusquely.

They followed in tame submission and entered Tan Porus’ sleeping quarters. The little psychologist drew aside a curtain and revealed a life-size painting.

“Make anything of that?”

It was the portrait of an Earthman, but of such an Earth-man as none of the psychologists had yet seen. Dignified and sternly handsome, with one hand stroking a regal beard, and the other holding the single flowing garment that clothed him, he seemed personified majesty.

“That’s Zeus,” said Porus. “The primitive Earthmen created him as the personification of storm and lightning.” He whirled upon the bewildered five. “Does it remind you of anybody?”

“Homo Canopus?” ventured Helvin uncertainly.

For a moment, Porus’ face relaxed in momentary gratification and then it hardened again. “Of course,” he snapped. “Why do you hesitate about it? That’s Canopus to the life, down to the full yellow beard.”

Then: “Here’s something else.” He drew another curtain.

The portrait was of a female, this time. Full-bosomed and wide-hipped she was. An ineffable smile graced her face and her hands seemed to caress the stalks of grain that sprang thickly about her feet.

“Demeter!” said Porus. “The personification of agricultural fertility. The idealized mother. Whom does that remind you of?”

There was no hesitation this time. Five voices rang out as

one: “Homo Betelgeuse!”

Tan Porus smiled in delight. “There you have it Well?”

216

HOMO SOL

“Well?” said Tubal.

“Don’t you see?” The smile faded. “Isn’t it clear? Nitwit! If a hundred Zeuses and a hundred Demeters were to land on Earth as part of a ‘trade mission,’ and turned out to be trained psychologists—Now do you see?”

Semper Gor laughed suddenly. “Space, time, and little meteors. Of course! The Earthmen would be putty in the hands of their own personifications of storm and motherhood come to life. In two hundred years—why, in two hundred years, we could do anything.”

“But this so-called trade mission of yours, Porus,” inter-posed Prat. “How would you get Homo Sol to accept it in the first place?”

Porus cocked his head to one side. “Dear Colleague Prat,” he murmured, “do you suppose that I created the passive panic just for the show—or just to gratify five woodenheads? This passive panic paralyzed industry, and the Terrestrial government is faced with revolution—another form of mob action that could use investigation. Offer them Galactic trade and eternal prosperity and do you think they’d jump at it? Has matter mass?”

The Rigellian cut short the excited babble that followed with an impatient gesture. “If you’ve nothing more to ask, gentlemen, let’s begin our preparations to leave. Frankly, I’m tired of Earth, and, more than that, I’m blasted anxious to get back to that squid of mine.”

He opened the door and shouted down the corridor: “Hey, Haridini Tell Arn to have the ship ready in six hours. We’re leaving.”

“But . . . but—“ The chorus of puzzled objections crystal-lized into sudden action as Semper Gor dashed at Porus and snatched him back as he was on the point of leaving. The little Rigellian struggled vainly in the other’s powerful grasp.

“Let go!”

“We’ve endured enough, Porus,” said Gor, “and now you”ll

just calm down and behave like a Humanoid. Whatever you

say, we’re not leaving until we’re finished. We’ve got to ar-

range with the Terrestrial government concerning the trade

mission. We’ve got to secure approval of the board. We’ve

got to pick our psychologist. We’ve got to—“

Here Porus, with a sudden jerk, freed himself. “Do you suppose for one moment that I would wait for your precious board to start to begin to commence to- consider doing some-thing about the situation in two or three decades?

217

HOMO SOL

“Earth agreed to my terms unconditionally a month ago. The squad of Canopans and Betelgeusans set sail five months ago, and landed day before yesterday. It was only with their help that we managed to stop yesterday’s panic—though you never suspected it. You probably thought you did it yourself. Today,

gentlemen, they have the situation in full control and your services are no longer needed. We're going home."

THE END

"Homo Sol" has a plot of a sort that particularly appealed to Campbell. Although the human beings in the story are far behind the other intelligences of the Galaxy, it is clear that there is something special about them, that they have an unusual ability to move ahead very quickly, and that every-one else had better watch out for them.

Campbell liked stories in which human beings proved themselves superior to other intelligences, even when those others were further advanced technologically. It pleased him to have human beings shown to possess a unique spirit of daring, or a sense of humor, or a ruthless ability to kill when necessary, that always brought them victory over other intelligences, even against odds.

I sometimes got the uncomfortable notion> however, that this attitude reflected Campbell's feelings on the smaller, Earth scale. He seemed to me to accept the natural superiority of Americans over non-Americans, and he seemed automatically to assume the picture of an American as one who was of northwest European origin.

I cannot say that Campbell was racist in any evil sense of the term. I cannot recall any act of his that could be construed as unkind, and certainly he never, not once, made me feel uncomfortable over the fact that I was Jewish.

Nevertheless, he did seem to take for granted, somehow, the stereotype of the Nordic white as the true representative of Man the Explorer, Man the Darer, Man the Victor, I argued with him strenuously on the subject, or as violently as I dared, and in years to come our relationship was to be as nearly strained as it could be (considering our mutual affection, and all that I owed him) over the civil rights issue. I was on the liberal side of the issue, he

HOMO SOL

on the conservative, and our minds never met on that subject.

All this had an important bearing on my science fiction work. I did not like Campbell's attitude concerning humanity vis-a-vis other intelligences and it took two revisions of "Homo Sol" before Campbell could move me close enough to what he wanted. Even then, he inserted several paragraphs, here and there, without consulting me, in the final version.

I tried to avoid such a situation in future. One way out was to depart from the traditions of those writers who wove plots against the gigantic web of entire galaxies containing many intelligences—notably those of E. E. Smith and of Campbell himself. Instead, I began to think of stories involving a galaxy populated by human intelligences only.

This came to fruit, soon enough, in the "Foundation" series. Undoubtedly the Smith-Campbell view makes more sense. It is almost certain that among the hundreds of billions of worlds in a large galaxy there ought to be hundreds or even thousands of different intelligent species. That there should be only one, ourselves, as I postulated, is most unlikely.

Some science fiction critics (notably Sam Moskowitz) have given me credit for inventing the human-only galaxy, as though it were some kind of literary advance. Others may have thought privately (I have never heard it stated openly) that I had only human intelligences in my galaxy because I lacked the imagination to think up extraterrestrials.

But the fact is that I was only trying to avoid a collision with Campbell's views; I did not want to set up a situation in which I would be forced to face the alternatives of adopting Campbell's views when I found them repugnant and failing to sell a story (which I also found repugnant).

On March 25, 1940, the day I put through my final submission of "Homo Sol," I went on to visit Fred Pohl at his office. He told me that the response to "Half-Breed" had been such that he felt justified in asking for a sequel. It was the first time I had ever been requested to write a

HOMO SOL

specific story with acceptance virtually guaranteed in ad-vance.

I spent April and May working on the sequel, “Half-Breeds on Venus,” and submitted it to Pohl on June 3. On June 14, he accepted it. The story was ten thousand words long, the longest I had ever sold up to that time. What’s more, Pohl’s magazines were doing so well that his budget had been increased and he was able to pay me five eighths of a cent a word for it—\$62.50.

It appeared in the issue of *Astonishing* that reached the stands on October 24, 1940, two years almost to a day since my first sale. This was a red-letter day for me, too, since it was the first time that the cover painting on a magazine was ever taken from one of my stories. I had “made the cover.”

The title of the story and my name were on the cover in bold letters. It was a flattering indication that my name could be counted on to sell magazines by this time.

220

10

Half-Breeds on Venus

The damp, somnolent atmosphere stirred violently and shrieked aside. The bare plateau shook three times as the heavy eggshaped projectiles shot down from outer space. The sound of the landing reverberated from the mountains on one side to the lush forest on the other, and then all was silent again.

One by one, three doors clanged open, and human figures stepped out in hesitant single file. First slowly, and then with impatient turbulence, they set first foot upon the new world, until the space surrounding the ships was crowded.

A thousand pairs of eyes gazed upon the prospect and a thousand mouths chattered excitedly. And in the other-world wind, a thousand crests of foot-high white hair swayed grace-fully.

The Tweenies had landed on Venus t

Max Scanlon sighed wearily, “Here we are!”

He turned from the porthole and slumped into his own special arm-chair. “They’re as happy as children—and I don’t blame them. We’ve got a new world—one all for ourselves—and that’s a great thing. But just the same, there are hard days ahead .of us. I am almost afraid! It is a project so lightly em-barked upon, but one so hard to carry out to completion.”

A gentle arm stole about his shoulder and he grasped it tightly, smiling into the soft, blue eyes that met his. “But

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221

HALF-BREEDS ON VENUS

you’re not afraid, are you, Madeline?”

“Certainly not!” And then her expression grew sadder, “If only father had come with us. You—you know that he meant more to us than to the others. We were the—the first he took under his wing, weren’t we?”

There was a long silence after that as each fell into deep thought.

Max sighed, “I remember him that day forty years ago—old suit, pipe, everything. He took me in. Me, a despised half-breed! And—and he found you for me, Madeline!”

“I know,” there were tears in her eyes. “But he’s still with us, Max, and always will be—here, and there.” Her hand crept first to her own heart and then to Max’s.

“Hey, there, Dad, catch her, catch her!”

Max whirled at the sound of his elder son’s voice, just in time to catch up the little bundle of flying arms and legs that catapulted into him.

He held her gravely up before him, “Shall I give you to your papa, Elsie? He wants you.”

The little girl kicked her legs ecstatically. “No, no. I want you, grand-daddy. I want you to give me a piggy-back and come out with grandmamma to see how nice everything is.”

Max turned to his son, and motioned him sternly away, “Depart, despised father, and let old grand-dad have a chance.”

Arthur laughed and mopped a red face, “Keep her, for Heaven’s sake. She’s been leading me and the

wife a merry chase outside. We had to drag her back by the dress to keep her from running off into the forest. Didn't we, Elsie?"

Elsie, thus appealed to, suddenly recalled a past grievance. "Grand-daddy, tell him to let me see the pretty trees. He doesn't want me to." She wriggled from Max's grasp and ran to the porthole. "See them, grand-daddy, see them. It's all trees outside. It's not black anymore. I hated it when it was black, didn't you?"

Max leaned over and ruffled the child's soft, white hair gravely, "Yes, Elsie, I hated it when it was black. But it isn't black anymore, and it won't ever be black again. Now go run to grandmamma. She'll get some cake specially for you. Go ahead, run!"

He followed the departing forms of his wife and grand-daughter with smiling eyes, and then, as they turned to his son, they became serious once more.

222

HALF-BREEDS ON VENUS

"Well, Arthur?"

"Well, dad, what now?"

"There's no time to waste, son. We've got to start building immediately—underground!"

Arthur snapped into an attentive attitude, "Underground!"

He frowned his dismay.

"I know, I know. I said nothing of this previously, but it's got to be done. At all costs we must vanish from the face of the System. There are Earthmen on Venus—purebloods. There aren't many, it's true, but there are some. They mustn't find us—at least, not until we are prepared for whatever may follow. That will take years."

"But father, underground! To live like moles, hidden from

light and air. I don't like that." -

"Oh, nonsense. Don't overdramatize. We'll live on the surface—but the city; the power-stations, the food and water reserves, the laboratories—all that must be below and im-pregnable."

The old Tweenie gestured the subject away with impatience, "Forget that, anyway. I want to talk about something else—something we've discussed already."

Arthur's eyes hardened and he shifted his glance to the ceiling. Max rose and placed his hands upon his son's brawny shoulders.

"I'm past sixty, Arthur. How long I have yet to live, I don't know. In any case, the best of me belongs to the past and it is better that I yield the leadership to a younger, more vigorous person."

“Dad, that’s sentimental bosh and you know it. There isn’t one of us that’s fit to wipe your shoes and no one is going to listen for a second to any plan of appointing a successor while you’re still alive.”

“I’m not going to ask them to listen. It’s done—and you’re the new leader.”

The younger man shook his head firmly, “You can’t make me serve against my will.”

Max smiled whimsically, “I’m afraid you’re dodging re-sponsibility, son. You’re leaving your poor old father to the strains and hardships of a job beyond his aged strength.”

“Dad!” came the shocked retort. “That’s not so. You know

it isn’t. You—“

“Then prove it. Look at it this way. Our race needs active

leadership, and I can’t supply it. I’ll always be here—while I

live—to advise you and help you as best I can, but from now

223

HALF-BREEDS ON VENUS

on, you must take the initiative.”

Arthur frowned and the words came from him reluctantly, “All right, then. I take the job of field commander. But re-member, you’re commander-in-chief.”

“Good! And now let’s celebrate the occasion.” Max opened a cupboard and withdrew a box, from which he abstracted a pair of cigars. He sighed, “The supply of tobacco is down to the vanishing point and we won’t have any more until we grow our own, but— we’ll smoke to the new leader.”

Blue smoke curled upwards and Max frowned through it at his son, “Where’s Henry?”

Arthur grinned, “Dunno! I haven’t seen hirri since we landed. I can tell you with whom he is, though.”

Max grunted, “I know that, too.”

“The kid’s making hay while the sun shines. It won’t be many years now. Dad, before you’ll be spoiling a second set of grandchildren.”

“If they’re as good as the three of my first set, I only hope I live to see the day.”

And father and son smiled affectionately at each other and listened in silence to the muted sound of happy laughter from the hundreds of Tweenies outside.

Henry Scanlon cocked his head to one side, and raised his hand for silence, "Do you hear running water, Irene?"

The girl at his side nodded, "Over in that direction."

"Let's go there, then. A river flashed by just before we landed and maybe that's it."

"All right, if you say so, but I think we ought to be getting back to the ships."

"What for?" Henry stopped and stared. "I should think you'd be glad to stretch your legs after weeks on a crowded ship."

"Well, it might be dangerous."

"Not here in the highlands, Irene. Venusian highlands are practically a second Earth. You can see this is forest and not jungle. Now if we were in the coastal regions—" He broke off short, as if he had just remembered something. "Besides, what's there to be afraid of? I'm with you, aren't I?" And he patted the Tonite gun at his hip.

Irene repressed a sudden smile and shot an arch glance at her strutting companion, "I'm quite aware that you're with me. That's the danger."

Henry's chest deflated with an audible gasp. He frowned.

224

HALF-BREEDS ON VENUS

"Very funny—And I on my best behavior, too." He drifted away, brooded sulkily awhile, and then addressed the trees in a distant manner, "Which reminds me that tomorrow is Daphne's birthday. I've promised her a present."

"Get her a reducing belt," came the quick retort. "Fat thing!"

"Who's fat? Daphne? Oh—I wouldn't say so." He considered matters carefully, one thoughtful eye upon the young girl at his side. "Now my description of her would be—shall we say—'pleasingly plump,' or, maybe, 'comfortably upholstered.' "

"She's fat," Irene's voice was suddenly a hiss, and something very like a frown wrinkled her lovely face, "and her eyes are green." She swung on ahead, chin high, and superbly con-scious of her own little figure.

Henry hastened his steps and caught up, "Of course, I prefer skinny girls any day.

Irene whirled on him and her little fists clenched, "I'm not skinny, you incredibly stupid ape."

"But Irene, who said I meant you?" His voice was solemn,

but his eyes were laughing,

The girl reddened to the ears and turned away, lower lip trembling. The smile faded from Henry's eyes and was re-placed by a look of concern. His arm shot out hesitantly and slipped about her shoulder.

"Angry, Irene?"

The smile that lit her face of a sudden was as brilliant as the sparkling sheen of her silvery hair in the bright sun.

"No," she said.

Their eyes met and, for a moment, Henry hesitated—and found that he who hesitates is lost; for with a sudden twist and a smothered laugh, Irene was free once more.

Pointing through a break in the trees, she cried, "Look, a lake!" and was off at a run.

Henry scowled, muttered something under his breath, and ran after.

The scene was truly Earthly. A rapids-broken stream wound its way through banks of slender-trunked trees and then spread into a placid lake some miles in width. The brooding quiet was unbroken save by the muffled beat that issued from the throat-bags of the frilled lizards that nested in the upper reaches of the trees.

The two Tweenies—boy and girl—stood hand in hand upon the bank and drank in the beauty of the scene.

HALF-BREEDS ON VENUS

Then there was a muffled splash near by and Irene shrank into the encircling arms of her companion.

"What's the matter?"

"N—nothing. Something moved in the water, I think."

"Oh, imagination, Irene."

"No. I did see something. It came up and—oh, goodness,

Henry, don't squeeze so tightly—"

She almost lost her balance as Henry suddenly dropped her altogether and jerked at his Tonite gun.

Immediately before them, a dripping green head lifted out of the water and regarded them out of wide-set, staring goggle-eyes. Its broad lipless mouth opened and closed rapidly, but not a sound issued forth.

Max Scanlon stared thoughtfully at the rugged foot-hills ahead and clasped his hands behind his back.

"You think so, do you?"

"Certainly, Dad," insisted Arthur, enthusiastically. "If we burrow under these piles of granite, all Earth couldn't get at us. It wouldn't take two months to form the entire cavern, with our unlimited power."

"Hmph! It will require care!"

"It will get it!"

"Mountainous regions are quake regions."

"We can rig up enough stat-rays to hold up all Venus, quakes or no quakes."

"Stat-rays eat up energy wholesale, and a breakdown that will leave us energyless would mean the end."

"We can hook up five separate power-houses,—as foolproof as we can make them. All five won't break down at once."

The old Tweenie smiled, "All right, son. I see you've got it planned thoroughly. Go ahead! Start whenever you want—and remember, it's all up to you."

"Good! Let's get back to the ships." They picked their way gingerly down the rocky, slope.

"You know, Arthur," said Max, stopping suddenly, "I've been thinking about those stat-beams."

"Yes?" Arthur offered his arm, and the two resumed their

walk.

"It's occurred to me that if we could make them two-di-mensional in extent and curve them, we'd have the perfect defense, as long as our energy lasted—a stat-field."

"You need four-dimensional radiation for that. Dad—nice to think about but can't be done."

226

HALF-BREEDS ON VENUS

. "Oh, is that so? Well, listen to this—"

What Arthur was to listen to remained hidden, however—for that day at least. A piercing shout ahead

jerked both their heads upward. Up towards them came the bounding form of Henry Scanlon, and following him, at a goodly distance and a much more leisurely pace, came Irene.

“Say, Dad, I had a devil of a time finding you. Where were you?”

“Right here, son. Where were you?”

“Oh, just around. Listen, Dad. You know those amphibians the explorers talk about as inhabiting the highland lakes of Venus, don’t you? Well, we’ve located them, lots of them, a regular convoy of them. Haven’t we, Irene?”

Irene paused to catch her breath and nodded her head, “They’re the cutest things, Mr. Scanlon. All green.” She wrinkled her nose laughingly.

Arthur and his father exchanged glances of doubt. The former shrugged. “Are you sure you haven’t been seeing things? I remember once. Henry, when you sighted a meteor in space, scared us all to death, and then had it turn out to be your own reflection in the port glass.”

Henry, painfully aware of Irene’s snicker, thrust out a bel-ligerent lower lip, “Say, Art, I guess you’re looking for a shove in the face. And I’m old enough to give it to you, too.”

“Whoa there, quiet down,” came the peremptory voice of the elder Scanlon, “and you, Arthur, had better learn to re-spect your younger brother’s dignity. Now here. Henry, all Arthur meant was that these amphibians are as shy as rabbits. No one’s ever caught more than a glimpse of them.”

“Well, we have. Dad. Lots of them. I guess they were at-tracted by Irene. No one can resist her.”

“I know you can’t,” and Arthur laughed loudly.

Henry stiffened once more, but his father stepped between.

“Grow up, you two. Let’s go and see these amphibians.”

“This is amazing,” exclaimed Max Scanlon. “Why, they’re as friendly as children. I can’t understand it.”

Arthur-shook his head, “Neither can I, Dad. In fifty years, no explorer has ever gotten a good look at one, and here they are—thick as flies.”

Henry was throwing pebbles into the lake. “Watch this, all of you.”

A pebble curved its way into the water, and as it splashed

six green forms turned a back somersault and slid smoothly

227

HALF-BREEDS ON VENUS

below the surface. With no time for a breath between, one was up again and the pebble arced back to fall at Henry’s feet.

The amphibians were crowding closer in ever increasing numbers now, approaching the very edge of the lake, where they grasped at the coarse reeds on the bank and stared goggle-eyed at the Tweenies. Their muscular webbed legs could be seen below the surface of the water, moving back and forth with lazy grace. Without cessation, the lipless mouths opened and closed in a queer, uneven rhythm.

"I think they're talking, Mr. Scanlon," said Irene, suddenly.

"It's quite possible," agreed the old Tweenie, thoughtfully. "Their brain-cases are fairly large, and they may possess considerable intelligence. If their voice boxes and ears are tuned to sound waves of higher or lower range than our own, we would be unable to hear them—and that might very well explain their soundlessness."

"They're probably discussing us as busily as we are them,"

said Arthur.

"Yes, and wondering what sort of freaks we are," added

Irene.

Henry said nothing. He was approaching the edge of the lake with cautious steps. The ground grew muddy beneath his feet, and the reeds thick. The group of amphibians nearest turned anxious eyes toward him, and one or two loosened their hold and slipped silently away.

But the nearest held his ground. His wide mouth was clamped tight; his eyes were wary—but he did not move.

Henry, paused, hesitated, and then held out his hand, "Hiya,

Phib!"

The "Phib" stared at the outstretched hand. Very cautiously, his own webbed forelimb stretched out and touched the Tweenie's fingers. With a jerk, they were drawn back, and the Phib's mouth worked in soundless excitement.

"Be careful," came Max's voice from behind. "You'll scare him that way. His skin is terribly sensitive and dry objects must irritate him. Dip your hand in the water."

Slowly, Henry obeyed. The Phib's muscles tensed to escape at the slightest sudden motion, but none came. Again the Tweenie's hand was held out, dripping wet this time.

For a long minute, nothing happened, as the Phib seemed to debate within itself the future course of action. And then, after two false starts and hasty withdrawals, fingers touched again.

228

HALF-BREEDS ON VENUS

"Ataphib," said Henry, and clasped the green hand in his own.

A single, startled jerk followed and then a lusty return of pressure to an extent that numbed the

Tweenie's fingers. Evi-dently encouraged by the first Phib's example, his fellows were crowding close now, offering hosts of hands.

The other three Tweenies slushed up through the mud now, and offered wetted hands in their turn.

"That's funny," said Irene. "Everytime I shake hands I seem to keep thinking of hair."

Max turned to her, "Hair?"

"Yes, ours. I get a picture of long, white hair, standing straight up and shining in the sun." Her hand rose uncon-sciously to her own smooth tresses.

"Say!" interrupted Henry suddenly, "I've been noticing that, too, now that you mention it. Only when I shake hands, though."

"How about you, Arthur?" asked Max.

Arthur nodded once, his eyebrows climbing.

Max smiled and pounded fist into palm. "Why, it's a primi-tive sort of telepathy—too weak to work without physical contact and even then capable of delivering only a few simple ideas."

"But why hair, dad?" asked Arthur.

"Maybe it's our hair that attracted them in the first place. They've never seen anything like it and—and—well, who can explain their psychology?"

He was down on his knees suddenly, splashing water over

his high crest of hair. There was a frothing of water and a

surging of green bodies as the Phibs pressed closer. One green

paw passed gently through the stiff white crest, followed by

excited, if noiseless, chattering. Struggling amongst themselves

for favored vantage-points, they competed for the privilege of

touching the hair until Max, for sheer weariness, was forced to rise again.

"They're probably our friends for life now," he said. "A pretty queer set of animals."

It was Irene, then, who noticed the group of Phib? a hun-dred yards from shore. They paddled quietly, making no effort to approach closer, "Why don't they come?" she asked.

She turned to one of the foremost Phibs and pointed, mak-ing frantic gestures of dubious meaning. She received only solemn stares in return.

"That's not the way, Irene," admonished Max, gently. He

HALF-BREEDS ON VENUS

held out his hand, grasped that of a willing Phib and stood motionless for a moment. When he loosed his grip, the Phib slid into the water and disappeared. In a moment, the laggard Phibs were approaching shore slowly.

“How did you do it?” gasped Irene.

“Telepathy! I held on tightly and pictured an isolated group of Phibs and a long hand stretching out over the water to shake theirs.” He smiled gently, “They are quite intelligent, or they would not have understood so readily.”

“Why, they’re females,” cried Arthur, in sudden breathless astonishment “By all that’s holy,—they suckle their young!”

The newcomers were slenderer and lighter in color than the others. They advanced shyly, urged on by the bolder males and held out timid hands in greeting.

“Oh-h,” Irene cried in sudden delight. “Look at this!”

She was down on her knees in the mud, arms outstretched to the nearest female. The other three watched in fascinated silence as the nervous she-Phib clasped its tiny armful closer to its breast.

But Irene’s arms made little inviting gestures, “Please, please. It’s so cute. I won’t hurt him.”

Whether the Phib mother understood is doubtful, but with a sudden motion, she held out a little green bundle of squirm-ing life and deposited it in the waiting arms.

Irene rose, squealing with delight. Little webbed feet kicked aimlessly and round frightened eyes stared at her. The other three crowded close and watched it curiously.

“It’s the dearest little thing, it is. Look at its funny little mouth. Do you want to hold it. Henry?”

Henry jumped backwards as if stung, “Not on your life!

I’d probably drop it.”

“Do you get any thought images, Irene?” asked Max, thoughtfully.

Irene considered and frowned her concentration, “No-o. It’s too young, mayb—oh, yes! It’s—it’s—“ She stopped, and tried to laugh. “It’s hungry!”

She returned the little baby Phib to its mother, whose muscular arms clasped the little mite close. The tiny Phib swiveled its little green head to bend one last goggling look at the creature that had held it for an instant.

“Friendly creatures,” said Max, “and intelligent. They can keep their lakes and rivers. We’ll take the land and won’t in-terfere with them.”

HALF-BREEDS ON VENUS

A lone Tweenie stood on Scanlon Ridge and his field-glass pointed at the Divide ten miles up the hills. For five minutes, the glass did not waver and the Tweenie stood like some watchful statue made of the same rock as formed the moun-tains all about.

And then the field-glass lowered, and the Tweenie's face was a pale thin-lipped picture of gloom. He hastened down the slope to the guarded, hidden entrance to Venustown.

He shot past the guards without a word and descended into the lower levels where solid rock was still being puffed into nothingness and shaped at will by controlled blasts of super-energy.

Arthur Scanlon looked up and with a sudden premonition of disaster, gestured the Disintegrators to a halt. "What's wrong, Sorrell?"

The Tweenie leant over and whispered a single word into Arthur's ear.

"Where?" Arthur's voice jerked out hoarsely. "On the other side of the ridge. They're coming through the Divide now in our direction. I spotted the blaze of sun on metal and—" he held up his field-glass significantly.

"Good Lord!" Arthur nibbed his forehead distractedly and then turned to the anxiously-watching Tweenie at the controls of the Disinto. "Continue as planned! No change!"

He hurried up the levels to the entrance, and snapped out hurried orders, "Triple the guard immediately. No one but me or those with me, are to be permitted to leave. Send out men to round up any stragglers outside immediately and order them to keep within shelter and make no unnecessary sound."

Then, back again through the central avenue to his father's quarters.

Max Scanlon looked up from his calculations and his grave forehead smoothed out slowly.

"Hello, son. Is anything wrong? Another resistant stratum?" "No, nothing like that." Arthur closed the door carefully and lowered his voice. "Earthmen!"

For a moment. Max made no movement. The expression on his face froze for an instant, and then, with a sudden ex-halation, he slumped in his chair and the lines in his forehead deepened wearily.

"Settlers?"

"Looks so. Sorrell said women and children were among

HALF-BREEDS ON VENUS

them. There were several hundred in all, equipped for a stay and headed in this direction."

Max groaned, “Oh, the luck, the luck! All the vast empty spaces of Venus to choose and they come here. Come, let’s get a firsthand look at this.”

They came through the Divide in a long, snaky line. Hard-bitten pioneers with their pinched work-worn women and their carefree, half-barbarous, wilderness-bred children. The low, broad “Venus Vans” joggled clumsily over the untrodden ways, loaded down with amorphous masses of household necessities.

The leaders surveyed the prospect and one spoke in clipped, jerky syllables, “Almost through, Jem. We’re out among the foothills now.”

And the other replied slowly, “And there’s good new growing-land ahead. We can stake out farms and settle down.” He sighed, “It’s been tough going this last month. I’m glad it’s over!”

And from a ridge ahead—the last ridge before the valley—the Scanlons, father and son, unseen dots in the distance, watched the newcomers with heavy hearts.

‘The one thing we could not prepare for—and it’s happened.’

Arthur spoke slowly and reluctantly, “They are few and unarmed. We can drive them out in an hour.” With sudden fierceness, “Venus is ours!”

“Yes, we can drive them out in an hour—in ten minutes.

But they would return, in thousands, and armed. We’re not

ready to fight all Earth, Arthur.”

The younger man bit his lip and words were muttered forth half in shame, “For the sake of the race. Father—we could kUl them all.”

“Neveri” exclaimed Max, his old eyes flashing. “We will not be the first to strike. If we kill, we can expect no mercy from Earth; and we will deserve none,”

“But, father, what else? We can expect no mercy from Earth as it is. If we’re spotted,—if they ever suspect our existence, our whole hegira becomes pointless and we lose out at the very beginning.”

“I know. I know.”

“We can’t change now,” continued Arthur, passionately.

“We’ve spent months preparing Venustown. How could we start over?”

232

HALF-BREEDS ON VENUS

“We can’t,” agreed Max, tonelessly. “To even attempt to move would mean sure discovery. We can only—“

“Live like moles after all. Hunted fugitives! Frightened refugees! Is that it?”

“Put it any way you like—but we must hide, Arthur, and bury ourselves.”

“Until—?”

“Until I—or we—perfect a curved two-dimensional stat-beam. Surrounded by an impermeable defense, we can come out into the open. It may take years; it may take one week. I don’t know.”

“And every day we run the risk of detection. Any day the swarms of purebloods can come down upon us and wipe us

out. We've got to hang by a hair day after day, week after week, month after month—"

"We've got to." Max's mouth was clamped shut, and his eyes were a frosty blue.

Slowly, they went back to Venustown.

Things were quiet in Venustown, and eyes were turned to the top-most level and the hidden exits. Out there was air and the sun and space—and Earthnaen.

They had settled several miles up the river-bed. Their rude houses were springing up. Surrounding land was being cleared. Farms were being staked out. Planting was taking place.

And in the bowels of Venus, eleven hundred Tweenies shaped their home and waited for an old man to track down the elusive equations that would enable a stat-ray to spread in two dimensions and curve.

Irene brooded somberly as she sat upon the rocky ledge and stared ahead to where the dim gray light indicated the existence of an exit to the open. Her shapely legs swung gently back and forth and Henry Scanlon, at her side, fought desperately to keep his gaze focussed harmlessly upon air.

"You know what. Henry?"

"What?"

"I'll bet the Phibs could help us."

"Help us do what, Irene?"

"Help us get rid of the Earthmen."

Henry thought it over carefully, "What makes you think that?"

"Well, they're pretty clever—cleverer than we think. Their minds are altogether different, though, and maybe they could fix it. Besides—I've just got a feeling." She withdrew her hand

233

HALF-BREEDS ON VENUS

suddenly, "You don't have to hold it. Henry."

Henry swallowed, "I—I thought you had a sort of unsteady seat there—might fall, you know."

"Ohi" Irene looked down the terrific three-foot drop.

"There's something in what you say. It does look pretty high

here.”

Henry decided he was in the presence of a hint, and acted accordingly. There was a moment’s silence while he seriously considered the possibility of her feeling a bit chilly—but before he had quite decided that she probably was, she spoke again,

“What I was going to say, Henry, was this. Why don’t we go out and see the Phibs?”

“Dad would take my head off if I tried anything like that.”

“It would be a lot of fun.”

“Sure, but it’s dangerous. We can’t risk anyone seeing us.”

Irene shrugged resignedly, “Well, if you’re afraid, we’ll say no more about it.”

Henry gasped and reddened. He was off the ledge in a bound, “Who’s afraid? When do you want to go?”

“Right now, Henry. Right this very minute.” Her cheeks flushed with enthusiasm.

“All right then. Come on.” He started off at a half-run, dragging her along.—And then a thought occurred to him and he stopped short.

He turned to her fiercely, “I’ll show you if I’m afraid.” His arms were suddenly about her and her little cry of sur-prise was muffled effectively.

“Goodness,” said Irene, when in a position to speak once more. “How thoroughly brutal!”

“Certainly. I’m a very well-known brute,” gasped Henry, as he uncrossed his eyes and got rid of the swimming sensation in his head. “Now let’s get to those Phibs; and remind me, when I’m president, to put up a memorial to the fellow who invented kissing.”

Up through the rock-lined corridor, past the backs of out-ward-gazing sentries, out through the carefully camouflaged opening, and they were upon the surface.

The smudge of smoke on the southern horizon was grim evidence of the presence of man, and with that in mind, the two young Tweenies slithered through the underbrush into the forest and through the forest to the lake of the Phibs.

Whether in some strange way of their own the Phibs sensed

HALF-BREEDS ON VENUS the presence of friends, the two could not tell, but they had scarcely reached the banks when approaching dull-green smudges beneath water told of the creatures' coming.

A wide, goggle-eyed head broke the surface, and, in a sec-ond, bobbing frogheads dotted the lake.

Henry wet his hand and seized the friendly forelimb out-stretched to him.

"Hi there, Phib."

The grinning mouth worked and made its soundless answer. "Ask him about the Earthmen, Henry," urged Irene. Henry motioned impatiently.

"Wait a while. It takes time. I'm doing the best I can." For two slow minutes, the two, Tweenie and Phib, remained motionless and stared into each other's eyes. And then the Phib broke away and, at some silent order, every lake-creature vanished, leaving the Tweenies alone.

Irene stared for a moment, nonplussed, "What happened?"

Henry shrugged, "I don't know. I pictured the Earthmen

and he seemed to know who I meant. Then I pictured Earth-

men fighting us and killing us—and he pictured a lot of us

and only a few of them and another fight in which we killed

them. But then I pictured us killing them and then a lot more

of them coming—hordes and hordes—and killing us and

then—"

But the girl was holding her hands to her tortured ears, "Oh, my goodness. No wonder the poor creature didn't under-stand. I wonder he didn't go crazy."

"Well, I did the best I could," was the gloomy response.

"This was all your nutty idea, anyway."

Irene got no further with her retort than the opening syl-lable, for in a moment the lake was crowded with Phibs once more. "They've come back," she said instead.

A Phib pushed forward and seized Henry's hand while the others crowded around in great excitement. There were sev-eral moments of silence and Irene fidgeted.

"Well?" she said.

"Quiet, please. I don't get it. Something about big animals, or monsters, or—" His voice trailed away,

and the furrow between his eyes deepened into painful concentration.

He nodded, first abstractedly, then vigorously.

He broke away and seized Irene's hands. "I've got it—and it's the perfect solution. We can save Venustown all by ourselves, Irene, with the help of the Phibs—if you want to come to the Lowlands with me tomorrow. We can take along a

235

HALF-BREEDS ON VENUS pair of Tonite pistols and food supplies and if we follow the river, it oughtn't to take us more than two or three days there and the same time back. What do you say, Irene?"

Youth is not noted for forethought. Irene's hesitation was for effect only, "Well—maybe we shouldn't go ourselves, but—but I'll go—with you." There was the lightest accent on the last word.

Ten seconds later, the two were on their way back to Venus-town, and Henry was wondering, if on the whole, it weren't better to put up two memorials to the fellow who invented kissing.

The nickering red-yellow of the fire sent back ruddy high-lights from Henry's lordly crest of hair and cast shifting shadows upon his brooding face.

It was hot in the Lowlands, and the fire made it worse, yet Henry huddled close and kept an anxious eye upon the sleeping form of Irene on the other side. The teeming life of the Venusian jungle respected fire, and the flames spelt safety.

They were three days from the plateau now. The stream had become a lukewarm, slowly-moving river, the shores of which were covered with the green scum of algae. The pleasant forests had given way to the tangled, vine-looped growths of the jungle. The mingled sounds of life had grown in volume

and increased to a noisy crescendo. The air became warmer
and damper; the ground swampier; the surroundings more
fantastically unfamiliar.

And yet there was no real danger—of that, Henry was con-vinced. Poisonous life was unknown on Venus, and as for the tough-skinned monsters that lorded the jungles, the fire at night and the Phibs during day would keep them away.

Twice the ear-splitting shriek of a Centosaur had sounded
in the distance and twice the sound of crashing trees had
caused the two Tweenies to draw together in fear. Both times, ‘I
the monsters had moved away again. •

This was the third night out, and Henry stirred uneasily. The Phibs seemed confident that before morning they could start their return trip, and somehow the thought of Venus-town was rather attractive. Adventure and excitement are fine and with every passing hour the glory of his scintillating bravery grew in Irene’s eyes—which was wonderful—but still Venustown and the friendly Highlands were nice to think about.

236

HALF-BREEDS ON VENUS

He threw himself on his stomach and gazed morosely into the fire, thinking of his twenty years of age—almost twenty years.

“Why, heck,” he tore at the rank grass beneath. “It’s about time I was thinking of getting married.” And his eye strayed involuntarily to the sleeping form beyond the fire.

As if in response, there was a flickering of eyelids and a vague stare out of deep blue eyes.

Irene sat up and stretched.

“I can’t sleep at all,” she complained, brushing futilely at her white hair. “It’s so hot” She stared at the fire distaste-fully.

Henry’s good humor persisted. “You slept for hours—and snored like a trombone.”

Irene’s eyes snapped wide open. “I did not!” Then, with a voice vibrant with tragedy, “Did I?”

“No, of course not!” Henry howled his laughter, stopping only at the sudden, sharp contact between the toe of Irene’s shoe and the pit of his own stomach. “Ouch,” he said.

“Don’t speak to me anymore. Mister Scanlon!” was the girl’s frigid remark.

It was Henry's turn to look tragic. He rose in panicky dis-may and took a single step towards the girl. And then he froze in his tracks at the ear-piercing shriek of a Centosaur. When he came to himself, he found his arms full of Irene.

Reddening, she disentangled herself, and then the Cento-saurian shriek sounded again, from another direction,—and there she was, right back again.

Henry's face was pale, in spite of his fair armful. "I think the Phibs have snared the Centosaurs. Come with me and I'll ask them."

The Phibs were dim blotches in the grey dawn that was breaking. Rows and rows of strained, abstracted individuals were all that met the eye. Only one seemed to be unoccupied and when Henry rose from the handclasp, he said, "They've got three Centosaurs and that's all they can handle. We're starting back to the Highlands right now."

The rising sun found the party two miles up the river. The Tweenies, hugging the shore, cast wary eyes towards the bordering jungle. Through an occasional clearing, vast grey bulks could be made out. The noise of the reptilian shrieks was almost continuous.

"I'm sorry I brought you, Irene," said Henry. "I'm not so

237

HALF-BREEDS ON VENUS sure now that the Phibs can take care of the monsters."

Irene shook her head. "That's all right, Henry. I wanted to come. Only—I wish we had thought of letting the Phibs bring the beasts themselves. They don't need us."

"Yes, they do! If a Centosaur gets out of control, it will make straight for the Tweenies and they'd never get away. We've got the Tonite guns to kill the 'saurs with if the worst comes to the worst—" His voice trailed away and he glanced at the lethal weapon in his hand and derived but cold comfort therefrom.

The first night was sleepless for both Tweenies. Somewhere, unseen in the blackness of the river, Phibs took shifts and their telepathic control over the tiny brains of the gigantic, twenty-legged Centosaurs maintained its tenuous hold. Off in the jungle, three hundred-ton monsters howled impatiently against the force that drove them up the river side against their will and raved impotently against the unseen barrier that pre-vented them from approaching the stream.

By the side of the fire, a pair of Tweenies, lost between mountainous flesh on one side and the fragile protection of a telepathic web on the other, gazed longingly towards the High-lands some forty miles off.

Progress was slow. As the Phibs tired, the Centosaurs grew balkier. But gradually, the air grew cooler. The rank jungle growth thinned out and the distance to Venustown shortened.

Henry greeted the first signs of familiar temperate-zone forest with a tremulous sigh of relief. Only Irene's presence prevented him from discarding his role of heroism.

He felt pitifully eager for their quixotic journey to be over, but he only said, "It's practically all over but the shouting. And you can bet there'll be shouting, Irene. We'll be heroes, you and I."

Irene's attempt at enthusiasm was feeble. "I'm tired. Henry. Lefs rest." She sank slowly to the ground, and Henry, after signalling the Phibs, joined her.

"How much longer, Henry?" Almost without volition, she found her head nestling wearily against his shoulder.

"One more day, Irene. Tomorrow this time, we'll be back." He looked wretched, "You think we shouldn't have tried to do this ourselves, don't you?"

"Well, it seemed a good idea at the time."

"Yes, I know," said Henry. "I've noticed that I get lots of

ideas that seem good at the time, but sometimes they turn

238

HALF-BREEDS ON VENUS

sour." He shook his head philosophically, "I don't know why, but that's the way it is."

"All I know," said Irene, "is that I don't care if I never

move another step in my life. I wouldn't get up now—"

Her voice died away as her beautiful blue eyes stared off towards the right. One of the Centosaurs stumbled into the waters of a small, tributary to the stream they were following. Wallowing in the water, his huge serpentine body mounted on the ten stocky pairs of legs, glistened horribly. His ugly head weaved towards the sky and his terrifying call pierced the air. A second joined him.

Irene was on her feet. "What are you waiting for. Henry.

Let's gol Hurryl"

Henry gripped his Tonite gun tightly and followed.

Arthur Scanlon gulped savagely at his fifth cup of black

coffee and, with an effort, brought the Audiomitter into opti-

cal focus. His eyes, he decided, were becoming entirely too

balky. He rubbed them into red-rimmed irritation and cast a

glance over his shoulder at the restlessly sleeping figure on the / couch.

He crept over to her, and adjusted the coverlet.

"Poor Mom," he whispered, and bent to kiss the pale Ups.

He turned to the Audiomitter and clenched a fist at it, "Wait

till I get you, you crazy nut”

Madeline stirred, “Is it dark yet?”

“No,” lied Arthur with feeble cheerfulness. “Hell call be-fore sundown. Mom. You just sleep and let me take care of things. Dad’s upstairs working on the stat-field and he says he’s making progress. In a few days everything will be all right.” He sat silently beside her and grasped her hand tightly. Her tired eyes closed once more.

The signal light blinked on and, with a last look at his

mother, he stepped out into the corridor, “Welll”

The waiting Tweenie saluted smartly, “John Bammo wants to say that it looks as if we are in for a storm.” He handed over an official report.

Arthur glanced at it peevishly, “What of that? We’ve had plenty so far, haven’t we? What do you expect of Venus?”

“This will be a particularly bad one, from all indications. The barometer has fallen unprecedentedly. The ionic con-centration of the upper atmosphere is at an unequalled maxi-mum. The Beulah River has overflowed its banks and is rising rapidly.”

HALF-BREEDS ON VENUS

The other frowned, “There’s not an entrance to Venustown that isn’t at least fifty yards above river level. As for rain—our drainage system is to be relied upon.” He grimaced sud-denly. “Go back and tell Bammo that it can storm for my part—for forty days and forty nights if it wants to. Maybe it will drive the Earthmen away.”

He turned away, but the Tweenie held his ground, “Beg

pardon sir, but that’s not the worst. A scouting party today—“

Arthur whirled. “A scouting party? Who ordered one to be sent out?”

“Your father, sir. They were to make contact with the Phibs,—I don’t know why.”

“Well, go on.”

“Sir, the Phibs could not be located.”

And now, for the first time, Arthur was startled out of his savage ill-humor, “They were gone?”

The Tweenie nodded, “It is thought that they have sought shelter from the coming storm. It is that which causes Bammo to fear the worst.”

“They say rats desert a sinking ship,” murmured Arthur. He buried his head in trembling hands. “Godi Everything at once! Everything at once!”

The darkening twilight hid the pall of blackness that low-ered over the mountains ahead and emphasized the darting flashes of lightning that flickered on and off continuously.

Irene shivered, “It’s getting sort of windy and chilly, isn’t it?”

“The cold wind from the mountains. We’re in for a storm, I guess,” Henry assented absently. “I think the river is getting wider.”

A short silence, and then, with sudden vivacity, “But look, Irene, only a few more miles to the lake and then we’re practi-cally at the Earth village. It’s almost over.”

Irene nodded, “I’m glad for all of us—and the Phibs, too.”

She had reason for the last statement. The Phibs were swim-ming slowly now. An additional detachment had arrived the day before from upstream, but even with those reinforce-ments, progress had slowed to a walk. Unaccustomed cold was nipping the multi-legged reptiles and they yielded to superior mental force more and more reluctantly.

The first drops fell just after they had passed the lake.

Darkness had fallen, and in the blue glare of the lightning the

240

HALF-BREEDS ON VENUS trees about them were ghostly specters reaching swaying fingers towards the sky. A sudden flare in the distance marked the funeral pyre of a lightning-hit tree.

Henry paled. “Make for the clearing just ahead. At a time like this, trees are dangerous.”

The clearing he spoke of composed the outskirts of the Earth village. The rough-hewn houses, crude and small against the fury of the elements, showed lights here and there that spoke of human occupancy. And as the first Centosaur stumbled out from between splintered trees, the storm sud-denly burst in all its fury.

The two Tweenies huddled close. “It’s up to the Phibs,” screamed Henry, dimly heard above the wind and rain. “I hope they can do it.”

The three monsters converged upon the houses ahead. They

moved more rapidly as the Phibs called up every last bit of mental power.

Irene buried her wet head in Henry’s equally wet shoulder,

“I can’t look! Those houses will go like matchsticks. Oh, the poor people!”

“No, Irene, no. They’ve stopped!”

The Centosaurs pawed vicious gouges out of the ground beneath and their screams rang shrill and clear above the noise of the storm. Startled Earthmen rushed from their cabins.

Caught unprepared—most having been roused from sleep

—and faced with a Venusian storm and nightmarish Venusian monsters, there was no question of organized action. As they stood, carrying nothing but their clothes, they broke and ran.

There was the utmost confusion. One or two, with dim attempts at presence of mind, took wild, ineffectual pot-shots at the mountains of flesh before them—and then ran.

And when it seemed that all were gone, the giant reptiles surged forward once more and where once had been houses, there were left only mashed splinters.

“They’ll never come back, Irene, they’ll never come back.”

Henry was breathless at the success of his plan. “We’re heroes now, and—” His voice rose to a hoarse shriek, “Irene, get back! Make for the trees!”

The Centosaurian howls had taken on a deeper note. The nearest one reared onto his two hindmost pairs of legs and his great head, two hundred feet above ground, was silhouetted horribly against the lightning. With a rumbling thud, he came down on all feet again and made for the river—which under

241

HALF-BREEDS ON VENUS the lash of the storm was now a raging flood.

The Phibs had lost control!

Henry’s Tonite gun flashed into quick action as he shoved Irene away. She, however, backed away slowly and brought her own gun into line.

The ball of purple light that meant a hit blazed into being and the nearest Centosaur screamed in agony as its mighty tail threshed aside the surrounding trees. Blindly, the hole where once a leg had been gushing blood, it charged.

A second glare of purple and it was down with an earth-shaking thud, its last shriek reaching a crescendo of shrill frightfulness.

But the other two monsters were crashing towards them. They blundered blindly towards the source of the power that, had held them captive almost a week; driving violently with all the force of their mindless hate to the river. And in the path of the Juggernauts were the two Tweenies.

The boiling torrent was at their backs. The forest was a groaning wilderness of splintered trees and ear-splitting sound.

Then, suddenly, the reports of Tonite guns sounded from the distance. Purple glares—a flurry of threshing—spasmodic shrieking—and then a silence in which even the wind, as if overawed by recent events, held its peace momentarily.

Henry yelled his glee and performed an impromptu war-dance. “They’ve come from Venustown, Irene,” he shouted.

“They’ve got the Centosaurs and everything’s finished! We’ve saved the Tweenies!”

It happened in a breath’s time. Irene had dropped her gun and sobbed her relief. She was running to Henry and then she tripped—and the river had her.

“Henry!” The wind whipped the sound away.

For one dreadful moment. Henry found himself incapable of motion. He could only stare stupidly, unbelievably, at the spot where Irene had been, and then he was in the water. He plunged into the surrounding blackness desperately.

“Irene!” He caught his breath with difficulty. The current drove him on.

“Irene!” No sound but the wind. His efforts at swimming were futile. He couldn’t even break surface for more than a second at a time, his lungs were bursting.

“Irene!” There was no answer. -Nothing but rushing water and darkness.

And then something touched him. He lashed out at it in-

HALF-BREEDS ON VENUS stinctively, but the grip tightened. He felt himself borne up into the air. His tortured lungs breathed in gasps. A grinning Phib face stared into his and after that there were nothing but confused impressions of cold, dark wetness.

He became aware of his surroundings by stages. First, that he was sitting on a blanket under the trees, with other blankets wrapped tightly about him. Then, he felt the warm radiation of the heatlamps upon him and the illumination of Atomo bulbs. People were crowding close and he noticed that it was no longer raining.

He stared about him hazily and then, “Irene!”

She was beside him, as wrapped up as he, and smiling feebly, “I’m all right, Henry. The Phibs dragged me back, too.”

Madeline was bending over him and he swallowed the hot coffee placed to his lips. “The Phibs have told us of what you two have helped them do. We’re all proud of you, son—you and Irene.”

Max’s smile transfigured his face into the picture of paternal pride, “The psychology you used was perfect. Venus is too vast and has too many friendly areas to expect Earth-men to return to places that have shown themselves to be infested with Centosaurs—not for a good long while. And when they do come back, we shall have our stat-field.”

Arthur Scanlon hurried up out of the gloom. He thwacked Henry on the shoulder and then wrung Irene's hand. "Your guardian and I," he told her, "are fixing up a celebration for day after tomorrow, so get good and rested. It's going to be the greatest thing you ever saw."

Henry spoke lip, "Celebration, huh? Well, I'll tell you what you can do. After it's over, you can announce an engagement"

"An engagement?" Madeline sat up and looked interested.

"What do you mean?"

"An engagement—to be married," came the impatient answer. "I'm old enough, I suppose. Today proves it!"

Irene's eyes bent in furious concentration upon the grass, "With whom. Henry?"

"Huh? With you, of course. Gosh, who else could it be?"

"But you haven't asked me." The words were uttered slowly and with great firmness.

For a moment Henry flushed, and then his jaws grew grim,

243

HALF-BREEDS ON VENUS

"Well, I'm not going to. I'm telling you! And what are you going to do about it?"

He leaned close to her and Max Scanlon chuckled and motioned the others away. On tip-toes, they left.

A dim shape hobbled into view and the two Tweenies separated in confusion. They had forgotten the others.

But it wasn't another Tweenie. "Why—why, it's a Phib!" cried Irene.

He limped his ungainly way across the wet grass, with the inexpert aid of his muscular arms. Approaching, he flopped wearily on his stomach and extended his forearms.

His purpose was plain. Irene and Henry grasped a hand apiece. There was silence a moment or two and the Phib's great eyes glinted solemnly in the light of the Atomo lamps. Then there was a sudden squeal of embarrassment from Irene and shy laugh from Henry. Contact was broken.

“Did you get the same thing I did?” asked Henry.

Irene was red, “Yes, a long row of little baby Phibs, maybe fifteen—“

“Or twenty,” said Henry.

“—with long white hair!”

THE END

The story, not surprisingly, reflects my personal situation at the time. I had gone to a boys’ high school and to a boys’ college. Now that I was in graduate school, however, the surroundings were, for the first time, coeducational.

In the fall of 1939, I discovered that a beautiful blond girl had the desk next to mine in the laboratory of my course in synthetic organic chemistry. Naturally I was attracted.

I persuaded her to go out with me on simple dates, the very first being on my twentieth birthday, when I took her to Radio City Music Hall. For five months, I mooned after her with feckless, romanticism.

At the end of the school year, though, she had earned her master of arts degree and, having decided not to go on for her doctorate, left school and took a job in Wilmington, Delaware, leaving me behind, woebegone and stricken.

I got over it, of course, but while she was still at school

I wrote “Half-Breeds on Venus.” Of all the stories I had yet

written, it was the most heavily boy-and-girl. The heroine’s

244

HALF-BREEDS ON VENUS

name was Irene, which was the name of my pretty blond lab neighbor.

Merely having a few dates on the hand-holding level did not, however, perform the magic required to make me capable of handling passion in literature, and I continued to use girls sparingly in later stories—and a good thing, too, I think.

The success of “Half-Breeds on Venus” made the notion of writing sequels generally seem a good idea. A sequel to a successful story must, after all, be a reasonably sure sale. So even while I was working on “Half-Breeds on Venus,” I suggested to Campbell that I write a sequel to “Homo Sol.”

Campbell’s enthusiasm was moderate, but he was willing to look at such a sequel if I were to write it. I did write it as soon as “Half-Breeds on Venus” was done and called it “The Imaginary.” Although it used one of the chief characters of “Homo Sol,” the human-nonhuman confrontation was absent, which probably didn’t help it as far as Campbell was concerned. I submitted it to him on June 11, and

received it back—a rejection, sequel or no sequel—on June 19.

Pohl rejected it, too. Tremaine read it with more sym-pathy and was thinking of taking it for Comet, I heard, but that magazine ceased publication and the story was back on the market. Actually, I retired it, but two years later I sold it to Pohl’s magazine after all—but at a time when Pohl was no longer editor.

But though I had my troubles and didn’t click every time, or even right away, I did manage to make \$272 during my first year as a graduate student, and that was an enormous help.

245

11

The Imaginary

The telecaster flashed its fitful signal, while Tan Porus sat by complacently. His sharp, green eyes glittered their triumph, and his tiny body was vibrant with excitement. Nothing could have better indicated the greatness of the occasion than his extraordinary position—Tan Porus had his feet on the desk!

The ‘caster glowed into life and a broad Arcturian countenance frowned fretfully out at the Rigellian psychologist.

“Do you have to drag me here straight from bed, Porus?

It’s the middle of the night!”

“It’s broad daylight in this part of the world. Final. But I’ve got something to tell you that’ll make you forget all about sleep.”

Gar Final, editor of the J.G.P.—Journal of Galactic Psychology—allowed a look of alertness to cross his face. What-ever Tan Porus’s faults—and Arcturus knew they were many—he had never issued a false alarm. If he said something great was in the air, it was not merely great—it was colossal!

It was quite evident that Porus was enjoying himself. “Final,” he said, “the next article I send to your rag is going to be the greatest thing you’ve ever printed.”

Final was impressed. “Do you really mean what you say?” he asked idiotically.

“What kind of a stupid question is that? Of course I do.

Listen—“ There followed a dramatic silence, while the tenseness on Final’s face reached painful proportions. Then came

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246

THE IMAGINARY

Porus's husky whisper—"I've solved the problem of the squid!"

Of course the reaction was exactly what Porus had expected. There was a blow-up at the other end, and for thirty interesting seconds the Rigellian was surprised to learn that the staid and respectable Final had a blistering vocabulary.

Porus's squid was a by-word throughout the galaxy. For two years now, he had been fussing over an obscure Dra-conian animal that persisted in going to sleep when it wasn't supposed to. He had set up equations and torn them down with a regularity that had become a standing joke with every psychologist in the Federation—and none had explained the unusual reaction. Now Final had been dragged from bed to be told that the solution had been reached—and that was all.

Final ripped out a concluding phrase that all but put the 'caster out of commission.

Porus waited for the storm to pass and then said calmly, "But do you know how I solved it?"

The other's answer was an indistinct mumble. The Rigellian began speaking rapidly. All traces of amuse-ment had left his face and, after a few sentences, all traces of anger left Final's.

The Arcturian's expression became one of wide-eyed in-terest. "No?" he gasped.

"Yes!"

When Porus had finished. Final raced madly to put in rush calls to the printers to delay publication of the coming issue of the J.G.P. for two weeks.

Puro Santins, head of the math department of the Uni-versity of Arcturus, gazed long and steady at his Sirian colleague.

"No, no, you're wrong! His equations were legitimate. I checked them myself."

"Mathematically, yes," retorted the round-faced Sirian. "But psychologically they had no meaning."

Santins slapped his high forehead. "Meaning! Listen to the

mathematician talk. Great space, man, what have mathe-

matics to do with meaning? Mathematics is a tool and as long

as it can be manipulated to give proper answers and to make

correct predictions, actual meaning has no significance. I'll say this for Tan Porus—most psychologists don't know enough mathematics to handle a slide-rule efficiently, but he knows his stuff."

247

THE IMAGINARY

The other nodded doubtfully, "I guess so. I guess so. But using imaginary quantities in psychological equations stretches my faith in science just a little bit. Square root of minus one!"

He shuddered. . . .

The seniors' lounge in Psychology Hall was crowded and a-buzz with activity. The rumor of Porus's solution to the now-classic problem of the squid had spread fast, and conversation touched on nothing else.

At the center of the thickest group was Lor Haridin. He was young, with but newly acquired Senior status. But as Porus's assistant he was, under present conditions, master of the situation.

"Look, fellows—just exactly what it's all about I don't know. That's the old man's secret. All I can tell you is that I've got the general idea as to how he solved it."

The others squeezed closer. "I hear he had to make up a new mathematical notation for the squid," said one, "like that time we had trouble with the humanoids of Sol."

Lor Haridin shook his head. "Worse! What made him think of it, I can't imagine. It was either a brainstorm or a night-mare, but anyway he introduced imaginary quantities—the square root of minus one."

There was an awful silence and then someone said, "I don't believe it!"

"Fact!" was the complacent reply.

"But it doesn't make sense. What can the square root of minus one represent, psychologically speaking? Why, that would mean—" he was doing rapid calculation in his head, as were most of the others—"that the neural synapses were hooked up in neither more nor less than four dimensions!"

"Sure," broke in another. "I suppose that if you stimulate the squid today, it will react yesterday. That's what an imaginary would mean. Comet gas! That's what / say."

"That's why you're not the man Tan Porus is," said Haridin. "Do you suppose he cares how many

imaginaries there are in the intermediate steps if they all square out into minus one in the final solution. All he's interested in is that they give him the proper sign in the answer—an answer which will explain that sleep business. As for its physical significance, what mat-ter? Mathematics is only a tool, anyway.”

The others considered silently and marveled.

Tan Porus sat in his stateroom aboard the newest and most

luxurious interstellar liner and gazed at the young man before

248

THE IMAGINARY

him happily. He was in amazing good humor and, for perhaps the first time in his life, did not mind being interviewed by the keen, efficient employees of the Ether Press.

The Ethereporter on his side wondered in silence at the affability of the scientist. From bitter experience, he had found out that scientists, as a whole, detested reporters—and that psychologists, in particular, thought it fun to practice a bit of applied psych on them and to induce killingly amusing—to others—reactions.

He remembered the time that the old fellow from Canopus had convinced him that arboreal life was the greatest good. It had taken twenty men to drag him down from the tree-tops and an expert psychologist to bring him back to normal.

But here was the greatest of them all. Tan Porus, actually answering questions like a normal human being.

“What I would like to know now, Professor,” said the re-porter, “is just what this imaginary quantity is all about. That is,” he interposed hastily, “not the mathematics of it—we’ll take your word on that—but just a general idea that the ordi-nary humanoid can picture. For instance, I’ve heard that the squid has a four-dimensional mind.”

Porus groaned, “Oh, Rigel! Four-dimensional poppycock! To tell the honest truth, that imaginary I used—which seems to have caught the popular fancy—probably indicates nothing more than some abnormality in the squid’s nervous system, but just what, I don’t know. Certainly, to the gross methods of ecology and micro-physiology, nothing unusual has been found. No doubt, the answer would lie in the atomic physics of the creature’s brain, but there I have no hope.” There was a trace of disdain in his voice. “The atomic physicists are too far behind the psychologists to expect them to catch up at this late date.”

The reporter bore down furiously on his stylus. The next day’s headline was clear in his mind: Noted Psychologist Blasts Atomic Physicists!

Also, the headline of the day after: Indignant Physicists Denounce Noted Psychologist!

Scientific feuds were great stuff for the Ether Press, particularly that between psychologists and physicists, who, it was well known, hated each other's guts.

The reporter glanced up brightly. "Say, Professor, the humanoids of the galaxy are very interested, you know, in the private lives of you scientists. I hope you don't mind if I ask you a few questions about your trip home to Rigel IV."

249

THE IMAGINARY

"Go ahead," said Porus, genially. "Tell them it's the first time I'm getting home in two years. I'm sort of looking forward to it. Arcturus is just a bit too yellow for my eyes and the furniture you have here is too big."

"It's true, isn't it, that you have a wife at home?"

Porus coughed. "Hmm, yes. Sweetest little woman in the galaxy. I'm looking forward to seeing her, too. Put that down."

The reporter put it down. "How is it you didn't bring her to Arcturus with you?"

Some of the geniality left the Rigellian's face. "I like to be alone when I work. Women are all right—in their place. Besides, my idea of a vacation is one by myself. Don't put that down."

The reporter didn't put it down. He gazed at the other's

little form with open admiration. "Say, Prof, how did you ever

get her to stay home, though? I wish you'd tell me the secret"

Then, with a wealth of feeling he added, "I could use it!",

Porus laughed. "I tell you, son. When you're an ace psy-chologist, you're master in your own home!"

He motioned the interview to an end and then suddenly grasped the other by the arm. His green eyes were piercingly sharp. "And listen, son, that last remark doesn't go into the story, you know."

The reporter paled and backed away. "No, sir; no sir! We've got a little saying in our profession that goes: 'Never monkey around with a psychologist, or he'll make a monkey of you.'"

"Good! I can do it literally, you know, if I have to."

The young press employee ducked out hastily after that, wiped the cold perspiration from his brow and left with his story. For a moment, towards the last, he had felt himself hanging on the ragged edge. He made a mental note to refuse all future interviews with psychologists—unless they raised his pay.

Tens of billions of miles out, the pure white orb of Rigel had reached Porus's eyes, and something in his heart uplifted him.

Type B reaction—nostalgia; conditioned reflex through as-sociation of Rigel with happy scenes of youth—

Words, phrases, equations spun through his keen brain, but he was happy in spite of them. And in a little while, the human triumphed over the psychologist and Porus abandoned analysis for the superior joy of uncritical happiness.

250

THE IMAGINARY

He sat up past the middle of the sleep period two nights before the landing to catch first glimpse of Hanlon, fourth planet of Rigel, his home world. Some place on that world, on the shores of a quiet sea, was a little two-story house. A little house—not those giant structures fit only for Arcturians and other hulking humanoids.

It was the summer season now and the houses would be bathed in the pearly light of Rigel, and after the harsh yellow-red of Arcturus, how restful that would be.

And—he almost shouted in his joy—the very first night he was going to insist on gorging himself with broiled tryptex. He hadn't tasted it for two years, and his wife was the best hand at tryptex in the system.

He winced a little at the thought of his wife. It had been a

dirty trick, getting her to stay home the last two years, but it

had had to be done. He glanced over the papers before him

once more. There was just a little nervousness in his fingers as

they shuffled the sheets. He had spent a full day in calculating

her reactions at first seeing him after two years' absence and

they were not pleasant

Nina Porus was a woman of untamed emotions, and he would have to work quickly and efficiently.

He spotted her quickly in the crowd. He smiled. It was nice to see her, even if his equations did predict long and serious storms. He ran over his initial speech once more and made a last-minute change.

And then she saw him. She waved frantically and broke from the forefront of the crowd. She was on Tan Porus before he was aware of it and, in the grip of her affectionate embrace, he went limp with surprise.

That wasn't the reaction to be expected at all! Something was wrong!

She was leading him dexterously through the crowd of re-porters to the waiting stratocar, talking rapidly along the way.

“Tan Porus, I thought I’d never live to see you again. It’s so good to have you with me again; you have absolutely no idea. Everything here at home is just fine, of course, but it isn’t quite the same without you.”

Porus’s green eyes were glazed. This speech was entirely uncharacteristic of Nina. To the sensitive ears of a psycholo-gist, it sounded little short of the ravings of a maniac. He had not even the presence of mind to grunt at proper intervals.

Frozen mutely in his seat, he watched the ground rush down-

251

THE IMAGINARY wards and heard the air shriek backwards as they headed for their little house by the sea.

Nina Porus prattled on gaily—the one normal aspect of her conversation being her ability to uphold both ends of a dialogue with smooth efficiency.

“And, of course, dear, I’ve fixed up an entire tryptex,

broiled to a turn, garnished with sarnees. And, oh yes, about

that affair last year with that new planet—Earth, do you call

it? I was so proud of you when I heard about it. I said—“

And so on and on, until her voice degenerated into a meaningless conglomeration of sounds.

Where were her tears? Where were the reproaches, the threats, the impassioned self-pity?

Tan Porus roused himself to one great effort at dinner. He

stared at the steaming dish of tryptex before him with an odd

lack of appetite and said, “This reminds me of the time at

Arcturus when I dined with the President Delegate—“

He went into details, dilating on the gayety and abandon of the affair, waxing lyrical over his own enjoyment of it, stressing, almost unsubtly, the fact that he had not missed his wife, and finally, in one last wild burst of desperation, men-tioning casually the presence of a surprising number of Rigel-lian females in the Arcturian system.

And through it all, his wife sat smiling. “Wonderful, darling,” she’d say. “I’m so glad you enjoyed yourself. Eat your tryptex.”

But Porus did not eat his tryptex. The mere thought of food nauseated him. With one lingering stare of dismay at his wife, he arose with what dignity he could muster and left for the privacy of his room.

He tore up the equations furiously and hurled himself into a chair. He seethed with anger, for evidently something had gone wrong with Nina. Terribly wrong! Even interest ia an-other man—and for just a moment that had occurred to him as a possible explanation—would not cause such a revolution in

character.

He tore at his hair. There was some hidden factor more startling than that—but what it was he had no idea. At that moment Tan Porus would have given the sum total of his worldly possessions to have his wife enter and make one—just one—attempt to snatch his scalp off, as of old.

And below, in the dining room, Nina Porus allowed a crafty gleam to enter her eye.

THE IMAGINARY

LOT Haridin put down his pen and said, “Come in!”

The door opened, and his friend, Eblo Ranin, entered, brushed off a corner of the desk and sat down.

“Haridin, I’ve got an idea.” His voice was uncommonly like a guilty whisper.

Haridin gazed at him suspiciously.

“Like the time,” he said, “you set up the booby trap for old man Obel?”

Ranin shuddered. He had spent two days hiding in the ven-tilator shaft after that brilliant piece of work. “No, this is legitimate. Listen, Porus left you in charge of the squid, didn’t he?”

“Oh, I see what you’re getting at. It’s no go. I can feed the squid, but that’s all. If I as much as clapped my hands at it to induce a color-change tropism, the boss would throw a fit.”

“To space with him! He’s parsecs away, anyway.” Ranin drew forth a two-month old copy of the J.G.P. and folded the cover back. “Have you been following Livell’s experiments at Procyon U.? You know—magnetic fields applied with and without ultra-violet radiation.”

“Out of my field,” grunted Haridin. “I’ve beard of it, but that’s all. What about it?”

“Well, it’s a type E reaction which gives, believe it or not, a strong Fimbal Effect in practically every case, especially in the higher invertebrates.”

“Hmm!”

“Now, if we could try it on this squid, we could—“

“No, no, no, no!” Haridin shook his head violently. “Porus

would break me. Great stars and little meteors, how he would

break me!”-

“Listen, you nut—Porus can’t tell you what to do with the squid. It’s Friar Obel that has final say. He’s head of the Psychological Board, not Porus. All you have to do is to apply for his permission and you’ll get it. Just between us, since that Homo Sol affair last year, he can’t stand the sight of Porus anyway.”

Haridin weakened. “You ask him.”

Ranin coughed. “No. On the whole, perhaps I’d better not. He’s sort of got a suspicion that I set that booby trap, and I’d rather keep out of his way.”

“Hmm. Well—all right!”

Lor Haridin looked as if he had not slept well for a week—which shows that sometimes appearances are not deceiving.

253

THE IMAGINARY

Eblo Ranin regarded him with patient kindness and sighed.

“Look! Will you please sit down? Santin said he would have the final results in today, didn’t he?”

“I know, I know, but it’s humiliating. I spent seven years on higher math. And now I make a stupid mistake and can’t even find it!”

“Maybe it’s not there to find.”

“Don’t be silly. The answer is just impossible. It must be impossible. It must be.” His high forehead creased. “Oh, I don’t know what to think.”

He continued his concentrated attempt to wear out the nap of the rug beneath and mused bitterly. Suddenly he sat down.

“It’s those time integrals. You can’t work with them, I tell you. You look ‘em up in a table, taking half an hour to find the proper entry, and they give you seventeen possible an-sw-ers. You have to pick the one that makes sense, and—

Arcturus help me!—either they all do, or none do! Run up against eight of them, as we do in this problem, and we’ve got enough permutations to last us the rest of our life. Wrong answer! It’s a wonder I lived through it at all.”

The look he gave the fat volume of Helo’s Tables of Time Integrals did not sear the binding, to Ranin’s great surprise.

The signal light flashed, and Haridin leaped to the door.

He snatched the package from the messenger’s hand and ripped open the wrappings frantically.

He turned to the last page and stared at Santin’s final note:

Your calculations are correct. Congratulations—and won’t this knock Porus’s head right off his shoulders! Better get in touch with him at once.

Ranin read it over the other’s shoulder, and for one long minute the two gazed at each other.

“I was right,” whispered Haridin, eyes bulging. “We’ve found something in which the imaginary doesn’t square out.

We've got a predicted reaction which includes an imaginary quantity!"

The other swallowed and brushed aside his stupefaction with an effort. "How do you interpret it?"

"Great space! How in the galaxy should I know? We've got to get Porus, that's all."

Ranin snapped his fingers and grabbed the other by the shoulders. "Oh, no, we won't. This is our big chance. If we can carry this through, we're made for life." He shuttered in

254

THE IMAGINARY his excitement. "Arcturus! Any psychologist would sell his life twice over to have our opportunity right now."

The Draconian squid crawled placidly about, unawed by the huge solenoid that surrounded its tank. The mass of tangled wires, the current leads, the mercury-vapor lamp up above meant nothing to it. It nibbled contentedly at the fronds of the sea fern about it, and was at peace with the world.

Not so the two young psychologists. Eblo Ranin scurried through the complicated set-up in a last-minute effort at check-ing everything. Lor Haridin helped him in intervals between nail-biting.

"Everything's set," said Ranin, and swabbed wearily at his damp brow. "Let her shoot!"

The mercury-vapor lamp went on and Haridin pulled the window curtains together. In the cold red-less light, two green-tinted faces watched the squid closely. It stirred restlessly, its warm pink changing to a dull black in the mercury light

"Turn on the juice," said Haridin hoarsely.

There was a soft click, and that was all.

"No reaction?" questioned Ranin, half to himself. And then : he held his breath as the other bent closer.

(“Something’s happening to the squid. It seems to glow a bit or is it my eyes?”

The glow became perceptible and then seemed to detach itself from the body of the animal and take on a spherical shape of itself. Long minutes passed.

“It’s emitting some sort of radiation, field, force—whatever you want to call it—and there seems to be expansion with time.”

There was no answer, and none was expected. Again they waited and watched.

And then Ranin emitted a muffled cry and grasped Hari-din’s elbow tightly. “Crackling comets, what’s it doing?”

The globular glowing sphere of whatever it was had thrust out a pseudopod. A gleaming little projection touched the swaying branch of the sea-fern, and where it touched the leaves turned brown and withered!

“Shut off the current!”

The current clicked off; the mercury-vapor lamp went out;

the shades were parted and the two stared at each other nervously.

“What was it?”

255

THE IMAGINARY

Haridin shook his head. “I don’t know. It was something definitely insane. I never saw anything like it”

“You never saw an imaginary in a reaction equation before, either, did you? As a matter of fact, I don’t think that expanding field was any known form of energy at—“

His breath came out in one long whistling exhalation and he retreated slowly from the tank containing the squid. The mollusc was motionless, but around it half the fern, in the tank hung sere and withered.

Haridin gasped. He pulled the shades and in the gloom, the globe of glowing haze bulked through half the tank. Little curving tentacles of light reached toward the remaining fern and one pulsing thread extended through the glass and was creeping along the table.

That fright in Ranin's voice rendered it a cracked, scarcely-understood sound.

"It's a lag reaction. Didn't you test it by Wilbon's The-orem?"

"How could I?" The other's heart pumped madly and his dry lips fought to form words. "Wilbon's Theorem didn't make sense with an imaginary in the equation. I let it go."

Ranin sped into action with feverish energy. He left the room and was back in a moment with a tiny, squealing, squirrel-like animal from his own lab. He dropped it in the path of the thread of light stealing along the table, and held it there with a yard rule.

The glowing thread wavered, seemed to sense the presence of life in some horribly blind way, and lunged towards it. The little rodent squealed once, a high-pitched shriek of infinite torture, and went limp. In two seconds it was a shriveled, shrunken travesty of its former self.

Ranin swore and dropped the rule with a sudden yell, for the thread, of light—a bit brighter, a bit thicker—began creep-ing up the wall toward him.

"Here," said Haridin, "let's end this!" He yanked a drawer open and withdrew the chromium-plated Tonite gun within. Its sharp thin beam of purple light lunged forward towards the squid and exploded in blazing, soundless fury against the edge of the sphere of force. The psychologist shot again and again, and then compressed the trigger to form one continuous pur-ple stream of destruction that ceased only when power failed.

And the glowing sphere remained unharmed. It engulfed the entire tank. The ferns were brown masses of death.

"Get the Board," yelled Ranin. "It's beyond us entirely!"

THE IMAGINARY

There was no confusion—humanoids in the mass are simply not subject to panic, if you don't count the half-genius, half-humanoid inhabitants of the planets of Sol—and the evacuation of the University grounds was carried out smoothly.

"One fool," said old Mir Deana, ace physicist of Arcturus U., "can ask more questions than a thousand wise men can answer." He fingered his scraggly beard and his button nose sniffed loudly in disdain.

"What do you mean by that?" questioned Friar Obel sharply. His green Vegan skin darkened angrily.

"Just that, by analogy, one cosmic fool of a psychologist can make a bigger mess than a thousand physicists can clear up."

Obel drew in his breath dangerously. He had his own opinion of Haridin and Ranin, but no lame-brain physicist could—

The plump figure of Qual Wynn, university president, came charging down upon them. He was out of

breath and spoke be-tween puffs.

“I’ve gotten in touch with the Galactic Congress and they’re arranging for evacuation of all Eron, if necessary.” His voice became pleading. “Isn’t there anything that can be done?”

Mir Deana sighed, “Nothing—yet! All we know is this: the squid is emitting some sort of pseudo-living radiatory field which is not electromagnetic in character. Its advance cannot be stopped by anything we have yet tried, material or vacuum. None of our weapons affect it, for within the field the ordinary attributes of space-time apparently don’t hold.”

The president shook a worried head. “Bad, bad! You’ve sent for Porus, though?” He sounded as though we were clutching at a last straw.

“Yes,” scowled Friar Obel. “He’s the only one that really knows that squid. If he can’t help us, no one can.” He stared off toward the gleaming white of the university buildings, where the grass over half the campus was brown stubble and the trees blasted ruins.

“Do you think,” said the president, turning to Deana once more, “that the field can span interplanetary space?”

“Sizzling novae, I don’t know what to think!” Deana ex-ploded, and he turned pettishly away.

There was a thick silence of utter gloom.

THE IMAGINARY brilliant coruscations of color overhead. He didn’t hear a sound of the melodious tones that filled the auditorium.

He knew only one thing—that he had been talked into attending a concert. Concerts above all were anathema to him, and in twenty years of married life he had steered clear of them with a skill and ease that only the greatest psychologist of them all could have shown. And now—

He was startled out of his stupor by the sudden discordant sounds that arose from the rear.

There was a rush of ushers to the exit where the disturbance originated, a waving of protesting uniformed arms and then a strident voice: “I am here on urgent business direct from the Galactic Congress on Eron, Arcturus. Is Tan Poms in the audience?”

Tan Porus was out of his seat with a bound. Any excuse to leave the auditorium was nothing short of heaven-sent.

He ripped open the communication handed him by the messenger and devoured its contents. At the second sentence, his elation left him. When he was finished, he raised a face in which only his darting green eyes seemed alive.

“How soon can we leave?”

“The ship is waiting now.”

“Come, then.”

He took one step forward and stopped. There was a hand on his elbow.

“Where are you going?” asked Nina Porus. There was hidden steel in her voice.

Tan Porus felt stifled for a moment. He foresaw what would

happen. “Darling, I must go to Eron immediately. The fate of

a world, of the whole galaxy perhaps, is at stake. You don’t

know how important it is. I tell you—“

“All right, go! And I’ll go with you.”

The psychologist bowed his head.

“Yes, dear!” he said. He sighed.

The psychological board hemmed and hawed as one man and then stared dubiously at the large-scale graph before them.

“Frankly, gentlemen,” said Tan Porus, “I don’t feel too certain about it myself, but—well, you’ve all seen my results, and checked them too. And it is the only stimulus that will yield a canceling reaction.”

Frian Obel fingered his chin nervously. “Yes, the mathe-

matics is clear. Increase in hydrogen-ion activity past pH3

258

THE IMAGINARY would set up a Demane’s Integral and that— But listen, Porus, we’re not dealing with space-time. The math might not hold —perhaps nothing will hold.”

“It’s our only chance. If we were dealing with normal space-

time, we could just dump in enough acid to kill the blasted

squid or fry it with a Tonite. As it is, we have no choice but

to take our chances with—“

Loud voices interrupted him. “Let me through, I say! I don’t care if there are ten conferences going on!”

The door swung open and Qual Wynn’s portly figure made its entrance. He spied Porus and bore down upon him. “Porus, I tell you I’m going crazy. Parliament is holding me, as uni-versity president, responsible for all this, and now Deana says that—“ He sputtered into silence and Mir Deana, standing

composedly behind him, took up the tale.

“The field now covers better than one thousand square miles and its rate of increase is growing steadily. There seems to be no doubt now that it can span interplanetary space if it wishes to do so—interstellar as well, if given the time.”

“You hear that? You hear that?” Wynn was fairly dancing in his anxiety. “Can’t you do something? The galaxy is doomed, I tell you, doomed!”

“Oh, keep your tunic on,” groaned Porus, “and let us handle this.” He turned to Deana. “Didn’t your physicist stooges conduct some clumsy investigations as to the speed of penetration of the field through various substances?”

Deana nodded stiffly.

“Penetration varies, in general, inversely with density. Osmium, iridium and platinum are the best. Lead and gold are fair.”

“Good! That checks! What I’ll need then is an osmium-plated suit with a lead-glass helmet. And make both plating and helmet good and thick.”

Qual Wynn stared horrified. “Osmium plating! Osmium! By the great nebula, think of the expense.”

“I’m thinking,” said Porus frostily..

“But they’ll charge it to the university; they’ll—“ He re-covered with difficulty as the somber stares of the assembled psychologists fastened themselves upon him. “When do you need it?” he muttered weakly.

“You’re really going, yourself?”

“Why not?” asked Porus, clambering out of the suit.

Mir Deana said, “The lead-glass headpiece will hold off the

259

THE IMAGINARY

field not longer than an hour and you’ll probably be getting partial penetration in much shorter time. I don’t know if you can do it.”

“// worry about that.” He paused, and then continued un-certainly. “I’ll be ready in a few minutes. I’d like to speak to my wife first—alone.”

The interview was a short one. It was one of the very few occasions that Tan Poms forgot that he was a

psychologist, and spoke as his heart moved him, without stopping to consider the natural reaction of the one spoken to.

One thing he did know—by instinct rather than thought—and that was that his wife would not break down or go semi-mental on him; and there he was right. It was only in the last few seconds that her eyes fell and her voice quavered. She tugged a handkerchief from her wide sleeve and hurried from the room.

The psychologist stared after her and then stooped to pick up the thin book that had fallen as she had removed the handkerchief. Without looking at it, he placed it in the inner pocket of his tunic.

He smiled crookedly. “A talisman!” he said.

Tan Porus’s gleaming one-man cruiser whistled into the “death field.” The clammy sensation of desolation impressed itself upon him at once.

He shrugged. “Imagination! Mustn’t get nervy now.”

There was the vaguest glitter—a sparkle that was felt rather than seen—in the air about him. And then it invaded the ship itself, and, looking up, the Rigellian saw the five Eronian ricebirds he had brought with him lying dead on the floor of their cage, huddled masses of bedraggled feathers.

“The ‘death field’ is in,” he whispered. It had penetrated the steel hull of the cruiser.

The cruiser bumped to a rather unskillful landing on the broad university athletic field, and Tan Porus, an incongruous figure in the bulky osmium suit, stepped out. He surveyed his depressing surroundings. From the brown stubble under-foot to the glimmering haze that hid the normal blue of the sky, all seemed—dead.

He entered Psychology Hall.

His lab was dark; the shades were still drawn. He parted them and studied the squid’s tank. The water replenisher was still working, for the tank was full. However, that was the only normal thing about it. Only a few dark-brown, ragged strands

260

THE IMAGINARY

of rot were left of what had once been sea-fern. The squid itself lay inertly upon the floor of the tank.

Tan Porus sighed. He felt tired and numbed. His mind was hazy and unclear. For long minutes he stared about him unseeingly.

Then, with an effort, he raised the bottle he held and glanced at the label—12 molar hydrochloric acid.

He mumbled vaguely to himself. “Two hundred cc. Just dump the whole thing in. That’ll force the pH down—if only hydrogen ion activity means something here.”

He was fumbling with the glass stopper, and—suddenly—laughing. He had felt exactly like this the one and only time he had ever been drunk.

He shook the gathering cobwebs from his brain. “Only got a few minutes to do—to do what? I don’t know—something anyway. Dump this thing in. Dump it in. Dump! Dump! Dumpety-dump!” He was mumbling a silly popular song to himself as the acid gurgled its way into the open tank.

Tan Porus felt pleased with himself and he laughed. He stirred the water with his mailed fist and laughed some more. He was still singing that song.

And then he became aware of a subtle change in environment. He fumbled for it and stopped singing. And then it hit him with the suddenness of a downpour of cold water. The glitter in the atmosphere had gone!

With a sudden motion, he unclasped the helmet and cast it off. He drew in long breaths of air, a bit musty, but unkillingly.

He had acidified the water of the tank, and destroyed the field at its source. Chalk up another victory for the pure mathematics of psychology!

He stepped out of his osmium suit and stretched. The pressure on his chest reminded him of something. Withdraw-ing the booklet his wife had dropped, he said, “The talisman came through!” and smiled indulgently at his own whimsy.

The smile froze as he saw for the first time the title upon the book.

The title was Intermediate Course in Applied Psychology—

Volume 5.

It was as if something large and heavy had suddenly fallen onto Porus’s head and driven understanding into it. Nina had been boning up on applied psych for two -whole years.

This was the missing factor. He could allow for it. He would have to use triple time integrals, but—

He threw the communicator switch and waited for contact.

THE IMAGINARY

“Hello! This is Poms! Come on in, all of you! The death field is gone! I’ve beaten the squid.” He broke contact and added triumphantly, “—and my wife!”

Strangely enough—or, perhaps, not so strangely—it was the latter feat that pleased him more.

THE END

The chief interest to me in “The Imaginary” is that it fore-shadows the “psychohistory” that was to play such a big role in the “Foundation” series. It was in this story and in its predecessor, “Homo Sol,” that for the first time I treated psychology as a mathematically refined science.

It was about time that I made another stab at Unknown, and I did so with a story called “The Oak,” which, as I recall, was something about an oak tree that served as an oracle and delivered ambiguous statements. I submitted it to Campbell on July 16, 1940, and it was promptly rejected.

One of the bad things about writing for Unknown was that the magazine was one of a kind. If Unknown rejected a story, there was no place else to submit it. It was possible to try Weird Tales, a magazine that was older than any science fiction magazine, but it dealt with old-fashioned, creaky horror tales and paid very little to boot. I wasn’t really interested in trying to get into it. (And besides, they rejected both “Life Before Birth” and “The Oak” when I submitted them.)

Still, July 29, 1940, was a turning point in my career, although, of course, I had no way of telling it. I had up to that point written twenty-two stories in twenty-five months. Of these I had sold (or was to sell) thirteen, while nine never sold at all and no longer exist. The record wasn’t abysmal but neither was it great—let’s call it mediocre.

However, as it happened, except for two short-short stories that were special cases, I never again wrote a science fiction story I could not sell. I had found the range.

But not Campbell’s range particularly. In August I wrote “Heredity,” which I submitted to Campbell on August 15, and which he rejected two weeks later. Fortunately, Pohl snapped it up at once.

262

12

Heredity

Dr. Stefansson fondled the thick sheaf of typewritten papers that lay before him, “It’s all here, Harvey—twenty-five years of work.”

Mild-mannered Professor Harvey puffed idly at his pipe, “Well, your part is over—and Markey’s, too, on Ganymede. It’s up to the twins, themselves, now.”

A short ruminative silence, and then Dr. Stefansson stirred uneasily, “Are you going to break the news to Alien soon?”

The other nodded quietly, “It will have to be done before we get to Mars, and the sooner the better.” He paused, then added in a tightened voice, “I wonder how it feels to find out after twenty-five years that one has a twin brother whom one has never seen. It must be a damned shock.”

“How did George take it?”

“Didn’t believe it at first, and I don’t blame him. Markey had to work like a horse to convince him it wasn’t a hoax. I suppose I’ll have as hard a job with Alien.” He knocked the dottle from his pipe and shook his head.

“I have half a mind to go to Mars just to see those two get together,” remarked Dr. Stefansson wistfully.

“You’ll do no such thing, Stef. This experiment’s taken too

long and means too much to have you rum it by any such fool move.”

“I know, I know! Heredity versus environment! Perhaps at last the definite answer.” He spoke half to himself, as if re-Astonishing Stories, April 1941 Copyright © 1941 by Fictioneers, Inc.

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263

HEREDITY peating an old, familiar formula, “Two identical twins, sep-arated at birth; one brought up on old, civilized Earth, the other on pioneer Ganymede. Then, on their twenty-fifth birth-day brought together for the first time on Mars—God! I wish Carter had lived to see the end of it They’re his children.”

‘Too badi—But we’re alive, and the twins. To carry the experiment to its end will be our tribute to him.”

There is no way of telling, at first seeing the Martian branch of Medicinal Products, Inc., that it is surrounded by anything but desert. You can’t see the vast underground caverns where the native fungi of Mars are artificially nurtured into huge blooming fields. The intricate transportation system that connects all parts of the square miles of fields to the central building is invisible. The irrigation system; the air-purifiers;

the drainage pipes, are all hidden.

And what one sees is the broad squat red-brick building and

Martian desert, rusty and dry, all about

That had been all George Carter had seen upon arriving via rocket-taxi, but him, at least, appearances had not deceived. It would have been strange had it done so, for his life on Ganymede had been oriented in its every phase towards eventual general managership of that very concern. He knew every square inch of the caverns below as well as if he had been born and raised in them himself.

And now he sat in Professor Lemuel Harvey’s small office and allowed just the slightest trace of uneasiness to cross his impassive countenance. His ice-blue eyes sought those of Professor Harvey.

“This—this twin brother o’ mine. He’ll be here soon?”

Professor Harvey nodded, “He’s on his way over right now.”

George Carter uncrossed his knees. His expression was almost wistful, "He looks a lot like me, d'ya rackon?"

"Quite a lot You're identical twins, you know."

"Hmmi Rackon so! Wish I'd known him all the time—on Gannyl" He frowned. "He's lived on Airth all's life, huh?"

An expression of interest crossed Professor Harvey's face.

He said briskly, "You dislike Earthmen?"

"No, not exactly," came the immediate answer. "It's just the Airthmen are tanderfeet All of 'm I know are."

Harvey stifled a grin, and conversation languished.

The door-signal snapped Harvey out of his reverie and George Carter out of his chair at the same instant. The pro-fessor pressed the desk-button and the door opened.

264

HEREDITY

The figure on the threshold crossed into the room and then stopped. The twin brothers faced each other.

It was a tense, breathless moment, and Professor Harvey sank into his soft chair, put his finger-tips together and watched keenly.

The two stood stiffly erect, ten feet apart, neither making a move to lessen the distance. They made a curious contrast—a contrast all the more marked because of the vast similarity between the two.

Eyes of frozen blue gazed deep into eyes of frozen blue. Each saw a long, straight nose over full, red lips pressed firmly together. The high cheekbones were as prominent in one as in the other, the jutting, angular chin as square. There was even the same, odd half-cock of one eyebrow in twin ex-pressions of absorbed, part-quizzical interest.

But with the face, all resemblance ended. Alien Carter's clothes bore the New York stamp on every square inch. From his loose blouse, past his dark purple knee breeches, salmon-colored cellulite stockings, down to the glistening sandals on his feet, he stood a living embodiment of latest Terrestrial fashion.

For a fleeting moment, George Carter was conscious of a

feeling of ungainliness as he stood there in his tight-sleeved,

close-necked shirt of Ganymedan linen. His unbuttoned vest

and his voluminous trousers with their ends tucked into high-

laced, heavy-soled boots were clumsy and provincial. Even he

felt it—for just a moment

From his sleeve-pocket Alien removed a cigarette case—it was the first move either of the brothers had made—opened it, withdrew a slender cylinder of paper-covered tobacco that spontaneously glowed into life at the first puff.

George hesitated a fraction of a second and his subsequent action was almost one of defiance. His hand plunged into his inner vest pocket and drew therefrom the green, shriveled form of a cigar made of Ganymedan greenleaf. A match flared into flame upon his thumbnail and for a long moment, he matched, puff for puff, the cigarette of his brother.

And then AUen laughed—a queer, high-pitched laugh, “Your eyes are a little closer together, I think.”

“Rackon ‘tis, maybe. Y’r hair’s fixed sort o’ different.” There was faint disapproval in his voice. Alien’s hand went self-consciously to his long, light-brown hair, carefully curled at the ends, while his eyes flickered over the carelessly-bound queue into which the other’s equally long hair was drawn.

265

HEREDITY

“I suppose we’ll have to get used to each other. —I’m willing to try.” The Earth twin was advancing now, hand outstretched. George smiled, “Y’ bet. ‘At goes here, too.”

The hands met and gripped.

“Y’r name’s All’n, huh?” said George.

“And yours is George, isn’t it?” answered Alien. And then for a long while they said nothing more. They just looked—and smiled as they strove to bridge the twenty-five year gap that separated them.

George Carter’s impersonal gaze swept over the carpet of low-growing purple blooms that stretched in plot-path bordered squares into the misty distance of the caverns. The newspapers and feature writers might rhapsodize over the “Fungus Gold” of Mars—about the purified extracts, in yields of ounces to acres of blooms, that had become indispensable to the medical profession of the System. Opiates, purified vitamins, a new vegetable specific against pneumonia—the blooms were worth their weight in gold, almost.

But they were merely blooms to George Carter—blooms to be forced to full growth, harvested, baled, and shipped to the Aresopolis labs hundreds of miles away.

He cut his little ground car to half-speed and leant furiously out the window, “Hi y’ mudcat there. Y’ with the dairty face. Watch what y’r doing—keep the domned water in the channel.”

He drew back and the ground car leapt ahead once more. The Ganymedan muttered viciously to himself, “These domned men about here are wairse than useless. So many ma-chines t’ do their wairk for ‘m they give their brains a pair-menent vacation, I rackon.”

The ground car came to a halt and he clambered out. Pick-ing his way between the fungus plots, he approached the clus-tered group of men about the spider-armed machine in the plotway ahead.

“Well, here I am. What is ‘t, All’n?”

Alien’s head bobbed up from behind the other side of the machine. He waved at the men about him, “Stop it for a second!” and leaped toward his twin.

“George, it works. It’s slow and clumsy, but it works. We can

improve it now that we’ve got the fundamentals down. And

in no time at all, we’ll be able to—“

“Now wait a while, All’n. On Ganny, we go slow. Y’ live long, that way. What y’ got there?”

266

HEREDITY

Alien paused and swabbed at his forehead. His face shone with grease, sweat, and excitement. “I’ve been working on this thing ever since I finished college. It’s a modification of some-thing we have on Earth—but it’s no end improved. It’s a mechanical bloom picker.”

He had fished a much-folded square of heavy paper from his pocket and talked steadily as he spread it on the plotway before them, “Up to now, bloom-picking has been the bottle-neck of production, to say nothing of the 15 to 20% loss due to picking under- and over-ripe blooms. After all, human eyes are only human eyes, and the blooms—Here, look!”

The paper was spread flat and Alien squatted before it George leaned over his shoulder, with frowning watchfulness.

“You see. It’s a combination of fluoroscope and photo-electric cell. The ripeness of the bloom can be told by the state of the spores within. This machine is adjusted so that the proper circuit is tripped upon the impingement of just that combination of light and dark formed by ripe spores within the bloom. On the other hand, this second circuit—but look, it’s easier to show you.”

He was up again, brimming with enthusiasm. With a jump, he was in the low seat behind the picker and had pulled the lever.

Ponderously, the picker turned towards the blooms and its “eye” travelled sideways six inches above the ground. As it passed each fungus bloom, a long spidery arm shot out, lop-ping it cleanly half an inch from the ground and depositing it neatly in the downward sloping slide beneath. A pile of blooms formed behind the machine.

“We can hook on a binder, too, later on. Do you notice those blooms it doesn’t touch? Those are unripe. Just wait till it comes to an over-ripe one and see what it does.”

He yelled in triumph a moment later when a bloom was torn out and dropped on the spot.

He stopped the machine, “You see? In a month, perhaps, we can actually start putting it to work in the fields.”

George Carter gazed sourly upon his twin, “Take more ‘n a month, I rackon. It’ll take foraver, more likely.”

“What do you mean, forever. It just has to be sped up—“

“I don’t care if ‘t just has t’ be painted pairple. ‘Tisn’t going t’ appear on my fields.”

“Your fields?”

“Yup, mine,” was the cool response. “I’ve got veto pow’r

here same as you have. Y’ can’t do anything ‘thout my say-so

267

HEREDITY

and y* won’t get it f’r this. In fact, I want y’ t’ clear that thing out o’ here, altogether. Got no use f’r ‘t.”

Alien dismounted and faced his brother, “You agreed to let me have this plot to experiment on, veto-free, and I’m hold-ing you to that agreement.”

“All right, then. But keep y’r domned machine out o’ the rest o’ the fields.”

The Earthman approached the other slowly. There was a dangerous look in his eyes. “Look, George, I don’t like your attitude—and I don’t like the way you’re using your veto power. I don’t know what you’re used to running on Gany-mede, but you’re in the big time now, and there are a lot of provincial notions you’ll have to get out of your head.”

“Not unless I want to. And if y’ want t’ have ‘t out with me, we’d better go t’ y’r office. Spatting before the men ‘d be bad for discipline.”

The trip back to Central was made in ominous silence. George whistled softly to himself while Alien folded his arms and stared with ostentatious indifference at the narrow, twist-ing plotway ahead. The silence persisted as they entered the Earthman’s office. Alien gestured shortly towards a chair and the Ganymedan took it without a word. He brought out his ever-present green-leaf cigar and waited for the other to speak.

Alien hunched forward upon the edge of his seat and leaned both elbows on his desk. He began with a rush.

“There’s lots to this situation, George, that’s a mystery to me. I don’t know why they brought up you on Ganymede and me on Earth, and I don’t know why they never let us know of each other, or made us

co-managers now with veto-power over one another—but I do know that the situation is rapidly growing intolerable.

“This corporation needs modernization, and you know that. Yet you’ve been wielding that veto-power over every trifling advance I’ve tried to initiate. I don’t know just what your viewpoint is, but I’ve a suspicion that you think you’re still living on Ganymede. If you’re still in the sticks,—I’m warning you—get out of them fast. I’m from Earth, and this corporation is going to be run with Earth efficiency and Earth organization. Do you understand?”

George puffed odorous tobacco at the ceiling before answering, but when he did, his eyes came down sharply, and there was a cutting edge to his voice.

“Airth, is it? Airth efficiency, no less? Well, All’n, I like ye.

268

HEREDITY

I can’t help it Y’r so much like me, that disliking y’ would be like disliking myself, I rackon. I hate t’ say this, but y’r up-bringing’s all wrong.”

His voice became sternly accusatory, “Y’r an Airthman. Well, look at y’. Airthman’s but half a man at best, and naturally y’ lean on machines. But d’ y’ suppose / want the corporation to be run by machines—just machines? What’re the men t’ do?”

“The men run the machines,” came the clipped, angry response.

The Ganymedan rose, and a fist slammed down on the desk, “The machines run the men, and y’ know it. Fairst, y’ use them; then y’ depend on them; and finally y’r slaves t’ them. Over on y’r precious Airth, it was machines, machines, machines—and as a result, what are y’! I’ll tell y’. Half a man!”

He drew himself up, “I still like y’. I like y’ weU enough f wish y’d lived on Gannie with me. By Jupe ‘n’ domn, ‘twould have made a man o’ y’.”

“Finished?” said Alien.

“Rackon sol”

“Then I’ll tell you something. There’s nothing wrong with you that a life time on a decent planet wouldn’t have fixed. As it is, however, you belong on Ganymede. I’d advise you to go back there.”

George spoke very softly, “Y’r not thinking o’ taking a punch at me, are y’?”

“No. I couldn’t fight a mirror image of myself, but if your face were only a little different, I would enjoy splashing it about the premises a bit.”

“Think y’ could do it—an Airthman like you? Here, sit down. We’re both getting a bit too excited, I rackon. Nothing’!! be settled this way.”

He sat down once more, puffed vainly at his dead cigar, and tossed it into the incinerator chute in disgust.

“Where’s y’r water?” he grunted.

Alien grinned with sudden delight, “Would you object to having a machine supply it?”

“Machine? What d’ y’ mean?” The Ganymedan gazed about him suspiciously.

“Watch! I had this installed a week ago.” He touched a

button on his desk and a low click sounded below. There was

the sound of pouring water for a second or so and then a cir-

269

HEREDITY

cular metal disk beside the Earthman’s right hand slid aside and a cup of water lifted up from below.

“Take it,” said Alien.

George lifted it gingerly and drank it down. He tossed the empty cup down the incinerator shaft, then stared long and thoughtfully at his brother, “May I see this water feeder o* y’rs?”

“Surely. It’s just under the desk. Here, I’ll make room for you.”

The Ganymedan crawled underneath while Alien watched uncertainly. A brawny hand was thrust out suddenly and a muffled voice said, “Hand me a screwdriver.”

“Here! What are you going to do?”

“Nothing. Nothing ‘t all. Just want t’ investigate this con-traption.”

The screw-driver was handed down and for a few minutes there was no other sound than an occasional soft scraping of metal on metal. Finally, George withdrew a flushed face and adjusted his wrinkled collar with satisfaction.

“Which button do I press for the water?”

Alien gestured and the button was pressed. The gurgling of water sounded. The Earthman stared in mystification from his desk to his brother and back again. And then he became aware of a moistness about his feet.

He jumped, looked downwards, and squawked in dismay, “Why, damn you, what have you done?” A snaky stream of water wriggled blindly out from under the desk and the pour-ing sound of water still continued.

George made leisurely for the door, “Just short-caircuited it. Here’s y’r screw-driver; fix ‘t up again.” And just before he slammed the door, “So much f’r y’r pracious machines. They go wrong at the wrong times.”

The sounder was buzzily insistent and Alien Carter opened one eye peevishly. It was still dark.

With a sigh, he lifted one arm to the head of his bed and put the Audiomitter into commission.

The treble voice of Amos Wells of the night shift squawked excitedly at him. Alien's eyes snapped open and he sat up.

"You're crazy!" But he was plunging into his breeches even as he spoke. In ten seconds, he was careening up the steps three at a time. He shot into the main office just behind the charging figure of his twin brother.

The place was crowded;—its occupants in a jitter.

270

J

HEREDITY

Alien brushed his long hair out of his eyes, "Turn on the turret searchlight!"

"It's on," said someone helplessly.

The Earthman mshed to the window and looked out. The yellow beam reached dimly out a few feet and ended in a muddy murkiness. He pulled at the window and it lifted up-wards grittily a few inches. There was a whistle of wind and a tornado of coughing from within the room. Alien slammed it down again and his hands went at once to his tear-filled eyes.

George spoke between sneezes, "We're not located in the sandstorm zone. This can't be one."

"It is," asserted Wells in a squeak. "It's the worst I've ever seen. Started full blast from scratch just like that. It caught me flat-footed. By the time I closed off all exits to above, it was too late."

"Too late!" Alien withdrew his attention from his sand-filled eyes and snapped out the words, "Too late for what?"

"Too late for our rolling stock. Our rockets got it worst of all. There isn't one that hasn't its propulsives clogged with sand. And that goes for our irrigation pumps and the ventilat-ing system. The generators below are safe but everything else will have to be taken apart and put together again. We're stalled for a week at least. Maybe more."

There was a short, pregnant silence, and then Alien said, "Take charge. Wells. Put the men on double shift and tackle the irrigation pumps first. They've got to be in working order inside of twenty-four hours, or half the crop will dry up and die on us. Here—wait, I'll go with you."

He turned to leave, but his first footstep froze in midair at the sight of Michael Anders, communications officer, rush-ing up the stairs.

"What's the matter?"

Anders spoke between gasps, "The damned planet's gone crazy. There's been the biggest quake in history with its center not ten miles from Aresopolis."

There was a chorus of “What?” and a ragged follow-up of blistering imprecations. Men crowded in anxiously;—many had relatives and wives in the Martian metropolis.

Anders went on breathlessly, “It came all of a sudden. Aresopolis is in ruins and fires have started. There aren’t any details but the transmitter at our Aresopolis labs went dead five minutes ago.”

There was a babel of comment The news spread out into
the furthest recesses of Central, and excitement waxed to

271

HEREDITY

dangerously panicky proportions. Alien raised his voice to a shout.

“Quiet, everyone. There’s nothing we can do about Aresopolis. We’ve got our own troubles. This freak storm is connected with the quake some way—and that’s what we have to take care of. Everyone back to his work now—and work fast. They’ll be needing us at Aresopolis damned soon.” He turned to Anders, “You! Get back to that receiver and don’t knock off until you’ve gotten in touch with Aresopolis again. Coming with me, George?”

“No, rackon not,” was the response. “Y* tend t’ y’r ma-chines. I’ll go down with Anders.”

Dawn was breaking, a dusky, lightless dawn, when Alien Carter returned to Central. He was weary—wearily in mind and body—and looked it. He entered the radio room.

“Things are a mess. If—“

There was a “Shhh” and George waved frantically. Alien fell silent. Anders bent over the receiver, turning tiny dials with nervous fingers.

Anders looked up, “It’s no use, Mr. Carter. Can’t get them.”

“All right. Stay here and keep y’r ears open. Let me know if anything turns up.”

He walked out, hooking an arm underneath his brother’s and dragging the latter out.

“When c’n we get out the next shipment, All’n?”

“Not for at least a week. We haven’t a thing that’ll either roll or fly for days, and it will be even longer before we can start harvesting again.”

“Have we any supplies on hand now?”

“A few tons of assorted blooms—mainly the red-purples.

The Earth shipment last Tuesday took off almost everything.”

George fell into a reverie.

His brother waited a moment and said sharply, “Well, what’s on your’ mind? What’s the news from Aresopolis?”

“Domned bad! The quake’s leveled three-fourths o’ Ares-opolis and the rest’s pretty much gutted with fire, I rackon. There ‘re fifty thousand that’ll have t’ camp out nights.—That’s no fun in Martian autumn weather with the Airth gravity system broken down.”

Alien whistled, “Pneumonia!”

“And common colds and influenza and any o’ half doz’n diseases t’ say nothing o’ people bairmt. —Old Vincent is raising cain.”

272

HEREDITY

“Wants blooms?”

“He’s only got a two-day supply on hand. He’s got t’ have more.”

Both, were speaking quietly, almost with indifference, with the vast understatement that is all that makes great crises bearable.

There was a pause and then George spoke again, “What’s the best we c’n do?”

“Not under a week—not if we kill ourselves to do it. If they could send over a ship as soon as the storm dies down, we might be able to send what we have as a temporary supply until we can get over with the rest.”

“Silly even t’ think o’ that. The Aresopolis port is just ruins.

They haven’t a ship t’ their names.”

Again silence. Then Alien spoke in a low, tense voice. “What are you waiting for? What’s that look on your face for?”

“I’m waiting fir y’ t’ admit y’r domned machines have failed y’ in the fairest emairgency we’ve had t’ meet.”

“Admitted,” snarled the Earthman.

“Good! And now its up t’ me t’ show y’ what human in-genuity can do.” He handed a sheet of paper to his brother, “There’s a copy of the message I sent Vincent.”

Alien looked long at his brother and slowly read the pen-cilled scribbling.

“Will deliver all we have on hand in thirty-six hours. Hope it will keep you going the few days until we can get a real shipment out. Things are a little rough out here.”

“How are you going to do it?” demanded Alien, upon finishing.

“I’m trying to show y’,” answered George, and Alien realized for the first time that they had left Central and were out in the caverns.

George led the way for five minutes and stopped before an object bulking blackly in the dimness. He turned on the section lights and said, “Sand truck!”

The sand truck was not an imposing object. With the low driving car in front and the three squat, open-topped freight-cars behind, it presented a picture of obsolete decrepitude. Fifteen years ago, it had been relegated to the dust-heap by the sand-sleds and rocket-freights.

The Ganymedan was speaking, “Checked it an hour ago,
m’self, and ‘tis still in wairking order. It has shielded bearings,

273

HEREDITY

air conditioning unit f’r the driving car, and an intairnal combustion engine.”

The other looked up sharply. There was an expression of distaste on his face. “You mean it burns chemical fuel.”

“Yup! Gas’line. That’s why I like it. Reminds me o’ Gany-

mede. On Gannie, I had a gas engine that—“

“But wait a while. We haven’t any of that gasoline.”

“No, rackon not. But we got lots o’ liquid hydrocarbons round the place. How about Solvent D? That’s mostly octane. We’ve got tanks o’ it.”

Alien said, “That’s so;—but the truck holds only two.”

“I know it. I’m one.”

“And I’m the other.”

George grunted, “I rackond y’d say that—but this isn’t going t’ be a push-button machine job. Rackon

y'r up t' it,—

Airthman?"

"I reckon I am—Gannie."

The sun had been up some two hours before the sand-truck's engine whirred into life, but outside, the murk had become, if anything, thicker.

The main driveway within the caverns was ahum with activity. Grotesque figures with eyes peering through the thick glass of improvised air-helmets stepped back as the truck's broad, sand-adapted wheels began their slow turn. The three cars behind had been piled high with purple blooms, canvas covers had been thrown over them and bound down tightly,—and now the signal was given to open the doors.

The lever was jerked downwards and the double doors sep-arated with sand-clogged protests. Through a gray whirl of inblown sand, the truck made its way outwards, and behind it sand-coated figures brushed at their air-helmets and closed the doors again.

George Carter, inured by long Ganymedan custom, met the sudden gravity change as they left the protective Gravitor fields of the caverns, with a single long-drawn breath. His hands held steady upon the wheels. His Terrestrial brother, however, was in far different condition. The hard nauseating knot into which his stomach tied itself loosened only very gradually, and it was a long time before his irregular sterto-rous breathing approached anything like normality again.

And throughout, the Earthman was conscious of the other's

274

HEREDITY

side-long glance and of just a trace of a smile about the other's lips.

It was enough to keep the slightest moan from issuing forth, though his abdominal muscles cramped and icy perspiration bathed his face.

The miles clicked off slowly, but the illusion of motionless-ness was almost as complete as that in space. The surroundings were gray—uniform, monotonous and unvarying. The noise of the engine was a harsh purr and the clicking of the air-purifier behind like a drowsy tick. Occasionally, there was an espe-cially strong gust of wind, and a patter of sand dashed against the window with a million tiny, separate pings.

George kept his eye strictly upon the compass before him.

The silence was almost oppressive.

And then the Ganyrnedan swivelled his head, and growled, "What's wrong with the domned vent'lator?"

Alien squeezed upward, head against the low top, and then turned back, pale-faced, "It's stopped."

"It'll be hours 'fore the storm's over. Ye've got t' have air till then. Crawl in back there and start it again." His voice was flat and final.

“Here,” he said, as the other crawled over his shoulder into the back of the car. “Here’s the tool-kit. Y’v got ‘bout twenty minutes ‘fore the air gets too foul t’ breathe. ‘Tis pretty bad now.”

The clouds of sand hemmed in closer and the dim yellow light above George’s head dispelled only partially the darkness within.

There was the sound of scrambling from behind him and then Alien’s voice, “Damn this rope. What’s it doing here?” There was a hammering and then a disgusted curse.

“This thing is choked with rust.”

“Anything else wrong?” called out the Ganymedan.

“Don’t know. Wait till I clear it out.” More hammering and an almost continuous harsh, scraping sound followed.

Alien backed into his seat once more. His face dripped rusty perspiration and a swab with the back of an equally damp, rust-covered hand did it no good.

“The pump is leaking like a punctured kettle, now that the rust’s been knocked loose. I’ve got it going at top speed, but the only thing between it and a total breakdown is a prayer.”

“Start praying,” said George, brusely. “Pray for a button to push.”

The Earthman frowned, and stared ahead in sullen silence.

275

HEREDITY

At four in the afternoon, the Ganymedan drawled, “Air’s beginning t’ thin out, looks like.”

Alien snapped to alertness. The air was foul and humid within. The ventilator behind swished sibilantly between each click and the clicks were spacing themselves further apart. It wouldn’t hold out much longer now.

“How much ground have we covered?”

“ ‘Bout a thaird o’ the distance,” was the reply. “How ‘r y* holding out?”

“Well enough,” Alien snapped back. He retired once more

into his shell

Night came and the first brilliant stars of a Martian night peeped out when with a last futile and long-sustained swi-i-i-s-s-sh, the ventilator died.

“Domn!” said George. “I can’t breathe this soup any longer, anyway. Open the windows.”

The keenly cold Martian wind swept in and with it the last traces of sand. George coughed as he pulled

his woolen cap over his ears and turned on the heaters.

“Y’ can still taste the grit.”

Alien looked wistfully up into the skies, “There’s Earth—with the moon hanging right onto her tail.”

“Airth?” repeated George with fine contempt. His finger pointed horizonwards, “There’s good old Jupe for y’.”

And throwing back his head, he sang in a full throated baritone:

“When the golden orb o’ Jove

Shines down from the skies above,

Then my spirit longs to go

To that happy land I know,

Back t’ good, old Ganyme-e-e-e-edē.”

The last note quavered and broke, and quavered and broke again and still again in an ever increasing rapidity of tempo until its vibrating ululation pierced the air about ear-shatter-ingly.

Alien stared at his brother wide-eyed, “How did you do that?”

George grinned, “That’s the Gannie quaver. Didn’t y’ ever hear it before?”

276

HEREDITY

The Earthman shook his head, “I’ve head of it, but that’s all.”

The other became a bit more cordial, “Well, o’ course y’ can only do it in a thin atmosphere. Y’ should hear me on Gannie. I c’d shake y’ right off y’r chair when I’m going good.

Here! Wait till I gulp down some coffee, and then I’ll sing y’

vairse twenty-four o’ the ‘Ballad o’ Ganymede.’ “

He took a deep breath:

“There’s a fair-haired maid I love

Standing in the light o’ Jove

And she’s waiting there for me-e-e-e-e.

Then—“

Alien grasped him by the arm and shook him. The Gany-medan choked into silence.

“What’s the matter?” he asked sharply.

“There was a thumping sound on the roof just a second ago. There’s something up there.”

George stared upwards, “Grab the wheel. I’ll go up.”

Alien shook his head, “I’m going myself. I wouldn’t trust myself running this primitive contraption.”

He was out on the running board the next instant.

“Keep her going,” he shouted, and threw one foot up onto the roof.

He froze in that position when he became aware of two yellow slits of eyes staring hard into his. It took not more than a second for him to realize that he was face to face with a keazel, a situation which for discomfort is about on a par with the discovery of a rattlesnake in one’s bed back on Earth.

There was little time for mental comparisons of his position with Earth predicaments, however, for the keazel lunged for-ward, its poisonous fangs agleam in the starlight.

Alien ducked desperately and lost his grip. He hit the sand with a slow-motion thud and the cold, scaly body of the Martian reptile was upon him.

The Earthman’s reaction was almost instinctive. His hand shot out and clamped down hard upon the creature’s narrow muzzle.

In that position, beast and man stiffened into breathless

statuary. The man was trembling and within him his heart

pounded away with hard rapidity. He scarcely dared move. In

the unaccustomed Martian gravity, he found he could not

277

HEREDITY

judge movements of his limbs. Muscles knotted almost of their own accord and legs swung when they ought not to.

He tried to lie still—and think.

The keazel squirmed, and from its lips, clamped shut by Earth muscles, issued a tremulous whine. Alien’s hand grew slick with perspiration and he could feel the beast’s muzzle turn a bit within his palm. He clamped harder, panic-stricken. Physically, the keazel was no match for an Earthman, even a tired,

frightened, gravity-unaccustomed Earthman—but one bite, anywhere, was all that was needed.

The keazel jerked suddenly; its back humped and its legs threshed. Alien held on with both hands and could not let go. He had neither gun nor knife. There was no rock on the level desert sands to crack its skull against. The sand-truck had long since disappeared into the Martian night, and he was alone—alone with a keazel.

In desperation, he twisted. The keazel's head bent. He could hear its breath whistling forth harshly—and again there was that low whine.

Alien writhed above it and clamped knees down upon its cold, scaly abdomen. He twisted the head, further and further. The keazel fought desperately, but Alien's Earthly biceps maintained their hold. He could almost sense the beast's agony in the last stages, when he called up all his strength,—some-thing snapped.

And the beast lay still.

He rose to his feet, half-sobbing. The Martian night wind knifed into him and the perspiration froze on his body. He was alone in the desert.

Reaction set in. There was an intense buzzing in his ears. He found it difficult to stand. The wind was biting—but somehow he didn't feel it any more.

The buzzing in his ears resolved itself into a voice—a voice calling weirdly through the Martian wind.

“All'n, where are y'? Domn y', y' tanderfoot, where are y'?”

All'n! A ll'n!”

New life swept into the Earthman. He tossed the keazel's carcass onto his shoulders and staggered on towards the voice.

“Here I am, G—Gannie. Right here.”

He stumbled blindly into his brother's arms.

George began harshly, “Y' blasted Airthman, can't y' even

keep y'r footing on a sandtruck moving at ten miles per? Y'

might've—“

His voice died away in a semi-gurgle.

278

HEREDITY

Alien said tiredly, “There was a keazel on the roof. He knocked me off. Here, put it somewhere. There's a hundred dollar bonus for every keazel skin brought in to Aresopolis.”

He had no clear recollection of anything for the next half hour. When things straightened out, he was in the truck again with the taste of warm coffee in his mouth. The engine was rumbling once more and the pleasant warmth of the heaters surrounded him.

George sat next to him silently, eyes fixed on the desert ahead. But once in a while, he cleared his throat and shot a lightning glance at his brother. There was a queer look in his eyes.

Alien said, "Listen, I've got to keep awake,—and you look half dead yourself—so how about teaching me that 'Gannie quaver' of yours. That's bound to wake the dead."

The Ganymedan stared even harder and then said gruffly, "Sure, watch m' Adam's apple while I do 't again."

The sun was half-way to zenith when they reached the canal.

An hour before dawn there had come the crackling sound of hoarfrost beneath the heavy wheels and that signified the end of the desert area and the approach of the canal oasis. With the rising of the sun, the crackling disappeared and the softening mud underneath slowed the sand-adapted truck. The pathetic clumps of gray-green scrub that dotted the flat land-scape were the first variant to eternal red sand since the two had started on their journey.

And then Alien had leaned forward and grasped his brother by the arm, "Look, there's the canal itself right ahead."

The "canal"—a small tributary of the mighty Jefferson Canal—contained a mere trickle of water at this season of the year. A dirty winding line of dampness, it was, and little more. Surrounding it on both sides were the boggy areas of black mud that were to fill up into a rushing ice-cold current an Earth-year hence.

The sand-truck nosed gingerly down the gentle slope, weaving a tortuous path among the sparsely-strewn boulders brought down by the spring's torrents and left there as the sinking waters receded.

It slopped through the mud and splashed clumsily through the puddles. It jounced noisily over rocks, muddied itself past the hubs as it made its way through the murky mid-stream channel and then settled itself for the upward pull out.

279

HEREDITY

And then, with a suddenness that tossed the two drivers out of their seats, it sideslipped, made one futile effort to pro-ceed onwards, and thereafter refused to budge.

The brothers scrambled out and surveyed the situation.

George swore lustily, voice more thickly accented than ever.

“B’ Jupe ‘n’ domn, we’re in a pickled situation f’r fair. Tis wallowing in the mud there like a blasted pig.”

Alien shoved his hair back wearily, “Well, don’t stand there looking at it. We’re still a hundred miles or better from Are-sopolis. We’ve got to get it out of there.”

“Sure, but how?” His imprecations dropped to sibilant breathings as he reached into the truck for the coil of rope in the back. He looked at it doubtfully.

“Y’ get in here, All’n, and when I pull, press down with y’r foot on that pedal.”

He was tying the rope to the front axle even as he spoke. He played it out behind him as he slogged out through ankle-deep mud, and stretched it taut.

“All right, now, give!” he yelled. His face turned purple with effort as his back muscles ridged. Alien, within the car, pressed the indicated pedal to the floor, heard a loud roar from the engine and a spinning whirl from the back wheels. The truck heaved once, and then sank back.

“ ‘Tis no use,” George called. “I can’t get a footing. If the ground were dry, I c’d do it.”

“If the ground were dry, we wouldn’t be stuck,” retorted Alien. “Here, give me that rope.”

“D’ y’ think y’ can do it, if / can’t?” came the enraged cry, but the other had already left the car.

Alien had spied the large, deep-bedded boulder from the truck, and it was with relief that he found it to be within reaching distance of the rope. He pulled it taut and tossed its free end about the boulder. Knotting it clumsily, he pulled, and it held.

His brother leaned out of the car window, as he made his way, back, with one lumped Ganymedan fist agitating the air.

“Hi, y’ nitwit. What’re y’ doing? D’ y’ expect that over-grown rock t’ pull us out?”

“Shut up,” yelled back Alien, “and feed her the gas when I pull.”

He paused midway between boulder and truck and seized the rope.

“Give!” he shouted in his turn, and with a sudden jerk pulled the rope towards him with both hands.

280

HEREDITY

The truck moved; its wheels caught hold. For a moment it hesitated with the engine blasting ahead full speed, and George’s hands trembling upon the wheel. And then it went over. And almost simultaneously, the boulder at the other end of the taut rope lifted out of the mud with a liquid smacking sound and went over on its side.

Alien slipped the noose off it and ran for the truck.

“Keep her going,” he shouted, and hopped onto the running board, rope trailing.

“How did y’ do that?” asked George, eyes round with awe.

“I haven’t got the energy to explain it now. When we get to Aresopolis and after we’ve had a good sleep, I’ll draw the triangle of forces for you, and show you what happened. No muscles were involved. Don’t look at me as if I were Her-cules.”

George withdrew his gaze with an effort, “Triangle o’ forces, is it? I never heard o’ it, but if that’s what it c’n do, educa-tion’s a great thing.”

“Comet-gas I Is any coffee left?” He stared at the last ther-mos-bottle, shook it near his ear dolefully, and said, “Oh, well, let’s practice the quaver. It’s almost as good and I’ve practically got it perfected.”

He yawned prodigiously, “Will we make it by nightfall?”

“Maybe!”

The canal was behind them now.

The reddening sun was lowering itself slowly behind the Southern Range. The Southern Range is one of the two “mountain chains” left on Mars. It is a region of hills; ancient, time-worn, eroded hills behind which lies Aresopolis.

It possesses the only scenery worth mentioning on all Mars and also the golden attribute of being able, through the up-drafts along its sides, to suck an occasional ram out of the desiccated Martian atmosphere.

Ordinarily, perhaps, a pair from Earth and Ganymede might have idled through this picturesque area, but this was definitely not the case with the Carter twins.

Eyes, puffed for lack of sleep, glistened once more at the sight of hills on the horizons. Bodies, almost broken for sheer weariness, tensed once more when they rose against the sky.

And the truck leaped ahead,—for just behind the hills lay Aresopolis. The road they travelled was no longer a rule-edge straight one, guided by the compass, over table-top-flat land. It followed narrow, twisting trails over rocky ground.

281

HEREDITY

They had reached Twin Peaks, then, when there was a sudden sputter from the motor, a few halting coughs and then silence.

Alien sat up and there was weariness and utter disgust in his voice, “What’s wrong with this everlastingly-to-be-damned machine now?”

His brother shrugged, “Nothing that I haven’t been expect-ing for the last hour. We’re out o’ gas. Doesn’t matter at all. We’re at Twin Peaks—only ten miles fr’m the city. We c’n get there in an hour,

and then they c'n send men out here for the blooms.”

“Ten miles in an hour!” protested Alien. “You’re crazy.”

His face suddenly twisted at an agonizing thought, “My God!

We can’t do it under three hours and it’s almost night. No one

can last that long in a Martian night. George, we’re—“

George was pulling him out of the car by main force, “By Jupe ‘n’ domn, All’n, don’t let the tenderfoot show through now. We c’n do it in an hour, I tell y’. Didn’t y’ ever try run-ning under sub-normal gravity? It’s like flying. Look at me.”

He was off, skimming the ground closely, and proceeding in ground-covering leaps that shrank him to a speck up the mountain side in a moment.

He waved, and his voice came thinly, “Come on!”

Alien started,—and sprawled at the third wide stride, arms nailing and legs straddled wide. The Ganymedan’s laughter drifted down in heartless gusts.

Alien rose angrily and dusted himself. At an ordinary walk, he made his way upwards.

“Don’t get sore, All’n,” said George. “It’s just a knack, and I’ve had practice on Gannie. Just pretend y’r running along a feather bed. Run rhythmically—a sort o’ very slow rhythm—and run close t’ the ground; don’t leap high. Like this. Watch me!”

The Earthman tried it, eyes on his brother. His first few un-certain strides became surer and longer. His legs stretched and his arms swung as he matched his brother, step for step.

George shouted encouragement and speeded his pace, “Keep lower t’ the ground, All’n. Don’t leap ‘fore y’r toes hit the ground.”

Alien’s eyes shone and, for the moment, weariness was for-gotten, “This is great; It is like flying—or like springs on your shoes.”

“Y’ ought t’ have lived on Gannie with me. We’ve got

special fields f’r subgravity races. An expairt racer c’n do forty

282

HEREDITY

miles an hour at times—and I c’n do thirty-five myself. —O’ course, the gravity there’s a bit lower than here on Mars.”

Long hair streamed backwards in the wind and skin red-dened at the bittercold air that blew past. The ruddy patches of sunlight travelled higher and higher up the slopes, lingered briefly upon the very summits and went out altogether. The short Martian twilight started upon its rapidly darkening career. The Evening

Star—Earth—was already glimmering brightly, its attendant moon somewhat closer than the night previous.

The passing minutes went unheeded by Alien. He was too absorbed by the wonderful new sensation of sub-gravity run-ning, to do anything more than follow his brother. Even the increasing chilliness scarcely registered upon his conscious-ness.

It was George, then, upon whose countenance a tiny, puck-ered uneasiness grew into a vast, panicky frown.

“Hi, AU’n, hold up!” he called. Leaning backward, he brought himself to a short, hopping halt full of grace and ease. Alien tried to do likewise, broke his rhythm, and went for-ward upon his face. He rose with loud reproaches.

The Ganymedan turned a deaf ear to them. His gaze was sombre in the dusk, “D’ y’ know where we are, All’n?”

Alien felt a cold constriction about his windpipe as he stared about him quickly. Things looked different in semi-darkness, but they looked more different than they ought. It was impossible for things to be so different.

“We should’ve sighted Old Baldy by now, shouldn’t we have?” he quavered.

“We sh’d’ve sighted him long ago,” came the hard answer. “’Tis that domned quake. Landslides must’ve changed the trails. The peaks themselves must’ve been screwed up—“ His voice was thin-edged, “Alien, ‘t isn’t any use making believe. We’re dead lost.”

For a moment, they stood silently—uncertainly. The sky was purple and the hills retreated into the night. Alien licked bluechilled Ups with a dry tongue.

“We can’t be but a few miles away. We’re bound to stum-ble on the city if we look.”

“Consider the situation, Airthman,” came. the savage,

shouted answer, “ ‘Tis night, Martian night. The temperature’s

down past zero and plummeting every minute. We haven’t any

time t’ look;—we’ve got t’ go straight there. If we’re not there

283

HEREDITY

in half an hour, we’re not going t’ get there at all.”

Alien knew that well, and mention of the cold increased his consciousness of it. He spoke through chattering teeth as he drew his heavy, fur-lined coat closer about him.

“We might build a fire!” The suggestion was a half-hearted one, muttered indistinctly, and fallen upon immediately by the other.

“With what?” George was beside himself with sheer dis-appointment and frustration. “We’ve pulled through this far, and now we’ll prob’ly freeze t’ death within a mile o’ the city. C’mon keep running. It’s a hundred-t’-one chance.”

But Alien pulled him back. There was a feverish glint in the Earthman’s eye, “Bonfires!” he said irrelevantly. “It’s a possibility. Want to take a chance that might do the trick?”

“Nothin else t’ do,” growled the other. “But hurry. Every minute I—“

“Then run with the wind—and keep going.”

“Why?”

“Never mind why. Do what I say—run with the wind!”

There was no false optimism in Alien as he bounded through the dark, stumbling over loose stones, sliding down declivities,—always with the wind at his back. George ran at his side, a vague, formless blotch in the night.

The cold was growing more bitter, but it was not quite as bitter as the freezing pang of apprehension gnawing at the Earthman’s vitals.

Death is unpleasant!

And then they topped the rise, and from George’s throat came a loud “B’ Jupe ‘n’ down!” of triumph.

The ground before them, as far as the eye could see, was dotted by bonfires. Shattered Aresopolis lay ahead, its home-less inhabitants making the night bearable by the simple agency of burning wood.

And on the hilly slopes, two weary figures slapped each other on the backs, laughed wildly, and pressed half-frozen, stubbly cheeks together for sheer, unadulterated joy.

They were there at last!

The Aresopolis lab, on the very outskirts of the city, was one of the few structures still standing. Within, by makeshift light, haggard chemists were distilling the last drops of extract.

Without, the city’s police-force remnants were clearing des-

perate way for the precious flasks and vials as they were dis-

tributed to the various emergency medical centers set up in

HEREDITY

various regions of the bonfire-pocked ruins that were once the Martian metropolis.

Old Hal Vincent supervised the process and his faded eyes ever and again peered anxiously into the hills beyond, watch-ing hopefully but doubtfully for the promised cargo of blooms.

And then two figures reeled out of the darkness and col-lapsed to halt before him.

Chill anxiety clamped down upon him, “The blooms!

Where are they? Have you got them?”

“At Twin Peaks,” gasped Alien. “A ton of them and better in a sand-truck. Send for them.”

A group of police ground-cars set off before he had finished,

and Vincent exclaimed bewilderedly, “A sand-truck? Why

didn’t you send it in a ship? What’s wrong with you out there,

anyway? Earthquake—“

He received no direct answer. George had stumbled to-wards the nearest bonfire with a beatific expression on his worn face.

“Ahhh, ‘tis warm!” Slowly, he folded and dropped, asleep before he hit the ground.

Alien coughed gaspingly, “Huh! The Gannie tenderfoot!

Couldn’t—ulp—take it!”

And the ground came up and hit him in the face.

Alien woke with the evening sun in his eyes and the odor of frying bacon in his nostrils. George shoved the frying pan towards him and said between gigantic, wolfing mouthfuls, “Help yourself.”

He pointed to the empty sand-truck outside the labs, “They got the stuff all right.”

Alien fell to, quietly. George wiped his lips with the back

of his hand and said, “Say, All’n, how ‘d y’ find the city? Tve

been sitting here trying t’ figure it all out”

“It was the bonfires,” came the muffled answer. “It was the only way they could get heat, and fires over square miles of land create a whole section of heated air, which rises, causing the cold surrounding air of the hills to sweep in.” He suited his words with appropriate gestures. “The wind in the hills was heading

for the city to replace warm air and we followed the wind. —Sort of a natural compass, pointing to where we wanted to go.”

George was silent, kicking with embarrassed vigor at the ashes of the bonfire of the night before.

“Lis’n, All’n, I’ve had y’ a’ wrong. Y’ were an Airthman

285

HEREDITY

tanderfoot t’ me till—‘ He paused, drew a deep breath and exploded with, “Well, by Jupe n’ domn, y’r my twin brother and I’m proud o’ it All Airth c’dn’t drown out the Carter blood in y’.”

The Earthman opened his mouth to reply but his brother clamped one palm over it, “Y’ keep quiet, till I’m finished. After we get back, y’ can fix up that mechanical picker or anything else y’ want. I drop my veto. If Airth and machines c’n tairn out y’r kind o’ man, they’re all right. But just the same,” there was a trace of wistfulness in his voice, “y’ got t’” admit that everytime the machines broke down—from irriga-tion-trucks and rocket-ships to ventilators and sand-trucks—t’was men who had t’ pull through in spite o’ all that Mars could do.”

Alien wrenched his face from out behind the restraining palm.

“The machines do their best,” he said, but not too vehe-mently.

“Sure, but that’s all they can do. When the emairgency comes, a man’s got t’ do a damn lot better than his .best or he’s a goner.”

The other paused, nodded, and gripped the other’s hand

with sudden fierceness, “Oh, we’re not so different. Earth and

Ganymede are plastered thinly over the outside of us, but

inside—“

He caught himself.

“Come on, let’s give out with that old Gannie quaver.”

And from the two fraternal throats tore forth a shrieking eldritch yell such as the thin, cold Martian air had seldom before carried.

THE END

I got the cover again with “Heredity.”

In connection with that story, I remember best a comment I received from a young fellow named Scott Feldman (who was then still in his teens but who was later, as Scott Meredith, to become one of the most important literary agents in the business). He disapproved of the story because I introduced two characters at the start who disappeared from the story and were never heard of again.

Once that was pointed out to me, it seemed to me that

this was indeed a major flaw, and I wondered why neither

286

HEREDITY

Campbell nor Pohl had specifically pointed it out. I never quite had the courage to ask, however.

But it did cause me to look at my stories more closely thereafter, and to realize again that writing isn’t all inspiration and free flow. You do have to ask yourself pretty mechanical questions, such as, “What do I do with this character now that I’ve taken the trouble to make use of him?”

By the time Campbell was rejecting, and Pohl accepting “Heredity,” I was writing “History.” The same thing happened. I submitted it to Campbell on September 13. It was rejected, and, eventually, Pohl took it.

287

13

History

Ullen’s lank arm pushed the stylus carefully and painstakingly across the paper; his near-sighted eyes blinked through thick lenses. The signal light flashed twice before he answered.

He turned a page, and called out, “Is dat you, Johnnie?”

Come in, please.”

He smiled gently, his thin, Martian face alight with pleasure.

“Sit down, Johnnie—but first lower de window-shade. De glare of your great Eard sun is annoying. Ah, dat’s good, and sid down and be very, very quiet for just a little while, be-cause I am busy.”

John Brewster shifted a pile of ill-stacked papers and seated himself. He blew the dust from the edges of an open book in the next chair and looked reproachfully on the Martian historian.

“Are you still poking around these musty old things? Don’t you get tired?”

“Please, Johnnie,” Ullen did not look up, “you will lose de page. Dat book dere is William Stewart’s ‘Hitlerian Era’ and it is very hard to read. So many words he uses which he doesn’t explain.”

His expression as it focussed upon Johnnie was one of frowning petulance, “Never do dey explain deir terms. It is so unscientific. On Mars, before we even start, we say, ‘Dis is a list of all definitions of terms to be used.’ How oderwise can Super Science Stories, March 1941
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288

HISTORY

people talk sensibly? Hmp! You crazy Eardmen.”

“Oh, nuts, Ullen—forget it. Why don’t you look at me.

Don’t you even notice anything?”

The Martian sighed, removed his glasses, cleaned them thoughtfully, and carefully replaced them. He stared imper-sonally at Johnnie, “Well, I think it is new clothes you are wearing. Is it not so?”

“New clothes! Is that all you can say, Ullen? This is a uni-form. I’m a member of the Home Defense.” He rose to his feet, a picture of boyish exuberance.

“What is dis ‘Home Defense’?” asked Ullen languidly.

Johnnie gulped and sat down helplessly, “You know, I really think you haven’t heard that Earth and Venus have been at war for the last week. I’ll bet money you haven’t.”

“I’ve been busy.” He frowned and pursed his thin, blood-less lips, “On Mars, dere is no war—at least, dere isn’t any more. Once, we used to fight, but dat was long ago. Once we were scientists, too, and dat was long ago. Now, dere are only a few of us—and we do not fight Dere is no happiness dat way.” He seemed to shake himself, and spoke more briskly, “Tell me, Johnnie, do you know where it is I can find what it means, dis ‘national honor?’ It holds me back. I can’t go funder unless I can understand it.”

Johnnie rose to his full height and glittered in the spotless green of the Terrestrial Service. He laughed with fond in-dulgence, “You’re hopeless, Ullen,—you old coot. Aren’t you going to wish me luck? I’m hitting space tomorrow.”

“Oh, is dere danger?”

There was a squawk of laughter, “Danger? What do you think?”

“Well, den, to seek danger—it is foolish. Why do you do it?”

“You wouldn’t understand, Ullen. Just wish me luck and say you hope I come through whole.”

“Cer-tain-ly! .I don’t want anyone to die.” He slipped his hand into the strong fist held out to him. “Take care of your-self, Johnnie—and wait, before you go, bring me Stewart’s book. Everything is so heavy here on Eard. Heavy, heavy,—and de words have no definitions.”

He sighed, and was back at his books as Johnnie slipped quietly out of the room.

“Dese barbarous people,” he muttered sleepily to himself.

“War! Dey dink dat by killing—“ His voice died away and

289

HISTORY

merged into a slurred mumble as his eyes followed creeping finger across the page.

“ ‘From the very moment of the union of the Anglo-Saxon world into a single governmental entity and even as far back as the spring of 1941, it was evident that the doom of—‘ “

“Dese crazy Eardmeni”

Ullen leaned heavily upon his crutches on the steps of the University library and one thin hand shielded his watering eyes from the terrible Earthly sun.

The sky was blue, cloudless,—undisturbed. Yet somewhere up above, beyond the planet’s airy blanket, steel-sided ships were veering and sparkling in vicious combat. And down upon the city were falling the tiny “Drops of Death,” the highly radioactive bombs that noiselessly and inexorably ate out a fifteen foot crater wherever they fell.

The city’s population was herding into the shelters and burying themselves inside the deep-set leaden cells. Upstaring, silent, anxious, they streamed past UUea. Uniformed guards invested some sort of order into the gigantic flight, steering the stragglers and speeding the laggards.

The air was filled with barked orders.

“Hit the shelter, Pop, Better get going. You can’t stand there, you know.”

Ullen turned to the guard who addressed him and slowly brought his wandering thoughts to bear upon the situation.

“I am sorry, Eardman—but I cannot move very fast on your huge world.” He tapped one crutch upon the marble flags beneath- “Dings are so heavy. If I were to crowd in wid de rest, I would be crushed.”

He smiled gently down from his lank height, and the guard rubbed a stubbly chin, “All right, pop, I can

fix that. It is tough on you Marsies at that—Here, hold those crutches up out of the way.”

With a heave, he cradled the Martian, “Hold your legs” close to my body, because we’re going to travel fast.”

His bulky figure pressed through the line of Earthmen. Ullen shut his eyes as the rapid motion under supernormal gravity stirred his stomach into rebellion. He opened them once again in the dim recesses of the low-ceilinged shelter.

The guard set him down carefully and adjusted the crutches beneath Ullen’s armpits, “O.K. Pop. Take care of yourself.”

Ullen took in his surroundings and hobbled to one of the

.290

HISTORY

low benches at the near end of the shelter. From behind him came the sombre clang of the thick, leaden door.

The Martian historian fished a worn tablet from his pocket and scribbled slow notes. He disregarded the excited babble that arose about him and the scraps of heated talk that filled the air thickly.

And then he scratched at his furrowed forehead with the stub end of his pencil, meeting the staring eyes of the man sitting next to him. He smiled abstractedly and returned to his notes.

“You’re a Martian, aren’t you?” His neighbor spoke in quick,

squeaky tones. “I don’t like foreigners much, but I’ve got

nothing special against Marsies. These Veenies, now, they—“

Ullen’s soft tones interrupted him. “Hate is all wrong, I dink. Dis war is a great annoyance—a great one. It interferes wid my work and you Eardmen ought to stop it. Is it not so?”

“You can bet your hide we’re going to stop it,” came the emphatic reply. “We’re going to bash their planet inside out—and the dirty Veenies with it.”

“You mean attack deir cities like dis?” The Martian blinked owlishly in thought, “You dink dat would be best?”

“Damn it, yes. It—“

“But look.” Ullen placed a skeleton finger in one palm and continued in gentle argument. “Would it not be easier to get de ships demselves by de fall-apart weapon?—Don’t you dink so? Or is it dat de Venus people, dey have de screens?”

“What weapon, did you say?”

Ullen ruminated carefully, “I suppose dat isn’t de name you call it by—but I don’t know about weapons,

anyway. We call it on Mars de 'skellingbeg' and dat means in English 'fall-apart weapon.' Now you know?"

There was no direct answer unless a vague under-breath mutter could be called one. The Earthman pushed away from his companion and stared at the opposite wall in a fidget.

Ullen sensed the rebuff and shrugged one shoulder wearily, "It is not dat I care much about de whole ding. It is only dat de war is a big bodder. It should be ended." He sighed, "But I don't care!"

His fingers had just begun manipulating the pencil once more in its travels across the open tablet on his lap, when he looked up again.

"Tell me, please, what is de name of dat country where Hitler died. Your Eard names, dey are so complicated some-times. I dink it begins wid an M."

291

HISTORY

His neighbor ripped him open with a stare and walked away. Ullen's eyes followed him with a puzzled frown. And then the all-clear signal sounded.

"Oh, yes," said UUen. "Madagascar 1 Such a silly name!"

Johnnie Brewster's uniform was war-worn now; a bit more wrinkled about the neck and shoulders, a trace more worn at knees and elbows.

Ullen ran his finger along the angry scar that ran the length of Johnnie's right fore-arm, "It hurts no more, John-nie?"

"Nuts! A scratch! I got the Veenie that did that. He's chas-ing dreams in the moon now."

"You were in de hospital long, Johnnie?"

"A week!" He lit a cigarette, pushed some of the mess off the Martian's desk and seated himself. "I've spent the rest of the time with my family, though I did get around to visit-ing you, you see."

He leaned over and poked an affectionate hand at the Martian's leathery cheek, "Aren't you going to say you're glad to see me?"

Ullen removed his glasses and peered at the Earthman,

"Why, Johnnie, are you so uncertain dat I am glad to see you,

dat you require I should say it in words?" He paused, "I'll

make a note of dat. You silly Eardmen must always be telling
each oder dese simple dings—and den you don’t believe it
anyway. On Mars—“

He was rubbing his glasses methodically, as he spoke, and now he replaced them, “Johnnie, don’t you Eardmen have de ‘fall-apart’ weapon? I met a person once in de raid shelter and he didn’t know what I was talking about.”

Johnnie frowned, “I don’t either, for that matter. Why do you ask?”

“Because it seems strange dat you should have to fight so hard dese Venus men, when dey don’t seem to have de screens to stop it wid. Johnnie, I want de war should be over. It makes me all de time stop my work to go to a shelter.”

“Hold on, now, Ullen. Don’t sputter. What is this ‘fall-apart’ weapon? A disintegrator? What do you know about it?”

“I? I know noddin about it at all. I dought you knew—

dat’s why I asked. Back on Mars, in our histories, dey talk
about using dat kind of weapon in our old wars. But we don’t
know noddin about weapons any more. Anyway, dey’re so
silly, because de oder side always dinks of someding which

292

HISTORY

protects against it, and den everyding is de same as always.—

Johnnie, do you suppose you could go down to de desk and ask for a copy of Higginboddam’s ‘Beginnings of Space Travel?’”

The Earthman clenched his fists and shook them impotently, “Ullen, you damned Martian pedant—don’t you understand that this is important? Earth is at war! War! War! War!”

“Well, den, stop de war.” There was irritation in Ullen’s voice. “Dere is no peace and quiet anywheres on Eard. I wish I had dis library—Johnnie, be careful. Please, what are you doing? You’re hurting me.”

“I’m sorry, Ullen, but you’ve got to come with me. We’re going to see about this.” Johnny had the feebly protesting Martian wedged into the wheel-chair and was off with a rush, before he had finished the sentence.

A rocket-taxi was at the bottom of the Library steps, and together chauffeur and Spaceman lifted the chair inside. With a comet-tail of smoke, they were off.

Ullen moaned softly at the acceleration, but Johnnie ignored him. “Washington in twenty minutes, fellow,” he said to the driver, “and ignore the signal beams.”

The starched secretary spoke in a frozen monotone, “Ad-miral Korsakoff will see you now.”

Johnnie wheeled and stamped out the last cigarette butt. He shot a hasty glance at his watch and grunted.

At the motion of the wheel-chair, Ullen roused himself out of a troubled sleep. He adjusted his glasses, “Did dey let us in finally, Johnnie?”

“Shhh!”

Ullen’s impersonal stare swept over the rich furnishings of the room, the huge maps of Earth and Venus on the wall, the imposing desk in the center. It lingered upon the pudgy, bearded figure behind this desk and then came to rest upon the lanky, sandy-haired man at his side.

The Martian attempted to rise from the chair in sudden eagerness, “Aren’t you Dr. Doming? I saw you last year at Princeton. You remember me, don’t you? Dey gave me at dat time, my honorary degree.”

Dr. Thorning had advanced and shook hands vigorously, “Certainly. You spoke then on Martian historical methods, didn’t you?”

“Oh, you remember. I’m glad! But dis is a great opportunity

for me, meeting you. Tell me, as a scientist, what would be

HISTORY

your opinion of my deory dat de social insecurity of de Hit-

lerian Era was de direct cause for de lag—“

Dr. Thoming smiled, “I’ll discuss it with you later, Dr. Ullen. Right now, Admiral Korsakoff wants information from you, with which we hope to end the war.”

“Exactly,” Korsakoff spoke in clipped tones as he met Ullen’s mild gaze. “Although a Martian, I presume you favor the victory of the principles of freedom and justice over the foul practices of Venusian tyranny.”

Ullen stared uncertainly, “Dat sounds familiar—but I don’t dink about it much. You mean, maybe, de war should end?”

“With victory, yes.”

“Oh, ‘victory,’ dat is just a silly word. History proves dat a war decided on military superiority only lays de groundwork for future wars of retaliation and revenge. I refer you to a very good essay on de subject by a James Calkins. It was published all de way back in 2050.”

“My dear sir!”

Ullen raised his voice in bland indifference to Johnnie’s

urgent whisperings. “Now to end de war—really end it—you

should say to de plain people of Venus, ‘It is unnecessary to

fight. Let us just talk’—“

There was the slam of fist on desk and a muttered oath of frightful import. “For God’s sakes, Thoming, get what you want out of him. I give you five minutes.”

Thoming stifled his chuckle, “Dr. Ullen, we want you to tell us what you know about the disintegrator.”

“Disintegrator?” Ullen put a puzzled finger to his cheek.

“The one you told Lieutenant Brewster of.”

“Ummmm— Oh! You mean de ‘fall-apart’ weapon. I don’t know noddin about it De Martian historians mention it some times, but none of dem know about it—de technical side, dat is.”

The sandy-haired physicist nodded patiently, “I know, I - know. But what do they say? What kind of a weapon is it?”

“Well, de way dey talk about it, it makes de metals to fall to pieces. What is it you call de ding dat holds metals toged-der/now?”

“Infra-molecular forces?”

Ullen frowned and then spoke thoughtfully, “Maybe. I

forgot what de Martian word is—except dat it’s long. Any-

way, dis weapon, it makes dis force dat holds de metals to-

294

HISTORY

gedder not to exist anymore and it all falls apart in a powder.

But it only works on de dree metals, Iron, cobalt, and—uh—de

odder one!”

“Nickel,” prompted Johnnie, softly.

“Yes, yes, nickel!”

Thorning’s eyes glittered, “Aha, the ferromagnetic elements. There’s an oscillating magnetic field mixed up in this, or I’m a Veenie. How about it, Ullen?”

The Martian sighed, “Such crazy Eard words.—Let’s see now, most of what I know about de weapon is from de work of Hogel Beg. It was—I’m pretty sure—in his “Cultural and Social History of de Dird Empire.” It was a huge work in twenty-four volumes, but I always dought it was radder mediocre. His technique in de presentation of—“

“Please,” said Thoming, “the weapon—“

“Oh, yes, dat!” He hitched himself higher in his chair and grimaced with the effort. “He talks about electricity and it goes back and ford very fast—very fast, and its pressure—“ He paused hopelessly, and regarded the scowling visage of the bearded Admiral naively, “I dink de word is pressure, but I don’t know, because it is hard to translate. De Martian word is ‘cranstard.’ Does dat help?”

“I think you mean ‘potential,’ Dr. Ullen!” Thoming sighed audibly.

“Well, if you say so. Anyway, dis ‘potential’ changes also very fast and de two changes are synchronized somehow along wid magnetism dat—uh—shifts and dat’s all I know about it.” He smiled uncertainly, “I would like to go back now. It would be all right now, wouldn’t it?”

The Admiral vouchsafed no answer, “Do you make any-thing out of that mess. Doctor?”

“Damned little,” admitted the physicist, “but it gives me a lead or two. We might try getting hold of this Beg’s book, but there’s not much hope. It will simply repeat what we’ve just heard. Dr. Ullen, are there any scientific works on your planet?”

The Martian saddened, “No, Dr. Doming, dey were all de-stroyed during de Kalynian reaction. On Mars, we doroughly disbelieve in science. History has shown dat it comes from science no happiness.” He turned to the young Earthman at his side, “Johnnie, let us go now, please.”

Korsakoff dismissed the two with a wave of the hand.

Ullen bent carefully over the closely-typed manuscript and

HISTORY

inserted a word. He glanced up brightly at Johnnie Brewster, who shook his head and placed a hand on the Martian's arm. His brow furrowed more deeply.

UUen," he said harshly, "you're in trouble."

"Eh? I? In trouble? Why, Johnnie, dat is not so. My book is coming along famously. De whole first volume, it is completed and, but for a bit of polishing, is ready for de printers."

"Ullen, if you can't give the government definite informa-tion on the disintegrator, I won't answer for the conse-quences."

"But I told all I knew—"

"It won't do. Ifs not enough. You've got to remember more, UUen, you've got to."

"But knowledge where dere is none is impossible to have—dat is an axiom." UUen sat upright in his seat, propping him-self on a crutch.

"I know it," Johnnie's mouth twisted in misery, "but you've got to understand.

"The Venusians have control of space; our Asteroid garri-sons have been wiped out, and last week Phobos and Deimos fell. Communications between Earth and Luna are broken and God knows how long the Lunar squadron can hold out. Earth itself is scarcely secure and their bombings are becom-ing more serious—.Oh, UUen, don't you understand?"

The Martian's look of confusion deepened, "Eard is losing?"

"God, yes!"

"Den give up. Dat is de logical ding to do. Why did you start at aU—you stupid Eardmen."

Johnnie ground his teeth, "But if we have the disintegrator, we won't lose."

UUen shrugged, "Oh, Johnnie, it gets wearisome to listen to de same old story. You Eardmen have one-track minds. Look, wouldn't it make you feel better to have me read you some of my manuscript? It would do your inteUect good."

"AU right, UUen, you've asked for it, and here's everything right out If you don't teU Thoming what he wants to know, you're going to be arrested and tried for treason."

There was a short silence, and then a confused stutter, "T—treason. You mean dat I betray—" The historian removed his glasses and wiped them with shaking hand, "It's not true. You're trying to frighten me."

"Oh, no, I'm not Korsakoff thinks you know more than you're teUing. He's sure that you're either holding out for a price or, more likely, that you've sold out to the Veenies."

HISTORY

“But Doming—“

“Thoming isn’t any too secure himself. He has his own skin to think of. Earth governments in moments of stress are not famous for being reasonable.” There were sudden tears in his -eyes, “Ullen, there must be something you can do. It’s not only you—it’s for Earth.”

Ullen’s breathing whistled harshly, “Dey tink I would sell my scientific knowledge. Is dat de kind of insult dey pay my sense of eddies; my scientific integrity?” His voice was thick with fury and for the first time since Johnnie knew him, he lapsed into guttural Martian. “For dat, I say not a word,” he finished. “Let dem put me in prison or shoot me, but dis insult I cannot forget.”

There was no mistaking the firmness in his eyes, and Johnnie’s shoulders sagged. The Earthman didn’t move at the glare of the signal light.

“Answer de light, Johnnie,” said the Martian, softly. “Dey are coming for me.”

In a moment, the room was crowded with green uniforms. Dr. Thoming and the two with him were the only ones present in civilian clothes.

UUen struggled to his feet, “Gentlemen, say nodding. I have heard dat it is dought dat I am selling what I know—selling for money.” He spat the words. “It is a ding never be-fore said of me—a ding-F-bave not deserved. If you wish you can imprison me immediately, but I shall say nodding more—nor have anyding funder to do wid de Eard government.”

A green-garbed official stepped forward immediately, but Dr. Thoming waved him back.

“Whoa, there. Dr. UUen,” he said jovially, “don’t jump too

soon. I’ve just come to ask if there isn’t a single additional

fact that you remember. Anything, no matter how insignifi-

cant—“

There was stony silence. UUen leant heavily on his crutches but remained stolidly erect.

Dr. Thoming seated himself imperturbably upon the his-torian’s desk, picked up the high stack of type-written pages, “Ah, is this the manuscript young Brewster was telling me about.” He gazed at it curiously, “Well, of course, you realize that your attitude will force the government to confiscate aU this.”

“Eh?” Ullen’s stern expression melted into dismay. His crutch slipped and he dropped heavily into his seat.

HISTORY

The physicist warded off the other's feeble clutch, "Keep your hands off. Dr. Ullen, I'm taking care of this." He leafed through the pages with a rustling noise. "You see, if you are arrested for treason, your writings become subversive."

"Subversive!" Ullen's voice was hoarse, "Dr. Doming, you don't know what you are saying. It is my—my great labor." His voice caught huskily, "Please, Dr. Doming, give me my manuscript."

The other held it just beyond the Martian's shaking fingers.

"//—" he said.

"But I don't know!"

The sweat stood out on the historian's pale face. His voice came thickly. "Time! Give me time! But let me dink—and don't, please don't harm dis manuscript"

The other's fingers sank painfully into Ullen's shoulder, "So nelp me, I burn your manuscript in five minutes, if—"

"Wait, I'll tell you. Somewhere—I don't know where—it was said dat in de weapon dey used a special metal for some of de wiring. I don't know what metal, but water spoiled it and had to be kept away—also air. It—"

"Holy jumping Jupiter," came the sudden shout from one of Thorning's companions. "Chief, don't you remember Aspartier's work on sodium wiring in argon atmosphere five years ago—"

Dr. Thoming's eyes were deep with thought, "Wait—wait—wait—Damn! It was staring us in the face—"

"I know," shrieked Ullen suddenly. "It was in Karisto. He

was discussing de fall of Gallonie and dat was one of de
minor causes—de lack of dat metal—and den he men-
tioned—“

He was talking to an empty room, and for a while he was silent in puzzled astonishment.

And then, “My manuscript!” He salvaged it from where it lay scattered over the floor, hobbling painfully about, smooth-ing each wrinkled sheet with care.

“De barbarians—to treat a great scientific work so!”

Ullen opened still another drawer and scrabbled through its contents. He closed it and looked about peevishly, “Johnnie, where did I put dat bibliography? Did you see it?”

He look toward the window, “Johnnie!”

Johnnie Brewster said, “Wait a while, Ullen. Here they come now.”

The streets below were a burst of color. In a long, stiffly-

298

HISTORY

moving line the Green of the Navy paraded down the avenue, -the air above them snow-thick with confetti, hail-thick with ticker-tape. The roar of the crowd was dull, muted.

“Ah, de foolish people,” mused Ullen. “Dey were happy just like dis when de war started and dere was a parade just like dis—and now anodder one. Silly!” He stumped back to his chair.

Johnnie followed, “The government is naming a new mu-seum after you, isn’t it?”

“Yes,” was the dry reply. He peered helplessly about under the desk, “De Ullen War Museum—and it will be filled wid ancient weapons, from stone knife to anti-aircraft gun. Dat is your queer Eard sense of de fitness of dings. Where in dun-deration is dat bibliography?”

“Here,” said Johnnie, withdrawing the document from Ullen’s vest pocket. “Our victory was due to your weapon, ancient to you, so it is fit in a way.”

“Victory! Sure! Until Venus rearms and reprepares and refights for revenge. All history shows—but never mind. It is useless, dis talk.” He settled himself deeply in his chair, “Here, let me show you a real victory. Let me read you some of de first volume of my work. It’s already in print, you know.”

Johnnie laughed, “Go ahead, Ullen. Right now I’m even willing to listen to you read your entire twelve volumes—word for word.”

And Ullen smiled gently. “It would be good for your in-tellect,” he said.

THE END

“History,” you will notice, mentions Hitler’s end. It was written in the first days of September 1940, when Hitler seemed at the very peak of his success. France was defeated and occupied and Britain was at bay and seemed unlikely to survive. —Still, I had no doubt as to his ultimate defeat. I did not visualize his ending in suicide, however. I thought that like Napoleon and the Kaiser, he would end his life in exile. Madagascar was the place I picked.

Also mentioned in the story are “the tiny ‘Drops of Death,’ the highly-publicized radioactive bombs that noiselessly and inexorably ate out a fifteen-foot crater wherever they fell.”

By the time I wrote the story, uranium fission had been

discovered and announced. I had not yet heard of it, how-

299

T

HISTORY

ever, and I was unaware that reality was about to outstrip my prized science fictional imagination.

“History” was the 24th story I had written in hope of possible publication. Of those 24, thirteen had been published by early 1941 and two others were to be published in 1942. Nine were doomed to extinction.

The nine which were extinct were of no loss to anybody, I think, and the remaining fifteen may have been interesting enough in their way but lacked, I suspect, the mark of greatness. The only one of these first 24 stories which proved memorable was “Robbie,” to which I refer on page 157 but which is not included in this book. And “Robbie” deserves notice not because of what it was, but because of what it led to, and that could scarcely be foreseen in 1941.

Since the estimable people at Fawcett have, out of considerations of space, divided this book into two volumes and are ending the first volume here, it turns out that we are at a point in my career at which no one could as yet point to young Isaac (still only 20) as a shining example of greatness to come.

I was even humble about it. To those who know me only in these latter days of my self-assurance, it may be hard to believe but if anyone had shaken my shoulder back in 1941 and said, “Hey, Isaac, how do you rate yourself as a science fiction writer?” I would have answered, defensively, “Well, I’m trying.”

So please don’t leave me at this point, folks. There is Fawcett’s second volume coming which will take up the story at this point and you can follow me on through the remaining years, in which I kept on trying.