

## TO TOUCH A STAR ROBERT F. YOUNG

*The blue star was an anti-paradox manifestation ... Powers, falling helplessly into it, was a paradox*

*1. ChiMuZeta was discovered in ancient times, possibly as early as 4000 A.D. However, its discoverers knew only its initial properties and doubtless this was why they classified as radiation and nicknamed "saltpeter" a force that transcends both space and time and supervises the consistency of the history of man . . .*

THE spaceship Powers had stolen in his bid to regain his manhood was one of the new superfreighters the Company had recently put into use. Powers was no stranger to sophisticated ships but this one was not merely sophisticated—it was ultra-sophisticated. It did his laundry, prepared his meals and made his bed. It thought up games for the two of them to play and told him stories to amuse him. It kept him company when he was lonely and sang Brahms' *Lullaby* to him when he couldn't sleep. It was all things to him—mentor, servant, maid, slave. The only function it couldn't perform was that of mistress. But Powers had no need of a mistress. That was why he was journeying to the Blue Star.

The ship's name was *M.A.R.Y.*

M for Morning Mist

A for Afterglow

R for Reawakening

Y for Yearning.

These were the planets it had been commissioned to serve; was how freighters derived their names.

The Blue Star had no name only a catalog number: X-10-D. But catalog numbers frequently become names and this had happened in the case of the Blue Star. Over the years X-10-D had transmuted to Extend.

Centered in the viewscreen of the *Mary*, it brought to mind a bright blue diamond lying in a jeweler's showcase. There are other diamonds in the showcase—red ones, yellow, green, orange but these were relatively insignificant in the Blue Star's presence: mere grains of cosmic dust the cosmic jeweler had forgotten to flick from his cosmic show-cushion.

Powers, who had begun life as a foundling and who had once been an hermaphrodite, had been staring at the star for some time. Now he turned his eyes away to rest them, but the Blue Star went right on burning on his retina almost as intensely as it burned in his brain.

He bent over the star map he had come into the chart room to study. If he succeeded in regaining his virility he would need a faraway place to expend it—preferably one on the other side of the galaxy from both Crag and Sublime. Crag was the home of the penal colony in which he had abided for four years and Sublime was the home of the the institute for Sublime Learning—more commonly known as "Salt Peter's Cathedral"—where he had been impotentialized.

He had a second reason for studying the map. The Beta Tau Storms. He knew that only the ship could see him safely through them but he wanted to know where they were.

AS HE sat staring at the little purple spirals that denoted their general whereabouts, the door of the chart room opened and the "stewardess" came in. Powers didn't want to look at her but he did anyway. The ship was some forty hours out from Twilight, the Company-owned planet where he had stolen it, yet he still wasn't wholly accustomed to this compelling combination of postures, attitudes, charm, companionableness, erudition and femininity electronically transformed into a comely girl.

He watched her as she walked toward him across the room, looked at her hungrily as she paused

beside him. Faint golden fuzz grew upon her rounded forearms; her perfume made him think of terrestrial fields of buttercups and clover. The curve of her chin made his heart ache.

Her name was the ship's name —Mary.

She said, "Have you charted the storms to your satisfaction, Ben?"

"I'm afraid only you can see us safely through the storms," Powers said.

She smiled. "I'll do my best."

He felt the material of her blue blouse touch his cheek as she tidied up the chart table. This was not wholly illusion. A projection she might be—an electronically brewed personification of the ship—but she had a substance of sorts. Without it she would not have been able to do his laundry, prepare his meals and make his bed. And her reality went even deeper, for the ganglions of supership computers were duplicates of the human brain.

She said suddenly, "Are we following an orthodox course to Morning Mist, Ben?"

Caught off guard, Powers played for time.

"Does it seem unorthodox?"

She laughed. "I pay little attention to such matters. The pilot programs me and I obey." She paused. Then: "But I am curious to know why you only partially programmed me. As matters stand we shall proceed to Extend and make precisely two orbits around it at a mean altitude of 14,021,636.2 miles. Then what?"

"Then," said Powers, seeing his way clear, "I will reprogram you, correcting the error I made in my original programming and putting us on an orthodox course to Morning Mist."

She said, "Oh, I see." And then: "I thought of a different game for us to play tonight, Ben. It's an awfully old one, but it's lots of fun. It's called checkers."

Powers had never heard of it. But playing it might get the Blue Star off his mind.

"I'll look forward to it," he said.

"Fine. See you at supper."

**A**FTER she left the room Powers got up and stepped over to the drink dispenser. He dialed a cold daiquiri and drank it slowly. I wonder what I'd do, he thought, if she were a real woman.

The answer, of course, was—nothing.

When they impotentialized you they burned a little ditty into your brain for you to think of and hum the music to when doubts assailed you. It went like this:

*Impotent I may be*

*But I will see*

*Stars lovers know as dust*

*In the blindness of their lust ...*

He hummed the tune now, thinking the words.

And the words danced in his mind—twisted, turned, attenuated, took on flesh and shaped themselves into naked nymphs and the nymphs cavorted licentiously around a grotesque Pan—and the Pan was himself, hooves rooted in the ground, straining straining to be free, the while idiotically playing the impotentialization tune upon a syrinx.

The techs at Salt Peter's Cathedral hadn't known that he had once been an hermaphrodite and he hadn't told them. He kept that part of his life a deep dark secret. But he should have told them. Maybe they would have known what Powers had subsequently found out—that ex-hermaphrodites have a partial immunity to ChiMuZeta—and would have exposed him for a longer period of time. As it was they had taken away just enough of his manhood to make it impossible for him to have a woman and left just enough of it for him to want one.

**I**RONICALLY, Powers had been serving a life sentence for multiple rape when the penal colony officials had put the proposition to him. However, it was a crime he was not guilty of—could not possibly have been guilty of for the simple reason that he had not been on the scene when it had been committed.

The proposition the penal colony officials put to him was as follows: if he would submit to impotentialization and accept a lifetime job as a long-run pilot for Stellar Carriers, Inc., he would be given his freedom. The reason long-run pilots were impotentialized was that the runs sometimes lasted as long as four years and a man who did not want a woman could live alone for longer periods of time than one who did.

The proposition was a standard one and had been put to innumerable lifers before Powers—this was the only way the carriers could obtain long-run pilots. None of the lifers had refused. Powers hadn't refused either. A little bit of freedom was better than none.

He had been sent directly to Sublime. There the techs at Salt Peter's Cathedral had briefed him on ChiMuZeta in accordance with the law and had given him the Treatment. It had required exactly one long run—a relatively short one—for Powers to discover that the Treatment hadn't taken. At first, naturally enough, he had assumed that it had had no effect upon him at all and he had rejoiced in the thought that he had cheated both the penal colony and the Company. Then, in a mirrored room in an orbital brothel off Twilight he had discovered that he had cheated no one except himself.

*2. At first the ancients knew only that ChiMuZeta came from the star X-10-D, that exposure to it for the duration of a single Orbit at a mean altitude of 14,021,636.2 miles (or the equivalent thereof) resulted in impotence and that exposure for the duration of two orbits at the same mean altitude (or the equivalent thereof) resulted in restoration of virility. They would not even have known this much had not one of them, apparently by accident, made an orbit at this altitude and had not another of them, years later under a galactic government grant and in company with a female of the species, made two . . .*

**S**UPPER was at seven. Mary served it. As was her custom, she sat across the table from him and kept him company while he ate. Tonight she had served roast leg of lamb, baked sweet potato, diced carrots, mint jelly and hot buttered rolls—all synthetics, of course, but extremely tasty.

Powers asked for a second helping of mint jelly and Mary; clearly pleased, spooned him out a generous one. He enjoyed the meal immensely, as he did all her meals. They were a far cry from the fare he'd been accustomed to on Crag and an even farther one from the fare he'd known in the Our Mother of Moses Orphanage on Sinai where he'd spent the first sixteen years of his life. The Our Mother of Moses Orphanage, though, hadn't been responsible for its meager fare. Sinai was a barren planet and had to import all its foodstuffs, and practical considerations, such as money, posed severe limitations on what could be imported.

But while Powers couldn't blame Our Mother of Moses for the skimpiness of her meals, he could—and did—blame her for abysmal ignorance he had been kept in during the early part of his life. It wasn't till after he left the place behind him and worked his way to Lebanon on a food freighter that he found out what was wrong with him. Fortunately Lebanon, even in those days, had been an enlightened planet and he'd had no trouble getting the wrongness set right.

"Come on," Mary said, sweeping the remnants of the meal into the dissolver. "Let's play checkers."

He followed her out of the little galley and down the corridor to the lounge. The lounge was small and compact, and contained among other things a little round table with two chairs. A checkerboard lay on the table, a stack of red checkers on one side of it and a stack of black ones on the other.

They sat down. Mary placed the checkers on their proper squares and explained the rules of the game to him. Powers made the first move.

She won the first game—he, the second. He knew, of course, that she had let him win. But he caught on swiftly, began to plan three, sometimes four moves ahead. Mary of course could plan any number of moves ahead but this posed a challenge and served to make the game all the more intriguing.

For some reason his mind was unusually keen tonight. As he continued to play it grew keener yet and he found himself looking six moves, ahead. Nine. Finally, when they stood at ten games apiece, the following pattern appeared upon the board. All of the men were kinged, and it was Powers' turn:

The sharpness of Powers' mind was now such that he could see simultaneously every possible move he could make, every possible move Mary could make, the subsequent patterns that would emerge and the new sets of possible moves that went with them. Thus, he saw not only the pattern itself, but all of its potential ramifications.

The overall pattern was fascinating in its complexity. He stared at it intently, studying its intricate lines and angles. The original pattern was no longer distinguishable: fact and extrapolation had become one. He found presently that he could no longer tell which of the lines represented his potential moves and which Mary's. But that was all right; it was the pattern that counted—not its individual parts.

**H**E RAISED his eyes to Mary's face, intending to tell her about the fascinating pattern—but he saw that she already knew about it. She had stood up, he noticed, and was gesturing for him to do the same. He obeyed. It seemed only natural that he should. Now she was leaving the lounge, looking back at him over her shoulder. *Follow me*, her eyes said. He did so.

Along the corridor to the companionway. Down the companionway to the lower deck. Across the lower deck to the lifts.

"Follow me," Mary said. "Yes, I'll follow you," he said. "I'll follow wherever you go."

He followed her into Lift-A, dropped down with her to the deck-level of Hold-A. Here, locks confronted them. Atmosphere was never maintained in the holds of freighters unless the goods being transported required it and the holds of the *Mary* were empty.

The first note of wrongness struck Powers when Mary began turning the deactivator on the inner lock. Shouldn't he be suited?

He asked her.

She did not answer but went on turning the activator.

The inner lock swung open.

She stepped into the intra-lock compartment. He almost followed. The pattern was less clear in his mind now. Its lines were wavering, running together.

What was he doing in the hold-area?

"Mary, why have we come here?" he asked.

She did not answer. She was busy turning a dial on the inner wall. He knew the function of the dial. It controlled the mechanism that closed the inner lock and then opened the outer one. *Whoosh!* the pocket of air in the intra-lock compartment would go as it rushed into Hold-A and dispersed and Powers' blood would gush from his nose and mouth and his lungs would come in clots from his mouth and his ghost would join the other ghosts that walked the black boulevard of space.

"Mary!"

He leaped through the narrowing aperture and sought to seize her arm and pull her away from the deadly dial. But while she had substance of sorts it was not the substance of flesh and bone and he could not hold on to her.

The inner lock had almost closed. He jumped through the narrow opening, barely in time. The pattern was no more but traces of his trance still remained. He watched, horrified, as the lock closed the rest of the way, sealing Mary in the airless hold.

Then the last traces of the trance vanished and sanity returned.

The ship had tried to kill him. Why?

He reentered the lift, reactivated it. He was sweating when he stepped out on the lower deck. Why should the ship want to kill him? He climbed the companionway to the living quarters, walked down the corridor to the lounge. Entering, he swept checkerboard and checkers from the table and sat down. He noticed that his hands were trembling.

**H**E WASN'T particularly surprised when Mary materialized opposite him. She was sitting in the

other chair as though she'd been there all along. Her right elbow rested- on the tabletop and her chin was cupped in the palm of her right hand.

She said, "You have more individuality than I thought."

"Why?" he asked hoarsely. "Why, Mary—why?"

"I'm a supership—remember?"

The truth came home to him then. Superships were conditioned to react when stolen.

But how did they know when they were stolen? Specifically, how had this one known? How had he betrayed himself?

He put the question to Mary.

She answered, "By that glib lie you told this afternoon when I asked why you had only partially programed me. It would have taxed the credulity of an idiot and an idiot I am not. I should have guessed the truth from the emptiness of my holds," she added almost ruefully, "but I did not, because according to my data freighters occasionally do leave home port without cargo."

"Do you know why I stole you?" Powers asked. "Do you know, Mary, why I'm going to Extend?"

She shook her head. "It makes no difference."

"But it does make a difference," Powers said desperately. "All you have to do is bear with me for another forty-eight hours. We'll have reached Extend by that time and have completed two orbits around it. That's all I want—two orbits. Then I'll program you to return to Twilight and the minute we arrive I'll turn myself in to the port authority."

"Talk sense, Ben."

"All right, I will," Powers said. "If you kill me you're as good as dead yourself, because you can't reprogram yourself. You'll simply stay on your present course, go into orbit around Extend and stay in orbit."

She shook her head. "Ben, Ben—why do you persist in thinking superships are dumb? The only reason I can't reprogram myself is because like all superships I'm conditioned to obey the programing of the pilot. But only as long as the pilot is alive. The minute you're dead I'll be free to go wherever I please."

Powers sighed. It had been a lousy hand but he had played it for all it was worth.

For some reason Mary's face was less distinct now than it had been a few moments ago. But he was aware of this only in the back part of his mind.

"I'll tell you one thing," he said. "You'll find me a little more difficult to deal with now that I'm alerted. You won't be able to hypnotize me with a checker game again—that's for sure. Nor," he added with a rueful smile, "get me into a prehypnotic state by feeding me souped-up mint jelly."

A thought struck him. Why hadn't she simply poisoned him and been done with it? But he didn't bother to ask the question, not only because she wouldn't have given him a straight answer but because he guessed the truth—there were no suitable toxins on board.

He said, "Well, anyway, it was a good try."

"I'll do better next time."

The matter-of-fact way she said it sent a shiver through him. He realized suddenly—consciously this time—that her face was blurred. Transferring his gaze to the wall behind her he found that it, too, was blurred. So were the other aspects of the room. For a moment he thought that she had somehow contrived to drug him again—then he noticed that the air was shimmering, as though filled with foreign matter, and the truth overwhelmed him.

He was on his feet, shouting, "We're entering a Beta Tau storm! Why aren't your alarms sounding?"

She smiled demurely up at him. "Don't shout at me, Ben. You programed the course."

He whirled, ran out of the room and down the corridor toward the protective-equipment lockers. Laughter sounded behind him—Mary's. It died abruptly when he reached the storage room and slammed the door behind him. The lockers were on the opposite wall.

*3. Later the ancients discovered that prolonged exposure to ChiMuZeta resulted in disintegration. Their first inkling of this came when the special-alloy tanks they had devised for*

*transporting and storing the radiation transmuted from a solid to a translucent and finally to a transparent state. They suspected that there might be still another phase and tentatively named it "transintegration"—a term that endures to this day. But despite the accidental accuracy of the term the ancients still hadn't the faintest conception of the true nature of the force at their fingertips, nor would they guess for another hundred years that ChiMuZeta in its ultimate form is an Anti-Paradox Manifestation—a force created in a star by the cosmos in order to stabilize the present by filling in hiatuses—and correcting their accompanying inconsistencies—in the past—hiatuses occasioned by mankind's unconscious ability to create en masse . . .*

WHEN POWERS next saw Mary he was seated before the viewscreen in the chart room wearing a synthi-lead suit that weighed nearly one hundred pounds. He was looking at the Blue Star, which now filled the screen and about which the ship would shortly go into orbit.

Mary materialized next to the screen—it was as though she had stepped through the bulkhead. The photon filter had toned down Extend's brilliance to a gentle hue that almost matched the color of her uniform.

She asked, "Comfortable, Ben?"

He glared at her through the suit's faceplate.

"I know who you are now," he said into the transmitter. "Keats saw you by the lake. You're *La Belle Dame Sans Merci*. You're Death."

"You're jumping the gun, Ben. When Keats saw the lady he was dying. You didn't get anywhere near enough Beta-Tau radiation to put you in an analogous fix."

"You sound disappointed."

"I am."

"Bitch."

She grinned. "Why don't you take off your suit, Ben? The storm's safely behind us."

It was true and he almost fell for her suggestion. Then he saw that rime was forming on the viewscreen controls and on all the other metal parts in the room. Cold sweat came out on his forehead and ran down into his eyes.

"You'd like that, wouldn't you?" he said. And then: "What's the temperature out there?"

"A cool minus four hundred and ten Fahrenheit and dropping. Come on out, Ben—it's quite refreshing."

"You opened all the locks?"

"Every one. And that's not all I did, Ben."

He did not need to ask what she meant. For some time now he had been aware of a growing heaviness in his limbs. Tentatively he tried to raise his right arm, found that he could barely do so. And when he tried to stand he only half-succeeded, then collapsed back into the chair.

He estimated his weight, suit and all, to be about eight hundred and seventy pounds.

Mary was grinning at him. "Three G's were all I could muster. My artificial-gray unit isn't what it should be."

How long could he endure three G's? And how much oxygen did he have left? A glance at the indicator informed him that he had a thirty-five-hour supply. More than enough to see him through two orbits. As for the suit, it would be no hindrance—it kept out Beta-Tau radiation but not ChiMuZeta.

But what then? How would he reprogram the ship if he couldn't move out of his chair?

But he would be able to move out of his chair. When all of the chips were down, Mary would *have* to turn down the grav-unit. If she didn't she, too, would face disintegration.

She hadn't won; then, after all.

From the way she continued to grin at him, though, you would have thought she had.

She said, "In about a day and a half you'll be dead. Why don't you give up the ghost now?"

"In a day and a half," Powers said, "we'll be in our third orbit around Extend. Doesn't that mean anything to you?"

"Only that you'll be dead."

Clearly she did not know—probably because her builders, in view of the fact that none of the commercial routes came anywhere near Extend, hadn't thought it necessary to include the data in her memory banks—that if she exceeded two orbits around Extend she would be running the risk of disintegration. Would he, when the time came, be able to convince her that the only way she could save her own "life" was by saving his?

It was a chance he would have to take. Because if he tried to convince her now and succeeded she would try another means of killing him and this time the attempt might very well come off. By keeping her in ignorance for a while he could obtain the time he needed.

"Well, I'll leave you to your thoughts, Ben," she said. "I imagine you have quite a few."

And so saying, she dematerialized.

The *Mary* gave a slight shudder as the first braking rocket fired. A series of shudders followed as successive rockets discharged themselves. Then the *Mary* was in orbit.

*4. Most paradoxes involve religious legends that through the ages successive generations of believers have turned into fact. Anti-Paradox Manifestations occur when such legends finally become fact and lie in wait till mankind discovers them and—in the case of the ancients—misinterprets them and unwittingly supplies them with the ingredients necessary for the correction. In ancient times, APMs sometimes endured for thousands of years.*

**W**HEN Mary next materialized the ship had entered its second orbit around Extend. She was furious.

"What kind of a pilot are you, Powers?" she demanded. "We're falling into the sun!"

At first Powers thought she was lying. Then he saw that the rime had vanished from the control knobs and he discovered that he could stand up.

"How—how much altitude have we lost?"

"Four million miles and every second we stand here we're losing thousands more. Get out of that suit and into the programing room before it's too late!"

He could only stand there. Four million miles—more like five million by now. It was already too late. According to the briefing he had received from the ChiMuZeta techs, the intensity of ChiMuZeta radiation at even minus one million miles was double that of impotentialization level.

He had spent hours programing the course, had checked and double-checked the orbital-velocity-altitude ratio. How could he possibly have erred?

Suddenly out of a corner of his mind came a thought he had kicked around shortly after the briefing and then forgotten about: how could the first man to orbit Extend have found the impotentialization level by accident? The odds against his doing so were staggering.

Perhaps he hadn't found it by accident.

And perhaps Powers' miscalculation wasn't an accident either. Perhaps he and Mary were pieces on a cosmic checkerboard with no more volition than the checkers they themselves had used so short a time ago.

But his insight went no deeper. He felt the awesome shudder that passed through the ship as its overheated drive went off, saw the fiery surface of Extend take on dreadful detail as the *Mary's* fall accelerated. He heard Mary's screams as she tried vainly to pull him from the room. He saw the bulkheads shimmer, then fade away as disintegration began.

And then he knew no more.

*5. APMs, being a part of basic reality, are not subject to time: this is a restriction which we ourselves impose upon them. Hence the seeming anachronism resulting from an APM correction is an anachronism only in our own eyes, and not a true anachronism at all.*

IN THE dream that was not a dream Powers climbed a black mountain, descended into a dark abyss from whose depths stars could be seen shining high' in the immensities. He stood there darkly, looking up at them, then lifting his arms to them he seized their light and wove a golden ladder which he climbed like Jacob into heaven. There lay the stars before him in a great black river of spacetime—he straddled the river and looked down into its depths and saw that it did not flow but lay there like a dark immobile interval; and through the interval swam the fishes of men. He saw other things in the river, too, he saw nebulae and planets and ships and suddenly he saw the *Mary*—and *Mary* and the *Mary* were one, swimming in the darkness of the river.

He could see all of the river because it occupied neither space nor time although it embodied both. It lay there Mobius-striplike beneath him, with its stars and planets and ships and silly men-fish going nowhere. It was his river, there for him to fish in and if he chose he could become a fish himself. Around him in the darkness he sensed other beings like himself and knew that they owned rivers, too, with fishes in them. I will become a fish for a while, he thought evilly, and diminished down into the static stream and stepped out upon a planet called Sacred Heart.

He saw a park and entered into the cool shade of trees and made his way to a round white building with a tall tower on top. He thought whimsically, *Here are mortals who presume to be my wives*, and he passed through a wide entranceway and into the Cloister and climbed a flight of stairs to the chapel where the Holy Sisters were praying. When they saw him, they screamed his crime.

He left the building and exceeded and stood above his river, looking down into the oneness of past-present-future. There was a girl named *Mary*, he remembered, who had tried to kill him. She was not flesh and blood like the other fishes. She was a projection, but she had been devised by men and therefore had been compounded of race memories—and where those memories began, there would he find the basic *Mary* ... He looked down into his river and after a while he saw her in the fields and he diminished and—

—stood before her. When the girl *Mary* saw him she did not flee. It was as though she had known that he was coming, as though she had prayed that he would come. She did not struggle when he seized her arm and pulled her into the dim shadows of an olive grove, nor when he divested her of her robes. "I shall have a child by thee," she said when he had taken his revenge, "and he will be of virgin birth. For I know that thou art not like other men that I have been chosen from amongst a thousand women to do thee honor."

He was mollified and no longer bore her ill will. She was the basic *Mary* and she was good. It was the false memories that had intruded over the millennia that had given her guile and robbed her of compassion.

He exceeded and looked down into his river and saw that all was well. After a while he caused a bright star to appear where none had been before, to show that he was pleased.