

ASTOUNDING

SCIENCE-FICTION

TITLE REGISTERED U. S. PATENT OFFICE

Contents for May, 1942, Vol. XXIX, No. 3

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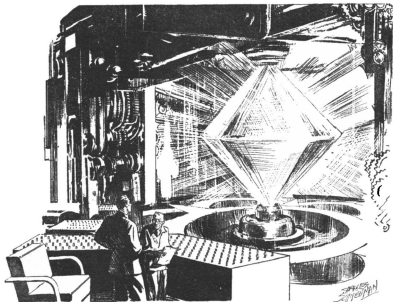
Illustrations by M. Isip, Kramer, Orban, Rogers and Schneeman

Cover by Rogers

OCT THRID
 FRIDAY
 EACH MONTH
 NEXT ISSUE ON
 SAJE MAY 1942
 \$2.50 per YEAR
 25c per COPY
 16
 Printed in the U.S.A.

STREET & SMITH PUBLICATIONS, INC. • 79 SEVENTH AVE., NEW YORK

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THE PUSH OF A FINGER

By Alfred Bester

● —or a careless word, for that matter, can wreck the entire universe. Think not? Well, if it happened this way—

Illustrated by Schneeman

I think it's about time someone got all those stories together and burned them. You know the kind I mean—X, the mad scientist, wants to change the world; Y, the ruthless dictator, wants to rule the world; Z, the alien planet, wants to destroy the world.

Let me tell you a different kind of story. It's about a whole world that wanted to rule one man—about a planet of people who hunted down a single indi-

vidual in an effort to change his life, yes, and even destroy him, if it had to be. It's a story about one man against the entire Earth, but with the positions reversed.

They've got a place in Manhattan City that isn't very well known. Not known, I mean, in the sense that the cell-nucleus wasn't known until scientists began to get the general idea. This was an undiscovered cell-nucleus, and still is, I imagine. It's the pivot of our Universe. Any-

thing that shakes the world comes out of it; and, strangely enough, any shake that does come out of it is intended to prevent worse upheavals.

Don't ask questions now. I'll explain as I go along.

The reason the average man doesn't know about this particular nucleus is that he'd probably go off his nut if he did. Our officials make pretty sure it's kept secret, and although some nosybodies would scream to high

heaven if they found out something was being kept from the public, anyone with sense will admit it's for the best.

It's a square white building about ten stories high and it looks like an abandoned hospital. Around nine o'clock in the morning you can see a couple of dozen ordinary looking citizens arriving, and at the end of the workday some of them leave. But there's a considerable number that stay overtime and work until dawn or until the next couple of dawns. They're cautious about keeping windows covered so that high-minded citizens won't see the light and run to the controller's office yawping about overtime and breaking down Stability. Also they happen to have permission.

Yeah, it's real big-time stuff. These fellas are so important, and their work is so important they've got permission to break the one unbreakable law. They can work overtime. In fact as far as they're concerned they can do any damned thing they please. Stability or no Stability—because it so happens they're the babies that maintain Stability. How? Take it easy. We've got plenty of time—and I'll tell you.

It's called the Prog Building and it's one of the regular newspaper beats, just like the police courts used to be a couple of hundred years ago. Every paper sends a reporter down there at three o'clock. The reporters hang around and bull for a while and then some brass hat interviews them and talks policy and economics and about how the world is doing and how it's going to do. Usually it's dull stuff but every once in a while something really big comes out, like the time they decided to drain the Mediterranean. They—

What?

You never heard of that? Say, who is this guy anyway? Are you kidding? From the Moon, hey, all your life? Never been to the home planet? Never

heard about what goes on? A real cosmic hick. Baby, you can roll me in a rug. I thought your kind died out before I was born. O. K., you go ahead and ask questions whenever you want. Maybe I'd better apologize now for the slang. It's part and parcel of the newspaper game. Maybe you won't be able to understand me sometimes, but I've got a heart of gold.

Anyway—I had the regular three o'clock beat at the Prog Building and this particular day I got there a little early. Seems the *Trib* had a new reporter on the beat, guy by the name of Halley Hogan, whom I'd never met. I wanted to get together with him and talk policy. For the benefit of the hermit from the Moon I'll explain that no two newspapers in any city are permitted to share the same viewpoint or opinion.

I thought all you boys knew that. Well, sure—I'm not kidding. Look. Stability is the watchword of civilization. The world must be Stable, right? Well, Stability doesn't mean stasis. Stability is reached through an equipoise of opposing forces that balance each other. Newspapers are supposed to balance the forces of public opinion so they have to represent as many different points of view as possible. We reporters always got together before a story, or after, and made sure none of us would agree on our attitudes. You know—some would say it was a terrible thing and some would say it was a wonderful thing and some would say it didn't mean a thing and so on. I was with the *Times* and our natural competitor and opposition was the *Trib*.

The newspaper room in the Prog Building is right next to the main offices, just off the foyer. It's a big place with low-beamed ceiling and walls done in synthetic wood panels. There was a round table in the center surrounded by hardwood chairs,

but we stood the chairs along the wall and dragged up the big deep leather ones. We all would sit with our heels on the table and every chair had a groove on the table in front of it. There was an unwritten law that no shop could be talked until every groove was filled with a pair of heels. That's a newspaper man's idea of a pun.

I was surprised to find almost everybody was in. I slipped into my place and upped with my feet and then took a look around. Every sandal showed except the pair that should have been opposite me, so I settled back and shut my eyes. That was where the *Trib* man should have been parked, and I certainly couldn't talk without my opposition being there to contradict me.

The *Post* said: "What makes, Carmichael?"

I said: "Ho-hum—"

The *Post* said: "Don't sleep, baby, there's big things cookin'."

The *Ledger* said: "Shuddup, you know the rules—" He pointed to the vacant segment of table.

I said: "You mean the law of the jungle."

The *Record*, who happened to be the *Ledger's* opposition, said: "Old Bobbus left. He ain't coming in no more."

"How come?"

"Got a Stereo contract. Doing comedy scenarios."

I thought to myself: "Oi, that means another wrestling match." You see, whenever new opposition reporters get together, they're supposed to have a symbolic wrestling match. I said supposed. It always turns into a brawl with everybody else having the fun.

"Well, I said, 'this new Hogan probably doesn't know the ropes yet. I guess I'll have to go into training. Anybody seen him? He look strong?' They all shook their heads and said they didn't know him. "O. K., then let's gab without him—"

The *Post* said: "Your correspondent has it that the pot's

a-boilin'. Every bigwig in town is in there." He jabbed his thumb toward the main offices.

We all gave the door a glance, only, like I always did, I tried to knock it in with a look. You see, although all of us came down to the Prog Building every day, none of us knew what was inside. Yeah, 's' fact. We just came and sat and listened to the big shots and went away. Like specters at the feast. It gripped all of us, but me most of all.

I would dream about it at night. How there was a Hyperman living in the Prog Building, only he breathed chlorine and they kept him in tanks. Or that they had the mummies of all the great men of the past which they reanimated every afternoon to ask questions. Or it would be a cow in some dreams that was full of brains and they'd taught it to "moo" in code. There were times when I thought that if I didn't get upstairs into the Prog Building I'd burst from frustration.

So I said: "You think they're going to fill up the Mediterranean again?"

The *Ledger* laughed. He said: "I hear tell they're going to switch poles. North to south and vice versa."

The *Record* said: "You don't think they could?"

The *Ledger* said: "I wish they would—if it'd improve my bridge."

I said: "Can it, lads, and let's have the dope."

The *Journal* said: "Well, all the regulars are in—controller, vice con and deputy vice con. But there also happens to be among those present—the chief stabilizer."

"No!"

He nodded and the others nodded. "Fact. The C-S himself. Came up by pneumatic from Washington."

I said: "Oh, mamma! Five'll get you ten they're digging up Atlantis this time."

The *Record* shook his head. "The C-S didn't wear a digging look."

Just then the door to the main office shoved open and the C-S came thundering out. I'm not exaggerating. Old Groat had a face like Moses, beard and all, and when he frowned, which was now, you expected lightning to crackle from his eyes. He breezed past the table with just one glance from the blue quartz he's got for eyes, and all our legs came down with a crash. Then he shot out of the room so fast I could hear his rep tunic swish with quick whistling sounds.

After him came the controller, the vice con and the deputy vice con, all in single file. They were frowning, too, and moving so rapidly we had to jump to catch the deputy. We got him at the door and swung him around. He was short and fat and trouble didn't sit well on his pudgy face. It made him look slightly lopsided.

He said: "Not now, gentlemen."

"Just a minute, Mr. Klang," I said, "I don't think you're being fair to the press."

"I know it," the deputy said, "and I'm sorry, but I really cannot spare the time."

I said: "So we report to fifteen million readers that time can't be spared these days—"

He stared at me, only I'd been doing some staring myself and I knew I had to get him to agree to give us a release.

I said: "Have a heart. If anything's big enough to upset the stability of the chief stabilizer, we ought to get a look-in."

That worried him, and I knew it would. Fifteen million people would be more than slightly unnerved to read that the C-S had been in a dither.

"Listen," I said. "What goes on? What were you talking about upstairs?"

He said: "All right. Come down to my office with me. We'll prepare a release."

Only I didn't go out with the rest of them. Because, you see, while I'd been nudging the deputy I'd noticed that all of them had rushed out so fast they'd forgotten to close the office door. It was the first time I'd seen it unlocked and I knew I was going to go through it this time. That was why I'd wheeled that release out of the deputy. I was going to get upstairs into the Prog Building because everything played into my hands. First, the door being left open. Second, the man from the *Trib* not being there.

Why? Well, don't you see? The opposition papers always paired off. The *Ledger* and the *Record* walked together and the *Journal* and the *News* and so on. This way I was alone with no one to look for me and wonder what I was up to. I pushed around in the crowd a little as they followed the deputy out, and managed to be the last one in the room. I slipped back behind the door jamb, waited a second and then streaked across to the office door. I went through it like a shot and shut it behind me. When I had my back against it I took a breath and whispered: "Hyperman, here I come!"

I was standing in a small hall that had synthetic walls with those fluorescent paintings on them. It was pretty short, had no doors anywhere, and led toward the foot of a white staircase. The only way I could go was forward, so I went. With that door locked behind me I knew I would be slightly above suspicion—but only slightly, my friends, only slightly. Sooner or later someone was going to ask who I was.

The stairs were very pretty. I remember them because they were the first set I'd ever seen outside the Housing Museum. They had white even steps and they curved upward like a conic section. I ran my fingers along the smooth stone balustrade and

trudged up expecting anything from a cobra to one of Tex Richard's Fighting Robots to jump out at me. I was scared to death.

I came to a square railed landing and it was then I first sensed the vibrations. I'd thought it was my heart whopping against my ribs with that peculiar bam-bam-bam that takes your breath away and sets a solid lump of cold under your stomach. Then I realized this pulse came from the Prog Building itself. I trotted up the rest of the stairs on the double and came to the top. There was a sliding door there. I took hold of the knob and thought: "Oh, well, they can only stuff me and put me under glass"—so I shoved the door open.

Boys, this was it—that nucleus I told you about. I'll try to give you an idea of what it looked like because it was the most sensational thing I've ever seen—and I've seen plenty in my time. The room took up the entire width of the building and it was two stories high. I felt as though I'd walked into the middle of a clock. Space was literally filled with the shimmer and spin of cogs and came that gleamed with the peculiar high-lights you see on a droplet of water about to fall. All of those thousands of wheels spun in sockets of precious stone—just like a watch only bigger—and those dots of red and yellow and green and blue fire burned until they looked like a painting by that Frenchman from way back. Seurat was his name.

The walls were lined with banks of Computation Integraphs—you could see the end-total curves where they were plotted on photoelectric plates. The setting dials for the Integraphs were all at eye level and ran around the entire circumference of the room like a chain of enormous white-faced periods. That was about all of the stuff I could recognize. The rest just looked complicated and bewildering.

That bam-bam-bam I told you about came from the very center of the room. There was a crystal octahedron maybe ten feet high, nipped between vertical axes above and below. It was spinning slowly so that it looked jerky, and the vibration was the sound of the motors that turned it. From way high up there were shafts of light projected at it. The slow turning facets caught those beams and shattered them and sent them dancing through the room. Boys—it was really sensational.

I took a couple of steps in and then a little old coot in a white jacket bustled across the room, saw me, nodded, and went about his business. He hadn't taken more than another three steps when he stopped and came back to me. It was a real slow take.

He said: "I don't quite—" and then he broke off doubtfully. He had a withered, faraway look, as though he'd spent all his life trying to remember he was alive.

I said: "I'm Carmichael."
"Oh yes!" he began, brightening a little. Then his face got dubious again.

I played it real smart. I said: "I'm with Stabilizer Groating."
"Secretary?"

"Yeah."
"You know, Mr. Mitchel, he said, "I can't help feeling that despite the gloomier aspects there are some very encouraging features. The Ultimate Datum System that we have devised should bring us down to surveys of the near future in a short time—" He gave me a quizzical glance like a dog begging for admiration on his hind legs.

I said: "Really?"
"It stands to reason. After all, once a technique has been devised for pushing analysis into the absolute future, a comparatively simple reversal should bring it as close as tomorrow."

I said: "It should at that"—and wondered what he was talking about. Now that some of the fright had worn off I was feel-

ing slightly disappointed. Here I expected to find the Hyperman who was handing down Sinai Decrees to our bosses and I walk into a multiplied clock.

He was rather pleased. He said: "You think so?"

"I think so."
"Will you mention that to Mr. Groating? I feel it might encourage him—"

I got even smarter. I said: "To tell you the truth, sir, the Stabilizer sent me up for a short review. I'm new to the staff and unfortunately I was delayed in Washington."

He said: "Tut-tut, forgive me. Step this way, Mr. . . . Mr. Ahh—"

So I stepped his way and we went weaving through the clock-works to a desk at one side of the room. There were half a dozen chairs behind it and he seated me alongside himself. The flat top of the desk was banked with small tabs and push buttons so that it looked like a stenotype. He pressed one stud and the room darkened. He pressed another and the bam-bam quickened until it was a steady hum. The octahedron crystal whirled so quickly that it became a shadowy mist of light under the projectors.

"I suppose you know," the old coot said in rather self-conscious tones, "that this is the first time we've been able to push our definitive analysis to the ultimate future. We'd never have done it if Wiggons hadn't developed his self-checking data system."

I said: "Good for Wiggons," and I was more confused than ever. I tell you, boys, it felt like waking up from a dream you couldn't quite remember. You know that peculiar sensation of having everything at the edge of your mind so to speak and not being able to get hold of it—I had a thousand clues and inferences jangling around in my head and none of them would interlock. But I knew this was big stuff.

Shadows began to play across

the crystal. Off-focus images and flashes of color. The little old guy murmured to himself and his fingers plucked at the keyboard in a quick fugue of motion. Finally he said: "Ah!" and sat back to watch the crystal. So did I.

I was looking through a window in space, and beyond that window I saw a single bright star in the blackness. It was sharp and cold and so brilliant it hurt your eyes. Just beyond the window, in the foreground, I saw a spaceship. No, none of your cigar things or ovate spheroids or any of that. It was a spaceship that seemed to have been built mostly in afterthoughts. A great rambling affair with added wings and towers and helter-skelter ports. It looked like it'd been built just to hang there in one place.

The old coot said: "Watch close now, Mr. Muggins, things happen rather quickly at this tempo."

Quickly? They practically sprinted. There was a spurt of activity around the spaceship. Towers went up and came down; the buglike figures of people in space armor bustled about; a little cruiser, shaped like a fat needle, sped up to it, hung around a while and then sped away. There was a tense second of waiting and then the star blotted out. In another moment the spaceship was blotted out, too. The crystal was black.

My friend, the goofy professor, touched a couple of studs and we had a long view. There were clusters of stars spread before me, sharply, brilliantly in focus. As I watched, the upper side of the crystal began to blacken. In a few swift moments the stars were blacked out. Just like that. Blooey! It reminded me of school when we added carbon ink to a drop under the mike just to see how the amoebae would take it.

He punched the buttons like crazy and we had more and more

views of the Universe, and always that black cloud crept along, blotting everything out. After a while he couldn't find any more stars. There was nothing but blackness. It seemed to me that it wasn't more than an extra-special Stereo Show, but it chilled me nevertheless. I started thinking about those amoebae and feeling sorry for them.

The lights went on and I was back inside the clock again. He turned to me and said: "Well, what do you think?"

I said: "I think it's swell."

That seemed to disappoint him. He said: "No, no—I mean, what do you make of it? Do you agree with the others?"

"With Stabilizer Grooting, you mean?"

He nodded.

I said: "You'll have to give me a little time to think it over. It's rather—startling."

"By all means," he said, escorting me to the door, "do think it over. Although"—he hesitated with his hand on the knob—"I shouldn't agree with your choice of the word 'startling.' After all, it's only what we expected all along. The Universe must come to an end one way or another."

Think? Boys, the massive brain practically fumed as I went back downstairs. I went out into the press room and I wondered what there was about a picture of a black cloud that could have upset the Stabilizer. I drifted out of the Prog Building and decided I'd better go down to the controller's office for another bluff, so I didn't drift any more. There was a pneumatic pick-up at the corner. I caught a capsule and clicked off the address on the dial. In three and a half minutes I was there.

As I turned the overhead dome back and started to step out of my capsule, I found myself surrounded by the rest of the newspaper crowd.

The Ledger said: "Where you been, my friendly, we needed your quick brain but bad."

I said: "I'm still looking for

Hogan. I can't cover a thing until I've seen him. What's this need for brains?"

"Not just any brains. Your brain."

I got out of the capsule and showed my empty pocket.

The Ledger said: "We're not soaping you for a loan—we needed interpolation."

"Aha?"

The Record said: "The dope means interpretation. We got one of those official releases again. All words and no sense."

"I mean interpolation," the Ledger said. "We got to have some one read implications into this barren chaff."

I said: "Brothers, you want exaggeration and I'm not going to be it this time. Too risky."

So I trotted up the ramp to the main floor and went to the deputy vice's office and then I thought: "I've got a big thing here, why bother with the small fry?" I did a turnabout and went straight to the controller's suite. I knew it would be tough to get in because the controller has live secretaries—no voters. He also happens to have four receptionists. Beautiful, but tough.

The first never saw me. I breezed right by and was in the second anteroom before she could say: "What is it, pa-lee-azz?" The second was warned by the bang of the door and grabbed hold of my arm as I tried to go through. I got past anyway, with two of them holding on, but number three added her lovely heft and I bogged down. By this time I was within earshot of the controller so I screamed: "Down with Stability!"

Sure I did. I also shouted: "Stability is all wrong! I'm for Chaos. Hurray for Chaos!" and a lot more like that. The receptionists were shocked to death and one of them put in a call for emergency and a couple of guys hanging around were all for bof-fing me. I kept on downing with



Stability and fighting toward the sanctum sanctorum et cetera and having a wonderful time because the three girls hanging on to me were strictly class and I happily suffocated on Exuberant No. 5. Finally the controller came out to see what made.

They let go of me and the controller said: "What's the meaning of this? . . . Oh, it's you."

I said: "Excuse it, please."

"Is this your idea of a joke, Carmichael?"

"No, sir, but it was the only quick way to get to you."

"Sorry, Carmichael, but it's a little too quick."

I said: "Wait a minute, sir."

"Sorry, I'm extremely busy."

He looked worried and impatient all at once.

I said: "You've got to give me a moment in private."

"Impossible. See my secretary." He turned toward his office.

"Please, sir—"

He waved his hand and started through the door. I took a jump and caught him by the elbow. He was sputtering furiously when I swung him around, but I got my arms around him and gave him a hug. When my mouth was against his ear I whispered: "I've been upstairs in the Prog Building. *I know!*"

He stared at me and his jaw dropped. After a couple of

vague gestures with his hands he motioned me in with a jerk of his head. I marched straight into the controller's office and almost fell down dead. The stabilizer was there. Yeah, old Jehovah Groating himself, standing before the window. All he needed was the stone tablets in his arms—or is it thunderbolts?

I felt very, very sober, my friends, and not very smart any more because the stabilizer is a sobering sight no matter how you kid about him. I nodded politely and waited for the controller to shut the door. I was wishing I could be on the other side of the door. Also I was wishing I'd never gone upstairs

into the Prog Building.

The controller said: "This is John Carmichael, Mr. Groaty, a reporter for the *Times*."

We both said: "How-d'you-do?" only Groaty said it out loud. I just moved my lips.

The controller said: "Now, Carmichael, what's this about the Prog Building?"

"I went upstairs, sir."

He said: "You'll have to speak a little louder."

I cleared my throat and said: "I went upstairs, sir."

"You what!"

"W-went upstairs."

This time lightning really did flash from the C-S's eyes.

I said: "If I've made trouble for anyone, I'm sorry. I've been wanting to get up there for years and . . . and when I got the chance today, I couldn't resist it—" Then I told them how I sneaked up and what I did.

The controller made a terrible fuss about the whole affair, and I knew—don't ask me how, I simply knew—that something drastic was going to be done about it unless I talked plenty fast. By this time, though, the clues in my head were beginning to fall into place. I turned directly to the C-S and I said: "Sir, Prog stands for Prognostication, doesn't it?"

There was silence. Finally Groaty nodded slowly.

I said: "You've got some kind of fortuneteller up there. You go up every afternoon and get your fortune told. Then you come out and tell the press about it as though you all thought it up by yourselves. Right?"

The controller sputtered, but Groaty nodded again.

I said: "This afternoon the end of the Universe was prognosticated."

Another silence. At last Groaty sighed wearily. He shut the controller up with a wave of his hand and said: "It seems Mr. Carmichael does know enough to make things awkward all around."

The controller burst out: "It's no fault of mine. I always insisted on a thorough guard system. If we had guarded the—"

"Guards," Groaty interrupted, "would only have upset existing Stability. They would have drawn attention and suspicion. We were forced to take the chance of a slip-up. Now that it's happened we must make the best of it."

I said: "Excuse me, sir. I wouldn't have come here just to boast. I could have kept quiet about it. What bothers me is what bothered you?"

Groaty stared at me for a moment, then turned away and began to pace up and down the room. There was no anger in his attitude; if there had been, I wouldn't have been as scared as I was. It was a big room and he did a lot of pacing and I could see he was coldly analyzing the situation and deciding what was to be done with me. That frigid appraisal had me trembling.

I said: "I'll give you my word not to mention this again—if that'll do the trick."

He paid no attention—merely paced. My mind raced crazily through all the nasty things that could happen to me. Like solitary for life. Like one-way exploration. Like an obliterated memory track which meant I would have lost my twenty-eight years, not that they were worth much to anyone but me.

I got panicky and yelled: "You can't do anything to me. Remember Stability—" I began to quote the Credo as fast as I could remember: "The *status quo* must be maintained at all costs. Every member of society is an integral and essential factor of the *status quo*. A blow at the Stability of any individual is a blow aimed at the Stability of society. Stability that is maintained at the cost of so much as a single individual is tantamount to Chaos—"

"Thank you, Mr. Carmichael," the C-S interrupted. "I have already learned the Credo."

He went to the controller's desk and punched the teletype keys rapidly. After a few minutes of horrible waiting the answer came clicking back. Groaty read the message, nodded and beckoned to me. I stepped up to him and, boys, I don't know how the legs kept from puddling on the floor.

Groaty said: "Mr. Carmichael, it is my pleasure to appoint you confidential reporter to the Stability Board for the duration of this crisis."

I said: "Awk!"

Groaty said: "We've maintained Stability, you see, and insured your silence. Society cannot endure change—but it can endure and welcome harmless additions. A new post has been created and you're it."

I said: "Th-thanks."

"Naturally, there will be an advance in credit for you. That is the price we pay, and gladly. You will attach yourself to me. All reports will be confidential. Should you break confidence, society will exact the usual penalty for official corruption. Shall I quote the Credo on that point?"

I said: "No, sir!" because I knew that one by heart. The usual penalty isn't pleasant. Groaty had me beautifully hog-tied. I said: "What about the *Times*, sir?"

"Why," Groaty said, "you will continue your usual duties whenever possible. You will submit the official releases as though you had no idea at all of what was really taking place. I'm sure I can spare you long enough each day to make an appearance at your office."

Suddenly he smiled at me and in that moment I felt better. I realized that he was far from being a Jehovian menace—in fact that he'd done all he could to help me out of the nasty spot my curiosity had got me into. I grinned back and on impulse shoved out my hand. He took it and gave it a shake. Everything was fine.

The C-S said: "Now that you're a fellow-official, Mr. Carmichael, I'll come to the point directly. The Prog Building, as you've guessed, is a Prognostication Center. With the aid of a complete data system and a rather complex series of Integrators we have been able to . . . tell our fortunes, as you put it."

I said: "I was just shooting in the dark, sir. I really don't believe it."

Groating smiled. He said: "Nevertheless it exists. Prophecy is far from being a mystical function. It is a very logical science based on experimental factors. The prophecy of an eclipse to the exact second of time and precise degree of longitude strikes the layman with awe. The scientist knows it is the result of precise mathematical work with precise data."

"Sure," I began, "but—"

Groating held up his hand. "The future of the world line," he said, "is essentially the same problem magnified only by the difficulty of obtaining accurate data—and enough data. For example: Assuming an apple orchard, what are the chances of apples being stolen?"

I said: "I couldn't say. Depends, I suppose, on whether there are any kids living in the neighborhood."

"All right," Groating said, "that's additional data. Assuming the orchard and the small boys, what are the chances of stolen apples?"

"Pretty good."

"Add data. A locust plague is reported on the way."

"Not so good."

"More data. Agriculture reports a new efficient locust spray."

"Better."

"And still more data. In the past years the boys have stolen apples and been soundly punished. Now what are the chances?"

"Maybe a little less."

"Continue the experimental

factors with an analysis of the boys. They are headstrong and will ignore punishment. Add also the weather forecasts for the summer; add the location of the orchard and attitude of owner. Now sum up: Orchard plus boys plus thefts plus punishment plus character plus locusts plus spray plus—"

I said: "Good heavens!"

"You're overwhelmed by the detail work," Groating smiled, "but not by the lack of logic. It is possible to obtain all possible data on the orchard in question and integrate the factors into an accurate prophecy not only as to the theft, but as to the time and place of theft. Apply this example to our own Universe and you can understand the working of the Prognosis Building. We have eight floors of data analyzers. The sifted factors are fed into the Integrators and—presto, prophecy!"

I said: "Presto, my poor head!"

"You'll get used to it in time."

I said: "The pictures?"

Groating said: "The solution of a mathematical problem can take any one of a number of forms. For Prognosis we have naturally selected a picturization of the events themselves. Any major step in government that is contemplated is prepared in data form and fed into the Integrator. The effect of that step on the world line is observed. If it is beneficial, we take that step; if not, we abandon it and search for another—"

I said: "And the pictures I saw this afternoon?"

Groating sobered. He said: "Up until today, Mr. Carmichael, we have not been able to integrate closer to the present that a week in the future—or deeper into the future than a few hundred years. Wiggon's new data technique has enabled us to push to the end of our existence, and it is perilously close. You saw the obliteration of our Universe take place less than a thousand years from now. This is some-

thing we must prevent at once."

"Why all the excitement? Surely something will happen during the next ten centuries to avoid it."

"What will happen?" Groating shook his head. "I don't think you understand our problem. On the one hand you have the theory of our society. Stability. You yourself have quoted the Credo. A society which must maintain its Stability at the price of instability is Chaos. Keep that in mind. On the other hand we cannot wait while our existence progresses rapidly toward extinction. The closer it draws to that point, the more violent the change will have to be to alter it."

"Think of the progress of a snowball that starts at the top of a mountain and rolls down the slopes, growing in bulk until it smashes an entire house at the bottom. The mere push of a finger is sufficient to alter its future when it starts—a push of a finger will save a house. But if you wait until the snowball gathers momentum you will need violent efforts to throw the tons of snow off the course."

I said: "Those pictures I saw were the snowball hitting our house. You want to start pushing the finger now—"

Groating nodded. "Our problem now is to sift the billions of factors stored in the Prog Building and discover which of them is that tiny snowball."

The controller, who had been silent in a state of wild suppression all the while, suddenly spoke up. "I tell you it's impossible, Mr. Groating. How can you dig the one significant factor out of all those billions?"

Groating said: "It will have to be done."

"But there's an easier way," the controller cried. "I've been suggesting it all along. Let's attempt the trial and error method. We instigate a series of changes at once and see whether or not the future line is shifted. Sooner

or later we're bound to strike something."

"Impossible," Groatling said. "You're suggesting the end of Stability. No civilization is worth saving if it must buy salvation at the price of its principles."

I said: "Sir, I'd like to make a suggestion."

They looked at me. The C-S nodded.

"It seems to me that you're both on the wrong track. You're searching for a factor from the present. You ought to start in the future."

"How's that?"

"It's like if I said old maids were responsible for more clover. You'd start investigating the old maids. You ought to start with the clover and work backwards."

"Just what are you trying to say, Mr. Carmichael?"

"I'm talking about a *posteriori* reasoning. Look, sir, a fella by the name of Darwin was trying to explain the balance of nature. He wanted to show the chain of cause and effect. He said in so many words that the number of old maids in a town governed the growth of clover, but if you want to find out how, you've got to work it out a *posteriori*; from effect to cause. Like this: Only bumblebees can fertilize clover. The more bumblebees, the more clover. Field mice attack bumblebee nests, so the more field mice, the less clover. Cats attack mice. The more cats, the more clover. Old maids keep cats. The more old maids . . . the more clover. Q. E. D."

"And now," Groatling laughed, "construe."

"Seems to me you ought to start with the catastrophe and follow the chain of causation, link by link, back to the source. Why not use the Prognosticator backwards until you locate the moment when the snowball first started rolling?"

There was a very long silence while they thought it over. The controller looked slightly bewil-

dered and he kept muttering: Cats—clover—old maids— But I could see the C-S was really hit. He went to the window and stood looking out, as motionless as a statue. I remember staring past his square shoulder and watching the shadows of the helios flicking noiselessly across the façade of the Judiciary Building opposite us.

It was all so unreal—this frantic desperation over an event a thousand years in the future; but that's Stability. It's strictly the long view. Old Cyrus Brennerhaven of the *Morning Globe* had a sign over his desk that read: If you take care of the tomorrows, the todays will take care of themselves.

Finally Groatling said: "Mr. Carmichael, I think we'd better go back to the Prog Building—"

Sure I felt proud. We left the office and went down the hall toward the pneumatics and I kept thinking: "I've given an idea to the Chief Stabilizer. He's taken a suggestion from me!" A couple of secretaries had rushed down the hall ahead of us when they saw us come out, and when we got to the tubes, three capsules were waiting for us. What's more, the C-S and the controller stood around and waited for me while I contacted my city editor and gave him the official release. The editor was a little sore about my disappearance, but I had a perfect alibi. I was still looking for Hogan. That, my friends, was emphatically that.

At the Prog Building we hustled through the main offices and back up the curved stairs. On the way the C-S said he didn't think we ought to tell Yarr, the little old coot I'd hoodwinked, the real truth. It would be just as well, he said, to let Yarr go on thinking I was a confidential secretary.

So we came again to that fantastic clockwork room with its myriad whirling cams and the revolving crystal and the hypnotic

bam-bam of the motors. Yarr met us at the door and escorted us to the viewing desk with his peculiar absent-minded subservience. The room was darkened again, and once more we watched the cloud of blackness seep across the face of the Universe. The sight chilled me more than ever, now that I knew what it meant.

Groatling turned to me and said: "Well, Mr. Carmichael, any suggestions?"

I said: "The first thing we ought to find but is just what that spaceship has to do with the black cloud . . . don't you think so?"

"Why yes, I do." Groatling turned to Yarr and said: "Give us a close-up of the spaceship and switch in sound. Give us the integration at normal speed."

Yarr said: "It would take a week to run the whole thing off. Any special moment you want, sir?"

I had a hunch. "Give us the moment when the auxiliary ship arrives."

Yarr turned back to his switchboard. We had a close-up of a great round port. The sound mechanism clicked on, running at high speed with a peculiar *wheeledy-woodeldey-weedledy* garble of shrill noises. Suddenly the cruiser shot into view. Yarr slowed everything down to normal speed.

The fat needle nosed into place, the ports clanged and hissed as the suction junction was made. Abruptly, the scene shifted and we were inside the lock between the two ships. Men in stained dungarees, stripped to the waist and sweating, were hauling heavy canvas-wrapped equipment into the mother ship. To one side two elderly guys were talking swiftly:

"You had difficulty?"

"More than ever. Thank God this is the last shipment."

"How about credits?"

"Exhausted."

"Do you mean that?"



"I do."

"I can't understand it. We had over two millions left."

"We lost all that through indirect purchases and—"

"And what?"

"Bribes, if you must know."

"Bribes?"

"My dear sir, you can't order cyclotrons without making people suspicious. If you so much as mention an atom today, you accuse yourself."

"Then we all stand accused here and now."

"I'm not denying that."

"What a terrible thing it is that the most precious part of our existence should be the most hated."

"You speak of—"

"The atom."

The speaker gazed before him meditatively, then sighed and turned into the shadowy depths of the spaceship.

I said: "All right, that's enough. Cut into the moment

just before the black-out occurs. Take it inside the ship."

The integrators quickened and the sound track began its shrill babble again. Quick scenes of the interior of the mother ship flickered across the crystal. A control chamber, roofed with a transparent dome passed repeatedly before us, with the darting figures of men snapping through it. At last the Integrator fixed on that chamber and stopped. The scene was frozen into a still-photograph—a tableau of half a dozen half-naked men poised over the controls, heads tilted back to look through the dome.

Yarr said: "It doesn't take long. Watch closely."

I said: "Shoot."

The scene came to life with a blurrp.

"—ready on the tension screens?"

"Ready, sir."

"Power checked?"

"Checked and ready, sir."

"Stand by, all. Time?"

"Two minutes to go."

"Good—"

The graybeard in the center of the chamber paced with hands clasped behind him, very much like a captain on his bridge. Clearly through the sound mechanism came the thuds of his steps and the background hum of waiting mechanism.

The graybeard said: "Time?"

"One minute forty seconds."

"Gentlemen: In these brief moments I should like to thank you all for your splendid assistance. I speak not so much of your technical work, which speaks for itself, but of your willingness to exile yourselves and even incriminate yourselves along with me— Time?"

"One twenty-five."

"It is a sad thing that our work which is intended to grant the greatest boon imaginable to the Universe should have been driven into secrecy. Limitless

power is so vast a concept that even I cannot speculate on the future it will bring to our worlds. In a few minutes, after we have succeeded, all of us will be universal heroes. Now, before our work is done, I want all of you to know that to me you are already heroes— Time?"

"One ten."

"And now, a warning. When we have set up our spacial partition membrane and begun the osmotic transfer of energy from hyperspace to our own there may be effects which I have been unable to predict. Raw energy pervading our space may also pervade our nervous systems and engender various unforeseen conditions. Do not be alarmed. Keep well in mind the fact that the change cannot be anything but for the better— Time?"

"Fifty seconds."

"The advantages? Up to now mathematics and the sciences have merely been substitutes for what man should do for himself. So Fitz-John preached in his first lecture, and so we are about to prove. The logical evolution of energy mechanics is not toward magnification and complex engineering development, but toward simplification—toward the concentration of all those powers within man himself— Time?"

"Twenty seconds."

"Courage, my friends. This is the moment we have worked for these past ten years. Secretly. Criminally. So it has always been with those who have brought man his greatest gifts."

"Ten seconds."

"Stand by, all."

"Ready all, sir."

The seconds ticked off with agonizing slowness. At the moment of zero the workers were galvanized into quick action. It was impossible to follow their motions or understand them, but you could see by the smooth timing and interplay that they were beautifully rehearsed. There was tragedy in those efforts for us who already knew the outcome. As quickly as they had begun,

the workers stopped and peered upward through the crystal dome. Far beyond them, crisp in the velvet blackness, that star gleamed, and as they watched, it winked out.

They started and exclaimed, pointing. The graybeard cried:

"It's impossible!"

"What is it, sir?"

"I—"

And in that moment blackness enveloped the scene.

I said: "Hold it—"

Yarr brought up the lights and the others turned to look at me. I thought for a while, idly watching the shimmering cams and cogs around me. Then I said: "It's a good start. The reason I imagine you gentlemen have been slightly bewildered up to now is that you're busy men with no time for foolishness. Now I'm not so busy and very foolish, so I read detective stories. This is going to be kind of backward detective story."

"All right," Groaty said. "Go ahead."

"We've got a few clues. First, the Universe has ended through an attempt to pervade it with energy from hyperspace. Second, the attempt failed for a number of reasons which we can't discover yet. Third, the attempt was made in secrecy. Why?"

The controller said: "Why not? Scientists and all that—"

"I don't mean that kind of secrecy. These men were plainly outside the law, carrying on an illicit experiment. We must find out why energy experiments or atomic experiments were illegal. That will carry us back quite a few decades toward the present."

"But how?"

"Why, we trace the auxiliary cruiser, of course. If we can pick them up when they're purchasing supplies, we'll narrow our backward search considerably. Can you do it, Dr. Yarr?"

"It'll take time."

"Go ahead—we've got a thousand years."

It took exactly two days. In that time I learned a lot about the Prognosticator. They had it worked out beautifully. Seems the future is made up solely of probabilities. The Integrator could push down any one of these possible avenues, but with a wonderful check. The less probable the avenue of future was, the more off-focus it was. If a future event was only remotely possible, it was pictured as a blurred series of actions. On the other hand, the future that was almost positive in the light of present data, was sharply in focus.

When we went back to the Prog Building two days later, Yarr was almost alive in his excitement. He said: "I really think I've got just the thing you're looking for."

"What's that?"

"I've picked up an actual moment of bribery. It has additional data that should put us directly on the track."

We sat down behind the desk with Yarr at the controls. He had a slip of paper in his hand which he consulted with much muttering as he adjusted co-ordinates. Once more we saw the preliminary off-focus shadows, then the sound blooped on like a hundred Stereo records playing at once. The crystal sharpened abruptly into focus.

The scream and roar of a gigantic foundry blasted our ears. On both sides of the scene towered the steel girder columns of the foundry walls, stretching deep into the background like the grim pillars of a satanic cathedral. Overhead cranes carried enormous blocks of metal with a ponderous gait. Smoke—black, white and fitfully flared with crimson from the furnaces, whirled around the tiny figures.

Two men stood before a gigantic casting. One, a foundryman in soiled overalls, made quick measurements which he called off to the other carefully checking a blueprint. Over the roar

of the foundry the dialogue was curt and sharp:

"One hundred three point seven."

"Check."

"Short axis. Fifty-two point five."

"Check."

"Tangent on ovate diameter. Three degrees point oh five two."

"Check."

"What specifications for outer convolutions?"

"Y equals cosine X."

"Then that equation resolves to X equals minus one half Pi."

"Check."

The foundryman climbed down from the casting, folding his three-way gauge. He mopped his face with a bit of waste and eyed the engineer curiously as the latter carefully rolled up the blueprint and slid it into a tube of other rolled sheets. The foundryman said: "I think we did a nice job."

The engineer nodded.

"Only what in blazes do you want it for. Never saw a casting like that."

"I could explain, but you wouldn't understand. Too complicated."

The foundryman flushed. He said: "You theoretical guys are too damned snotty. Just because I know how to drop-forge doesn't mean I can't understand an equation."

"Mebbeso. Let it go at that. I'm ready to ship this casting out at once."

As the engineer turned to leave, rapping the rolled blueprints nervously against his calf, a great pig of iron that had been sailing up from the background swung dangerously toward his head. The foundryman cried out. He leaped forward, seized the engineer by the shoulder and sent him tumbling to the concrete floor. The blueprints went flying.

He pulled the engineer to his feet immediately and tried to straighten the dazed man who could only stare at the tons of iron that sailed serenely on. The

foundryman picked up the scattered sheets and started to sort them. Abruptly he stopped and examined one of the pages closely. He began to look through the others, but before he could go any further, the blueprints were snatched from his hands.

He said: "What's this casting for?"

The engineer rolled the sheets together with quick, intense motions. He said: "None of your blasted business."

"I think I know. That's one-quarter a cyclotron. You're getting the other parts made up in different foundries, aren't you?"

There was no answer.

"Maybe you've forgotten Stabilization Rule 93."

"I haven't forgotten. You're crazy."

"Want me to call for official inspection?"

The engineer took a breath, then shrugged. He said: "I suppose the only way to convince you is to show you the master drafts. Come on—"

They left the foundry and trudged across the broad concrete of a landing field to where the fat needle of the auxiliary ship lay. They mounted the ramp to the side port and entered the ship. Inside, the engineer called: "It's happened again, boys. Let's go!"

The port swung shut behind them. Spacemen drifted up from the surrounding corridors and rooms. They were rangy and tough-looking and the sub-nosed paralyzers glinted casually in their hands as though they'd been cleaning them and merely happened to bring them along. The foundryman looked around for a long time. At last he said: "So it's this way?"

"Yes, it's this way. Sorry."

"I'd like you to meet some of my friends, some day—"

"Perhaps we will."

"They'll have an easier time with you than you're gonna have with me!" He clenched fists and

poised himself to spring.

The engineer said: "Hey—wait a minute. Don't lose your head. You did me a good turn back there. I'd like to return the favor. I've got more credit than I know what to do with."

The foundryman gave him a perplexed glance. He relaxed and began to rub his chin dubiously.

He said: "Damn if this isn't a sociable ship. I feel friendlier already—"

The engineer grinned.

I called: "O. K., that's enough. Cut it," and the scene vanished.

"Well?" Yarr asked eagerly.

I said: "We're really in the groove now. Let's check back and locate the Stabilization debates on Rule 930." I turned to the C-S. "What's the latest rule number, sir?"

Groating said: "Seven fifteen."

The controller had already been figuring. He said: "Figuring the same law-production rate that would put Rule 930 about six hundred years from now. Is that right, Mr. Groating?"

The old man nodded and Yarr went back to his keyboard. I'm not going to bother you with what we all went through because a lot of it was very dull. For the benefit of the hermit from the Moon I'll just mention that we hung around the Stability Library until we located the year S. R. 930 was passed. Then we shifted to Stability headquarters and quick-timed through from January 1st until we picked up the debates on the rule.

The reasons for the rule were slightly bewildering on the one hand, and quite understandable on the other. It seems that in the one hundred and fifty years preceding, almost every Earth-wide university had been blown up in the course of an atomic-energy experiment. The blow-ups were bewildering—the rule understandable. I'd like to tell you about that debate because—well, because things happened that touched me.

The Integrator selected a cool,

smooth foyer in the Administration Building at Washington. It had a marble floor like milky ice flecked with gold. One side was broken by a vast square window studded with a thousand round-bottle panes that refracted the afternoon sunlight into showers of warm color. In the background were two enormous doors of synthetic oak. Before those doors stood a couple in earnest conversation—a nice-looking boy with a portfolio under his arm, and a stunning girl. The kind with sleek-shingled head and one of those clean-cut faces that look fresh and wind-washed.

The controller said: "Why, that's the foyer to the Seminar Room. They haven't changed it at all in six hundred years."

Groeting said: "Stability!" and chuckled.

Yarr said: "The debate is going on inside. I'll shift scene—" "No—wait," I said. "Let's watch this for a while." I don't know why I wanted to—except that the girl made my pulse run a little faster and I felt like looking at her for a couple of years.

She was half crying. She said: "Then, if for no other reason—for my sake."

"For yours!" The boy looked harassed.

She nodded. "You'll sweep away his life work with a few words and a few sheets of paper."

"My own work, too."

"Oh, but won't you understand? You're young. I'm young. Youth loves to shatter the old idols. It feasts on the broken shards of destruction. It destroys the old ideas to make way for its own. But he's not young like us. He has only his past work to live on. If you shatter that, he'll have nothing left but a futile resentment. I'll be pent up with a broken old man who'll destroy me along with himself. Darling, I'm not saying you're wrong—I'm only asking you to wait a little."

She was crying openly now.

The boy took her by the arm and led her to the crusted window. She turned her face away from the light—away from him. The boy said: "He was my teacher. I worship him. What I'm doing now may seem like treachery, but it's only treachery to his old age. I'm keeping faith with what he was thirty years ago—with the man who would have done the same thing to his teacher."

She cried: "But are you keeping faith with me? You, who will have all the joy of destroying and none of the tedious sweeping away the pieces. What of my life and all the weary years to come when I must coddle him and soothe him and lead him through the madness of forgetting what you've done to him?"

"You'll spend your life with me. I break no faith with you, Barbara."

She laughed bitterly. "How easily you evade reality. I shall spend my life with you—and in that short sentence, *poof!*"—she flicked her hand—"you dismiss everything. Where will he live? Alone? With us? Where?"

"That can be arranged."

"You're so stubborn, so pig-headed in your smug, righteous truth-seeking, Steven—for the very last time—please. Wait until he's gone. A few years, that's all. Leave him in peace. Leave us in peace."

He shook his head and started toward the oaken doors. "A few years waiting to salvage the pride of an old man, a few more catastrophes, a few more thousand lives lost—it doesn't add up."

She sagged against the window, silhouetted before the riot of color, and watched him cross to the doors. All the tears seemed drained out of her. She was so limp I thought she would fall to the floor at any instant. And then, as I watched her, I saw her stiffen and I realized that another figure had entered the foyer and was rushing to-

ward the boy. It was an oldish man, bald and with an ageless face of carved ivory. He was tall and terribly thin. His eyes were little pits of embers.

He called: "Steven!"

The boy stopped and turned.

"Steven, I want to talk to you."

"It's no use, sir!"

"You're headstrong, Steven. You pit a few years' research against my work of a lifetime. Once I respected you. I thought you would carry on for me as I've carried on for the generations that came before me."

"I am, sir."

"You are not." The old man clutched at the boy's tunic and spoke intensely. "You betray all of us. You will cut short a line of research that promises the salvation of humanity. In five minutes you will wipe out five centuries of work. You owe it to those who slaved before us not to let their sweat go in vain."

The boy said: "I have a debt also to those who may die."

"You think too much of death, too little of life. What if a thousand more are killed—ten thousand—in the end it will be worth it."

"It will never be worth it. There will never be an end. The theory has always been wrong, faultily premised."

"You fool!" the old man cried. "You damned, blasted young fool. You can't go in there!"

"I'm going, sir. Let go."

"I won't let you go in."

The boy pulled his arm free and reached for the doorknob. The old man seized him again and yanked him off balance. The boy muttered angrily, set himself and thrust the old man back. There was a blinding blur of motion and a cry from the girl. She left the window, ran across the room and thrust herself between the two. And in that instant she screamed again and stepped back. The boy sagged gently to the floor, his mouth opened to an O of astonishment. He tried to speak and then relaxed. The girl

dropped to her knees alongside him and tried to get his head on her lap. Then she stopped.

That was all. No shot or anything. I caught a glimpse of a metallic barrel in the old man's hand as he hovered frantically over the dead boy. He cried: "I only meant to—I—" and kept on whimpering.

After a while the girl turned her head as though it weighed a ton, and looked up. Her face was suddenly frostbitten. In dull tones she said: "Go away, father."

The old man said: "I only—" His lips continued to twitch, but he made no sound.

The girl picked up the portfolio and got to her feet. Without glancing again at her father, she opened the doors, stepped in and closed them behind her with a soft click. The debating voices broke off at the sight of her. She walked to the head of the table, set the portfolio down, opened it and took out a sheaf of typescript. Then she looked at the amazed men who were seated around the table gaping at her.

She said: "I regret to inform the stabilizers that Mr. Steven Wilder has been unavoidably detained. As his fiancée and co-worker, however, I have been delegated to carry on his mission and present his evidence to the committee—" She paused and went rigid, fighting for control.

One of the stabilizers said: "Thank you. Will you give your evidence, Miss . . . Miss?"

"Barbara Leeds."

"Thank you, Miss Leeds. Will you continue?"

With the gray ashes of a voice she went on: "We are heartily in favor of S. R. 930 prohibiting any further experimentation in atomic energy dynamics. All such experiments have been based on—almost inspired by the FitzJohn axioms and mathematic. The catastrophic detonations which have resulted must invariably result since the basic premises are incorrect. We shall prove that the backbone of Fitz-

John's equations is entirely in error. I speak of

$$i = (b/a) \pi i \sigma / \mu \dots"$$

She glanced at the notes, hesitated for an instant, and then continued: "FitzJohn's errors are most easily pointed out if we consider the Leeds Derivations involving transfinite cardinals—"

The tragic voice droned on.

I said: "C-cut."

There was silence.

We sat there feeling bleak and cold, and for no reason at all, the icy sea-green opening bars of Debussy's "La Mer" ran through my head. I thought: "I'm proud to be a human—not because I think or I am, but because I can feel. Because humanity can reach out to us across centuries, from the past or future, from facts or imagination, and touch us—move us."

At last I said: "We're moving along real nice now."

No answer.

I tried again: "Evidently that secret experiment that destroyed existence was based on this FitzJohn's erroneous theory, eh?"

The C-S stirred and said: "What? Oh— Yes, Carmichael, quite right."

In low tones the controller said: "I wish it hadn't happened. He was a nice-looking youngster, that Wilder—promising."

I said: "In the name of heaven, sir, it's not going to happen if we pull ourselves together. If we can locate the very beginning and change it, he'll probably marry the girl and live happily ever after."

"Of course—" The controller was confused. "I hadn't realized."

I said: "We've got to hunt back a lot more and locate this FitzJohn. He seems to be the key man in this puzzle."

And how we searched. Boys, it was like working a four-dimensional jig saw, the fourth dimension in this case being

time. We located a hundred universities that maintained chairs and departments exclusively devoted to FitzJohn's mathematics and theories. We slipped back a hundred years toward the present and found only fifty and in those fifty were studying the men whose pupils were to fill the chairs a century later.

Another century back and there were only a dozen universities that followed the FitzJohn theories. They filled the scientific literature with trenchant, belligerent articles on FitzJohn, and fought gory battles with his opponents. How we went through the libraries. How many shoulders we looked over. How many pages of equations we snap-photographed from the whirling octahedron for future reference. And finally we worked our way back to Bowdoin College, where FitzJohn himself had taught, where he worked out his revolutionary theories and where he made his first converts. We were on the home stretch.

FitzJohn was a fascinating man. Medium height, medium color, medium build—his body had the rare trick of perfect balance. No matter what he was doing, standing, sitting, walking, he was always exquisitely poised. He was like the sculptor's idealization of the perfect man. FitzJohn never smiled. His face was cut and chiseled as though from a roughish sandstone; it had the noble dignity of an Egyptian carving. His voice was deep, unimpressive in quality, yet unforgettable for the queer, intense stresses it laid on his words. Altogether he was an enigmatic creature.

He was enigmatic for another reason, too, for although we traced his career at Bowdoin backward and forward for all its forty years, although we watched him teach the scores and scores of disciples who afterward went out into the scholastic world to take up the fight for him—we could never trace Fitz-

John back into his youth. It was impossible to pick him up at any point earlier than his first appearance on the physics staff of the college. It seemed as though he were deliberately concealing his identity.

Yarr raged with impotent fury. He said: "It's absolutely aggravating. Here we follow the chain back to less than a half century from today and we're blocked—" He picked up a small desk phone and called upstairs to the data floors. "Hullo, Cullen? Get me all available data on the name FitzJohn. FITZJOHN. What's the matter, you deaf? F-I-T-Z . . . That's right. Be quick about it."

I said: "Seems as if FitzJohn didn't want people to know where he came from."

"Well," Yarr said pettishly, "that's impossible. I'll trace him backward second by second, if I have to!"

I said: "That would take a little time, wouldn't it?"

"Yes."

"Maybe a couple of years?"

"What of it? You said we had a thousand."

"I didn't mean you to take me seriously, Dr. Yarr."

The small pneumatic at Yarr's desk whirred and clicked. Out popped a cartridge. Yarr opened it and withdrew a list of figures, and they were appalling. Something like two hundred thousand FitzJohns on the Earth alone. It would take a decade to check the entire series through the Integrator. Yarr threw the figures to the floor in disgust and swiveled around to face us.

"Well?" he asked.

I said: "Seems hopeless to check FitzJohn back second by second. At that rate we might just as well go through all the names on the list."

"What else is there to do?"

I said: "Look, the Prognosticator flirted twice with something interesting when we were conning FitzJohn's career. It was something mentioned all through the future, too."

"I don't recall—" the C-S began.

"It was a lecture, sir," I explained. "FitzJohn's first big lecture when he set out to refute criticism. I think we ought to pick that up and go through it with a fine comb. Something is bound to come out of it."

"Very well."

Images blurred across the spinning crystal as Yarr hunted for the scene. I caught fuzzy fragments of a demolished Manhattan City with giant crablike creatures mashing helpless humans, their scarlet chiton glittering. Then an even blurrier series of images. A city of a single stupendous building towering like Babel into the heavens; a catastrophic fire roaring along the Atlantic seaboard; then a sylvan civilization of odd, naked creatures fitting from one giant flower to another. But they were all so far off focus they made my eyes ache. The sound was even worse.

Groating leaned toward me and whispered: "Merely vague possibilities—"

I nodded and then riveted my attention to the crystal, for it held a clear scene. Before us lay an amphitheater. It was modeled on the ancient Greek form, a horseshoe of gleaming white-stone terraces descending to a small square white rostrum. Behind the rostrum and surrounding the uppermost tiers of seats was a simple colonnade. The lovely and yet noble dignity was impressive.

The controller said: "Hel-lo, I don't recognize this."

"Plans are in the architectural offices," Groating said. "It isn't due for construction for another thirty years. We intend placing it at the north end of Central Park—"

It was difficult to hear them. The room was filled with the below and roar of shouting from the amphitheater. It was packed from pit to gallery with quick-

jerking figures. They climbed across the terraces; they fought up and down the broad aisles; they stood on their seats and waved. Most of all they opened their mouths into gaping black blots and shouted. The hoarse sound rolled like slow, thunderous waves, and there was a faint rhythm struggling to emerge from the chaos.

A figure appeared from behind the columns, walked calmly up to the platform and began arranging cards on the small table. It was FitzJohn, icy and self-possessed, statuesque in his white tunic. He stood aloofly at the table, carefully sorting his notes, utterly oblivious of the redoubled roar that went up at his appearance. Out of that turmoil came the accented beats of a doggerel rhyme:

Neon
Crypton
Ammoniated
FitzJohn
Neon
Crypton
Ammoniated
FitzJohn

When he was finished, FitzJohn straightened and, resting the fingertips of his right hand lightly on top of the table, he gazed out at the rioting—unsmiling, motionless. The pandemonium was reaching unprecedented heights. As the chanting continued, costumed figures appeared on the terrace tops and began fighting down the aisles toward the platform. There were men wearing metal-tubed frameworks representing geometric figures. Cubes, spheres, rhomboids and tesseracts. They hopped and danced outlandishly.

Two young boys began unreeling a long streamer from a drum concealed behind the colonnade. It was of white silk and an endless equation was printed on it that read:

$e^{ia} = 1 + ia - a^2 + a^3! - a^4! \dots$
and so on, yard after yard after yard. It didn't exactly make sense, but I understood it to be

some kind of cutting reference to FitzJohn's equations.

There were hundreds of others, some surprising and many obscure. Lithe contortionists, made up to represent Möbius Strips, grasped ankles with their hands and went rolling down the aisles. A dozen girls appeared from nowhere, clad only in black net representing giant Aleph-Nulle, and began an elaborate ballet. Great gas-filled balloons, shaped into weird topological manifolds were dragged in and bounced around.

It was utter insanity and utterly degrading to see how these mad college kids were turning FitzJohn's lecture into a Mardi Gras. They were college kids, of course, crazy youngsters who probably couldn't explain the binomial theorem, but nevertheless were giving their own form of expression to their teachers' antagonism to FitzJohn. I thought vaguely of the days centuries back when a thousand Harvard undergraduates did a very similar thing when Oscar Wilde came to lecture. Undergraduates whose entire reading probably consisted of the *Police Gazette*.

And all the while they danced and shouted and screamed, Fitz-John stood motionless, fingertips just touching the table, waiting for them to finish. You began with an admiration for his composure. Then suddenly you realized what a breathtaking performance was going on. You glued your eyes to the motionless figure and waited for it to move—and it never did.

What?

You don't think that was so terrific, eh? Well, one of you get up and try it. Stand alongside a table and rest your fingertips lightly on the top—not firmly enough to bear the weight of your

arm—but just enough to make contact. Maybe it sounds simple. Just go ahead and try it. I'll bet every credit I ever own no one of you can stand there without moving for sixty seconds. Any takers? I thought not. You begin to get the idea, eh?

They began to get the same idea in the amphitheater. At first the excitement died down out of shame. There's not much fun making a holy show of yourself if your audience doesn't react. They started it up again purely out of defiance, but it didn't last long. The chanting died away, the dancers stopped cavorting, and at last that entire audience of thousands stood silent, uneasily watching Fitz-John. He never moved a muscle.

After what seemed like hours of trying to outstare him, the kids suddenly gave in. Spatters of applause broke out across the terraces. The clapping was taken up and it rose to a thunder of beating palms. No one is as quick to appreciate a great performance as a youngster. These kids sat down in their seats and applauded like mad. FitzJohn never moved until the applause,

too, had died down, then he picked up his card and, without preamble—as though nothing at all had happened—he began his lecture.

"Ladies and gentlemen, I have been accused of creating my theory of energy-dynamics and my mathematics out of nothing—and my critics cry: 'From nothing comes nothing.' Let me remind you first that man does not create in the sense of inventing what never existed before. Man only discovers. The things we seem to invent, no matter how novel and revolutionary, we merely discover. They have been waiting for us all the time.

"Moreover, I was not the sole discoverer of this theory. No scientist is a lone adventurer, striking out into new fields for himself. The way is always led by those who precede us, and we who seem to discover all, actually do no more than add our bit to an accumulated knowledge.

"To show you how small my own contribution was and how much I inherited from the past, let me tell you that the basic equation of my theory is not even my own. It was discovered some

fifty years prior to this day—some ten years before I was born.

"For on the evening of February 9, 2909, in Central Park, on the very site of this amphitheater, my father, suddenly struck with an idea, mentioned an equation to my mother. That equation:

$$i = (b/a) \pi i e / \mu \dots$$

was the inspiration for my own theory. So you can understand just how little I have contributed to the 'invention' of The Tension Energy-Dynamics Equations—"

FitzJohn glanced at the first card and went on: "Let us consider, now, the possible permutations on the factor $e/\mu \dots$ "

I yelled: "That's plenty. Cut!" and before the first word was out of my mouth the controller and the C-S were shouting, too. Yarr blanked out the crystal and brought up the lights. We were all on our feet, looking at each other excitedly. Yarr jumped up so fast his chair went over backward with a crash. We were in a fever because, boys, that day happened to be February 9, 2909, and we had just about two hours until evening.

The controller said: "Can we locate these FitzJohns?"

"In two hours? Don't be silly. We don't even know if they're named FitzJohn today."

"Why not?"

"They may have changed their name—it's getting to be a fad nowadays. The son may have changed his name as a part of that cover-up of his past. Heaven only knows why not—"

"But we've got to split them up—whatever they are."

The C-S said: "Take hold of yourself. How are we going to separate eleven million married people? Didn't you ever hear of Stability?"

"Can't we publish a warning and order everybody out of the park?"

"And let everybody know about the Prog Building?" I said. "You keep forgetting Stability."

"Stability be damned! We can't let them have that conversation—and if they do anyway, we can't let them have that boy!"

Groating was really angry. He said: "You'd better go home and read through the Credo. Even if it meant the salvation of the Universe I would not break up a marriage—nor would I harm the boy."

"Then what do we do?"

"Have patience. We'll think of something."

I said: "Excuse me, sir—I've got an idea."

"Forget ideas," the controller yelled, "we need action."

"This is action."

The C-S said: "Go ahead, Carmichael."

"Well, obviously the important thing is to keep all married couples out of the north sector of Central Park tonight. Suppose we get a special detail of police together at once. Then we beat through the park and get everybody out. We can quarantine it—set up a close cordon around the park and guard it all night."

The controller yelled: "It may be one of the policemen."

"O. K., then we pick the unmarried ones. Furthermore, we give strict orders that all women are to stay away."

The C-S said: "It might work—it'll have to work. We can't let that conversation take place."

I said: "Excuse me, sir, do you happen to be married?"

He grinned: "My wife's in Washington. I'll tell her to stay there."

"And the controller, sir?"

The controller said: "She'll stay home. What about yourself?"

"Me? Strictly bachelor."

Groating laughed. "Unfortunately, but excellent for tonight. Come, let's hurry."

We took the pneumatic to headquarters and let me tell you, stuff began to fly, but high! Before we were there ten minutes, three companies were reported ready for duty. It seemed to

satisfy the controller, but it didn't satisfy me. I said: "Three's not enough. Make it five."

"Five hundred men? You're mad."

I said: "I wish it could be five thousand. Look, we've knocked our brains out digging through a thousand years for this clue. Now that we've got it I don't want us to muffle the chance."

The C-S said: "Make it five."

"But I don't think we've got that many unmarried men in the service."

"Then get all you can. Get enough so they can stand close together in the cordon—close enough so no one can wander through. Look—this isn't a case of us hunting down a crook who knows we're after him. We're trying to pick up a couple who are perfectly innocent—who may wander through the cordon. We're trying to prevent an accident, not a crime."

They got four hundred and ten all told. The whole little regiment was mustered before headquarters and the C-S made a beautifully concocted speech about a criminal and a crime that had to be prevented and hoopsgadoopus. I forget most of it. Naturally we couldn't let them know about the Prog Building any more than we could the citizens—and I suppose you understand why the secret had to be kept.

You don't, eh? Well, for the benefit of the hermit from the Moon I'll explain that, aside from the important matter of Stability, there's the very human fact that the Prog would be besieged by a million people a day looking for fortunetelling and hot tips on the races. Most important of all, there's the question of death. You can't let a man know when and how he's going to die. You just can't.

There wasn't any sense keeping the news from the papers because everyone around Central Park was going to know some-

thing was up. While the C-S was giving instructions, I slipped into a booth and asked for multidual. When most of the reporters' faces were on segments of the screen, I said: "Greetings, friendlies!"

They all yelled indignantly because I'd been out of sight for three days.

I said: "No more ho-hum, lads. Carmichael sees all and tells all. Hot-foot it up to the north end of Central Park in an hour or so. Big stuff!"

The *Journal* said: "Take you three days to find that out?"

"Yep."

The *Post* said: "Can it, Carmichael. The last time you sent us north, the south end of the Battery collapsed."

"This is no gag. I'm giving it to you straight."

"Yeah?" The *Post* was belligerent. "I say Gowan!"

"Gowan yourself," the *Ledger* said. "This side of the opposition is credible."

"You mean gullible."

I said: "The word this time is sensational. Four hundred police on the march. Tramp-tramp-tramp—the beat of the drum—boots—et cetera. Better get moving if you want to tag along."

The *News* gave me a nasty smile and said: "Brother, for your sake it better be good—because I'm preparing a little sensation of my own to hand over."

I said: "Make it a quick double cross, Newsy. I'm in a hurry," and I clicked off. It's funny how sometimes you can't get along right with wrong people.

You know how fast night comes on in February. The blackness gathers in the sky like a bunched cape. Then someone lets it drop and it sinks down over you with swiftly spreading black folds. Those dusky folds were just spreading out toward the corners of the sky when we got to the park. The cops didn't even bother to park their helios. They vaulted out and left them

blocking the streets. In less than half a minute, two hundred were beating through the park in a long line, driving everyone out. The rest were forming the skeleton of the cordon.

It took an hour to make sure the park was clear. Somehow, if you tell a hundred citizens to do something, there will always be twenty who'll fight you—not because they really object to doing what they're told, but just out of principle or curiosity or cantankerousness.

The all-clear came at six o'clock, and it was just in time because it was pitch dark. The controller, the C-S and myself stood before the high iron gates that open onto the path leading into the rock gardens. Where we stood we could see the jet masses of foliage standing crisp and still in the chill night. To either side of us stretched the long, wavering lines of police glow lamps. We could see the ring of bright dots drawn around the entire north end of the park like a necklace of glowing pearls.

The silence and the chill waiting was agonizing. Suddenly I said: "Excuse me, sir, but did you tell the police captain to O. K. the reporters?"

The C-S said: "I did, Carmichael—" and that was all. It wasn't so good because I'd hoped we'd have a little talk to ease the tension.

Again there was nothing but the cold night and the waiting. The stars overhead were like bits of radium and so beautiful you wished they were candy so you could eat them. I tried to imagine them slowly blotted out, and I couldn't. It's impossible to visualize the destruction of any lovely thing. Then I tried counting the police lamps around the park. I gave that up before I reached twenty.

At last I said: "Couldn't we go in and walk around a bit, sir?"

The C-S said: "I don't see why not—"

So we started through the gate, but we hadn't walked three

steps into the park when there was a shout behind us and the sharp sounds of running feet.

But it was only old Yarr running up to us with a couple of cops following him. Yarr looked like a banshee with his coat flying and an enormous muffler streaming from his neck. He dressed real old-fashioned. He was all out of breath and just gasped while the C-S told the cops it was all right.

Yarr panted: "I . . . I—"

"Don't worry, Dr. Yarr, everything is safe so far."

Yarr took an enormous breath, held it for a moment and then let it out with a woosh. In natural tones he said: "I wanted to ask you if you'd hold on to the couple. I'd like to examine them for a check on the Prognosticator."

Gently, the C-S explained: "We're not trying to catch them, Dr. Yarr. We don't know who they are and we may never know. All we want to do is to prevent this conversation."

So we forgot about taking a walk through the gardens and there was more cold and more silence and more waiting. I clasped my hands together and I was so chilled and nervous it felt like I had ice water between the palms. A quick streak of red slanted up through the sky, the rocket discharges of the Lunar Transport, and ten seconds later I heard the *wham* of the take-off echoing from Governor's Island and the follow-up drone. Only that drone kept on sounding long after it should have died away and it was too thin—too small—

I looked up, startled, and there was a helio making lazy circles over the center of the rock gardens. Its silhouette showed clearly against the stars and I could see the bright squares of its cabin windows. Suddenly I realized there was a stretch of lawn in the center of the gardens where a helio could land—where a couple could get out to

stretch their legs and take an evening stroll.

I didn't want to act scared, so I just said: "I think we'd better go inside and get that helio out of there."

So we entered the gate and walked briskly toward the gardens, the two cops right at our heels. I managed to keep on walking for about ten steps and then I lost all control. I broke into a run and the others ran right behind me—the controller, the C-S, Yarr and the cops. We went pelting down the gravel path, circled a dry fountain and climbed a flight of steps three at a clip.

The helio was just landing when I got to the edge of the lawn. I yelled: "Keep off! Get out of here!" and started toward them across the frozen turf. My feet pounded, but not much louder than my heart. I guess the whole six of us must have sounded like a herd of buffalo. I was still fifty yards off when dark figures started climbing out of the cabin. I yelled: "Didn't you hear me? Get out of this park!"

And then the *Post* called: "That you, Carmichael? What goes on?"

Sure—it was the press.

So I stopped running and the others stopped and I turned to the C-S and said: "Sorry about the false alarm, sir. What shall I do with the reporters—have them fly out or can they stay? They think this is a crime hunt."

Grating was a little short of breath. He said: "Let them stay, Carmichael, they can help us look for Dr. Yarr. He seems to have lost himself somewhere in the woods."

I said: "Yes, sir," and walked up to the helio.

The cabin door was open and warm amber light spilled out into the blackness. All the boys were out by this time, getting into their coveralls and stamping around and making the usual newspaper chatter. As I came up, the *Post* said: "We brung

your opposition along, Carmichael—Hogan of the *Triib*."

The *News* said: "Now's as good a time as any for the wrasslin' match, eh? You been in training, Carmichael?" His voice had a nasty snigger to it and I thought: "Oh-ho, this Hogan probably scales two twenty and he'll mop me up, but very good—to the great satisfaction, no doubt, of my confrere from the *News*."

Only when they shoved Hogan forward, he wasn't so big, so I thought: "At a time like this—let's get it over with fast." I took a little sprint through the dark and grabbed Hogan around the chest and dumped him to the ground.

I said: "O. K., opposition, that's—"

Suddenly I realized this Hogan'd been soft—soft but firm, if you get me. I looked down at her, full of astonishment and she looked up at me, full of indignation, and the rest of the crowd roared with laughter.

I said: "I'll be a pie-eyed emu!"

And then, my friends, six dozen catastrophes and cataclysms and volcanoes and hurricanes and everything else hit me. The C-S began shouting and then the controller and after a moment, the cops. Only by that time the four of them were on top of me and all over me, so to speak. Little Yarr came tearing up, screaming at Groating and Groating yelled back and Yarr tried to bash my head in with his little fists.

They yanked me to my feet and marched me off while the reporters and this Halley Hogan girl stared. I can't tell you much about what happened after that—the debating and the discussing and the interminable sound and fury, because most of the time I was busy being locked up. All I can tell you is that I was it. Me. I. I was the one

man we were trying to stop. I—innocent me. I was X, the mad scientist and Y, the ruthless dictator and Z, the alien planet—all rolled into one. I was the one guy the Earth was looking to stop.

Sure—because you see if you twist "I'll be a pie-eyed emu" enough, you get FitzJohn's equation: $I = (b/a) \pi i e / \mu \dots$

I don't know how my future son is going to figure I was talking mathematics. I guess it'll just be another one of those incidents that turn into legend and get pretty well changed in the process. I mean the way an infant will say "goo" and by the time his pop gets finished telling about it it's become the Preamble to the Credo.

What?

No, I'm not married—yet. In fact, that's why I'm stationed up here editing a two-sheet weekly on this God-forsaken asteroid. Old Groating, he calls it protective promotion. Well, sure, it's a better job than reporting. The C-S said they wouldn't have broken up an existing marriage, but he was going to keep us apart until they can work something out on the Prognosticator.

No—I never saw her again after that time I dumped her on the turf, but, boys, I sure want to. I only got a quick look, but she reminded me of that Barbara Leeds girl, six hundred years from now. That lovely kind with shingled hair and a clean-cut face that looks fresh and wind-washed—

I keep thinking about her and I keep thinking how easy it would be to stow out of here on an Earth-bound freighter—change my name—get a different kind of job. To hell with Groating and to hell with Stability and to hell with a thousand years from now. I've got to see her again—soon.

I keep thinking how I've got to see her again.