

*She paused and bent over him, slowly—and her eyes were shining.*

## STAR SHIP INVINCIBLE

*A novelette of courage and fear, beauty and horror and pathos—evoked by  
the dread, unfathom-able menace of the "sink hole of space."*

by Frank K. Kelly

*Illustrated by Elliot Dold*

**HE HAD** been sitting hunched on the high stool of the operator's chair, elbows on the smooth ledge of metal that encircled him, when the receptor tube spat a harsh sound in his ears, a sibilant warning note. He thought, "What now?" but straightened with alacrity, his stiff back shaping a tense angle.

He jerked his head upward in an arc, nostrils widened, his thin nose slightly trembling, as if he could smell what was vibrating through the receptor channel. He forgot how cold he was, and how his stomach ached faintly from many days on a diet of compressed-food tablets, and how he wished his relief would come, because he was lonely, the universe seeming strange and hostile all around him.

He could see too many stars from this round room that bulged in a curve outward from the top of the Jupiter Dome. It was not good for a man to see too many stars too long.

The snapping sound cracked like a whip in his ears again, and a voice roared: "G-16, the Dome!"

"Jupiter Station," he said quietly. "G-16 responding. Graham at the key. Ready."

The hard voice rumbled: "Build for visual projection. S 1. Jan Garth will speak to you."

"Standing by," Graham said. "R tube clear. Projection coming—what channel?"

"A-channel," the voice boomed. "Beam Central, Earth, sending. Set up cross waves for head and shoulders. Use tight beam on a reverse arc."

"Power?" he asked faintly. "We're low here. The supply ship you were going to send—"

"All the power you've got," the voice cut in, brusque and commanding.

"Right," Graham muttered.

His hands, supple in metal-fabric gloves, caressed the complex panels in front of him as if he was playing a delicate musical instrument. He kicked a lever attached to one leg of his stool and the tripod chair began to revolve, slowly and smoothly.

As he turned he touched studs. The power tubes that ringed him in concentric rows hummed and howled, then went aching silent, as the pulsating tight beam passed the wave band of audible reception.

His eardrums hurt: there had been a soundless concussion, and a golden sphere, slightly flattened at the ends, had come into being directly over his head.

It hung suspended between the four great mirrors over him, spraying his face with lances of swirling light. He worked his lithe hands, fast.

A blue luminosity grew from his key-board, spurted upward from the power tubes, forming like sapphire frost on levers and studs. Azure spears pushed at the glowing globe. His fingers danced over the power panels. The globe was held in balanced suspension in a basket network of crossing rays. It turned on an invisible axis, revolving with silent speed. Spinning like a dervish, the head and shoulders of a big man shaped within the hazy edges of the illuminated sphere.

Graham turned his twitching face upward. He whispered to himself, a little queerly: "Nice trick. You do it with mirrors."

He wanted to laugh—or cry. Sweat lay in heavy drops between his fingers. Visual projection always seemed like magic to him.

After all he was only a flabby little man who knew the motions, the incantations, that brought this magic into being. He handled forces he was terribly afraid of within himself. He was always wondering why the chained lightning in the tubes didn't turn and rend him; he thought some day it would refuse to perform its tricks, would swing and destroy him in a sudden burst of coldly coruscating flame.

The gleaming globe still whirled above him, but the spinning slowed, as he narrowed the flow of juice pouring into the A-channel. There were manacled giants in the tubes, but he could make them weak by starving them, by throttling the leaping flow of power that fed them.

The image in the sphere was at first vague and seemed to be upside down. Then the head and shoulders of the projected vision came right side around, the shape of face and neck clarifying first, then the line of lips and jaw slowly sharpening and straightening. Presently Graham had no difficulty at all in recognizing

the grim countenance of Jan Garth, Administrator of Star Lines.

"Jupiter supply ship left Mars this date, 12:40, Mars time reckoned in Earth -units," Garth said abruptly. "Watched the blast-off through my v-plate here. Record the time for per-manent preservation."

"Recorded," Graham said, very low. He had taken it on the absorbent tape.

As soon as adequate projection had been built up, he had switched in the recording spool.

GARTH didn't say anything for half a minute after that terse exchange of crisp phrases. It was the first time the administrator had used the Jupiter beam personally, and for an instant the harsh voice stumbled, as if the man speaking had suddenly been brought up against reality in his mind; as if he had just awakened to what he was really doing.

He was talking—no; an image of himself was talking—in a little room high up under the roof of the inter-planetary dome on Jupiter, a room separate from where he stood on Earth by an immensity so vast that the thought of it stunned a man into somber silence.

At last Garth said: "The ship is one of ours. Registered at the Port of Korna, nine thousand tons Earth weight; carrying pilot, navigator, and twenty-eight passengers. The *Star Ship In-vincible*. Captain Moran commanding."

"New ship," Graham said succinctly.

"Maiden voyage. It's the first of the new fleet."

"Carrying supplies for the Dome here?"

"Yes."

"We need plenty," Graham said, bit-ting his words.

He shivered, suddenly realizing that he was very cold. Jupiter's atmosphere didn't hold heat; the Sun was very far away; and they had only a little more fuel to feed into the atomic converters. Until the supply ship came, the Dome would be cold.

"I know," Garth said.

"Why did you wait so long to send this ship?" Graham demanded recklessly.

He forgot the power of the other; he forgot that he was only Key Man G-16, Jupiter Station; he thought of how they had to live, here in the Dome, sleeping restlessly in chilly cells, groping through corridors kept dim because light took power and you didn't mind not seeing very well if you could stay at least partly warm. And always the faint ache in their bellies; the ache that came from month after month on the same diet of compressed synthe-food.

Garth said: "This is only a little later than usual. The ship will be there soon. Hold hard."

Graham hunched his shoulders. "You—you haven't forgotten the Sink Hole?"

Garth said: "No."

"The ship's carrying passengers?"

"Yes. Twenty-eight."

"They've been warned?"

"They've been warned."

Graham nodded. "Well, Moran and his navigator know what to expect."

"They're not going to have any trouble."

"You're pretty sure," Graham said softly. "This ship—she's fast?"

The big man shifted his head, raising it with exultance. "I told you; it's the first of the new fleet we've been building on Mars for the Jupiter run. Since the Sink Hole came, we've been working night and day. Now we're ready to take a chance."

The little man sat still, his body humped, feeling the sweat gather in the cold palms of his hands. They were taking a chance, were they? This new ship must be big stuff; at least the lab men thought it was big stuff.

A picture rose in his brain. He glimpsed strained faces, looked into the worried yet courageous eyes of the passengers—passengers who were, he knew, friends and lovers of the people already here in the Dome. They know what might happen, those passengers; yet they went aboard the *Star Ship Invincible* because the touch of a friendly hand, the pressure of lips and bodies in the physical contact of love, meant more to them than living a safe existence full of the emptiness of fading memories.

They were coming unafraid, risking everything, knowing that the Sink Hole might never close again; because it had closed once before, after an interval of ten yawning years, was no guarantee that it would close now after this re-opening. They came, knowing they might be put away forever from the good Earth.

They weren't willing to be cut off from the outer planets for ten years, waiting for the Sink Hole to shut to-gether in its periodic pulsation. Ten years was a long time; too long, these faithful ones believed, too long for sepa-ration. So they risked more than life for—

"You're not taking the big chance," Graham said after a minute. "Those people aboard the *Invincible* are doing that."

Garth shrugged. "People are always taking chances. That's life, isn't it—taking chances?"

Graham said: "I don't know. Maybe it is."

"They've got everything in their favor," Garth stated. "The Walton Arc is still clear. The Hole's widening slowly this time. And the ship has the speed to make port at the Dome, before the Hole spreads across the Walton Arc."

"I hope you're right," Graham mut-tered.

All at once a realization came to him, and he went cold in every part of his body. He thought: God, she may have decided to come this trip. Even now she may be on the *Invincible*, not know-ing the danger, not sensing fully that the ship rides a race with death. The passenger list—the names of those who were coming on the *Invincible*. He had to know.

He tried to keep the shivering out of his voice, but it was there when he spoke: "You—you'd better let

me have the names of the passengers, chief. The people here will want to know who's aboard that ship."

Garth looked at him closely. "All right; I'll give it to you. I've got the record here. Better take this on the tape."

"Yes, sir," Graham said, very low. "The names, sir?"

Garth's hand appeared in the projection, holding a strip of metal-fabric, stamped indelibly with a string of names and numbers; he began to read, his voice low, his eyes now and then glancing at the signal man's face; since the projection had been built on a tight beam operating along a double arc, Graham's body was visible to the man on Earth.

THE LIST wasn't long; only twenty-eight passengers. Almost the last in the roll was the name Graham had hoped and feared might be there. There couldn't be any doubt now. The girl had gone aboard the *Invincible*. It all depended now on Moran—on Moran and whatever they had developed in the experimental laboratories on Mars. This ship—there was something about the way Garth spoke of it that gave him hope.

"I've got them all," Graham said, as the harsh voice of the administrator faded out. "Thank you, sir."

Garth stared at him keenly. "Any one you know listed there?"

The little man stammered something incoherent.

"Can't hear you," Garth said, indifferent now. For a moment he had been amused by the taut anxiety that had crept into the key-man's gaunt face, but after all it was nothing to him; he didn't care very much what answer the flabby fellow made.

"Only my wife," Graham said. He choked, and then went on: "Couldn't you tell me what this ship has that the others hadn't sir? And what—what do you want me to do? There must be something I can do. If I could help to keep her safe it would mean so much to me."

"I understand." Garth softened for an instant; really, the fellow was quite human, with his pleading eyes and twitching little face. "Yes; there's something you can do. You'll connect with the *Invincible* immediately after I've signed off here. Once you've got them, you'll transfer the channel on relay to my operator here, but keep your own key open. Moran is under orders to use the automatic time signal, on a circuit breaker operating every other minute. So long as you hear that signal, you'll know the ship's all right."

"Sure," Graham said. "But suppose it fades?"

"If you think something's wrong, you'll flash my operator and report."

"That's all I've got to do?"

"That's all."

"It's not much," Graham whispered.

Garth turned. "There isn't much we can do if the *Invincible* goes under. I can't believe it will go under."

"Yes," Graham said eagerly. "You said it had a lot of new gadgets. You couldn't—couldn't tell me what they were?"

"It's the best ship we know how to build," Garth said slowly. "I'm not a lab man, so I don't know the jargon or the details, but it's got everything we could put into it. You needn't worry. Moran is the best pilot-commander we have, and Hansen's a navigator; they'll bring this ship through."

Graham shook his head, his lips trembling. "This thing won't be decided by navigating. It will depend on the ship—on speed, on power, on equipment."

Garth straightened, smiling a little. "Well, this vessel is named the *In-vincible*."

Graham shivered. "Wrong name. I'm afraid of names like that."

The other threw back his big head and laughed. "Have you got any sensible reason for being afraid?"

"Yes," Graham said.

The heavy-faced man looked at him, suddenly grave. "You'll explain."

"Sure!" Graham said. "I—I've had a lot of time to read the old books here in the station. I mean the old printed books the ancients had before the tape recorder and the film spool. There's a story of a ship of the sea that was built about two hundred years ago, in the twentieth century—"

"Go on," Garth ordered.

"It struck an iceberg—there were ice-bergs on Earth then; this was before climate control—and it went down. Right under, in just a little while. About a thousand people were drowned, counting the passengers."

Garth shrugged. "What's that got to do with the ship we built on Mars?"

"The experts said this ship of the sea wasn't sinkable," Graham said quietly. "Well, they were wrong. They seem to have found then that anything man could make could be easily destroyed. We've had to learn that lesson over and over."

After a silence Garth said: "What was the name of this sea ship?"

Graham answered: "They called it the *Titanic*."

Neither of them moved for a while.

Then Garth shouted: "But you don't know this ship that Moran is commanding. It's made of an alloy, the newest alloy we've yet found; tungsten isotope and C-metal. The hull is split in cylindrical sections twenty feet in diameter over all. The sections are honeycombed with cells; the cells are bulkheaded, shock-proofed, deadened with molecular insulation. The ship is armor-plated in three layers, with vacuum between each layer."

GRAHAM kept thinking of the girl; and not of the girl alone, but of all of them on the *Invincible*; crouching in a little metal bubble that hurtled at inconceivable speed along the Walton Arc, along a plotted curve that passed just beyond the edge of the Hole in Space. Just beyond—maybe. If the Hole didn't grow. And the Hole was growing.

His throat was bitter and dry. "It's no good if you've been preparing against collision. The Hole isn't solid, isn't material or tangible. What the ship's got to have is power—power to pull away."

"You think," Garth said slowly, "the Hole is something like a vortex or a whirlpool? And when a ship comes too near it's sucked under."

"Now you've got it," Graham said.

For a minute they both sat very still, staring at one another with opaque eyes ; Graham could hear the sibilant singing of the discharge spark in the R tube behind him. He waited.

"The lab men have given the *In-vincible* all the power we knew how to build into her," Garth muttered. "Ethereic drive. If a ship's pulled into the Hole, it must come out somewhere. What's on the other side of the Hole?"

"We don't know," Graham said ironically. "I believe it lies in a uni-verse of different dimensional propor-tions; in a different kind of ether. Somehow that universe, or maybe it was our universe, warped a little out of line, and there's this gap where nothing fits. It begins and ends nowhere."

The other whispered: "The lab men developed an experimental shield—waves generated in a circular blanket that will cover 'the *Invincible* all over. So the ship can ride in a static ether."

Graham put up his hands suddenly and covered his gray face. "I wish I could feel that you'd gone about this right; that the lab men knew what they were building; but I can't be sure. All I can think about is my wife. We'd only been married a little while when I was transferred here. I didn't want to bring her out to this God-forsaken planet.

"Then the Hole opened and stayed open, for ten years. I haven't seen her in ten years. But I haven't forgotten. She has been faithful. I know that. Now she's coming to me on a ship that's got a good chance of falling into hell. Maybe I'll never see her again. Maybe I'll never feel her lips against mine again—"

The big man's eyes were hard and un-yielding. "You'll see her soon. Don't be a damned fool. You've got a job to do. You can't go soft on me now. None of us can afford to go soft in this game. I couldn't recall the *Invincible* if I wanted to. The ship's gone too far along the Arc."

"No; Moran wouldn't turn back now," Graham said harshly. "I know him, the devil. He's hard as hell. He's like you. You've never been hit like I'm hit now. But wait—it's coming to you. Some day it's coming to you."

Garth laughed; the sound throbbed with immense contempt. This flabby little key man with the face of a rabbit shouting at him, talking like that to him! That was funny. Yes. Damned funny! He roared:

"If I gave the order, even now, Moran would turn back."

Graham grinned, peeling his lips back. "He's after glory. If he went on and made it through, he could laugh at you. He'd be a hero the system over. And if he didn't—what'd be the difference?" Garth was stung. "You've got your orders, G-16. If the circuit breaker on the *Invincible* stops, you'll ring me in at once."

"Yes," Graham said. "Whatever Moran does, I'll obey orders, chief. I've been obeying orders all my life."

Garth muttered grimly: "You're not after glory, are you?"

"No. Moran can have that."

Garth grinned. "Cut off."

"Cutting off."

The opalescent sphere lost shape and the illusion of solidity; it dissolved like smoke, streaming away in banners of golden glow that vanished in a bright and glittering nothingness. It was gone and Graham sat alone. The stars closed in around him; millions of white orbs watching him. To them he must have been a queer specimen of tormented matter, convulsed by the strange mad-ness called life, wriggling frantically away from the final transfixion that would be his destiny.

Shuddering, he pulled his thoughts from the stars. Before, he had been lonely, but not this lonely; now he ached with the completeness of his isolation. His belly was empty, and his heart was vacant, except for the hunger of a terrible longing; yet these things were as nothing to him. He sat staring down the long slope of fruitless years, seeing before him the shadow of coming be-reavement. He felt now that the girl, his wife, still lived somewhere in space; but the warm pulsation of her unique being was burning low. Far away from him she brushed elbows unawares with death. Annihilation was nearer to her than she knew.

His longing and his loneliness, how-ever, were not stronger in him than the lifelong habit of submission to command. Swinging in the chair he began to change the set-up of the power chart.

## II.

SHE STOOD at the foot of the burnished metal ladder that went up into the control cabin. Hesitantly, she caught her gleaming metal-fabric cloak about her and moved upward; halfway to the top she felt the ladder quiver under added weight, and, tilting her head, she saw a man coming rapidly down. He seemed to become conscious of her presence at the same time and stopped a little above her, staring.

He was a big man, the solid meat of his hard body revealed in muscular out-line by the close fit of his space-man's uniform. Blond, burned by the light of suns and stars, he was handsome—an overpowering Nordic.

His lips twisted in a slow frown. "Do you feel the need of exercise, lady? I admit the ship's a little cramped back here, but still—climbing ladders—"

She stammered something. Looking at her more closely and seeing that she was beautiful, his lips twisted a different way and he smiled.

"Didn't you know it's not allowed to go up into the control cabin?"

"Oh, yes," she said lightly. "I knew it." She returned his smile.

He said with a stumbling voice: "You're lovely, but at least you're not a lovely liar."

"Why should I lie?" she asked slowly. "I wasn't doing anything wrong. I was exploring the ship."

"I see," he said, very sober. "First voyage?"

"Almost," she said. "Except for the crossing I made with my father from Earth to Mars. I have no memory of that. I'm Earth-born."

"So am I," he said gently. "Then we'd better be friends. There aren't many Earth-born on the ship."

She nodded. Her burnished golden head moved with an easy grace. Eyes the color of starlit space

looked upward into his. She said quietly:

"I've found that. I've had no one to talk to for nearly three days now."

"Hard on a woman," he said, grin-ning.

She laughed, delightfully.

He moved another rung downward on the ladder. "You've been lonely," he said. "I'm very sorry. Didn't know any one like you had come aboard—this trip. Should have looked at the pas-senger list more closely."

"You like me?" she whispered.

He put his head on one side, regarded her carefully, then answered, grave-voiced: "Yes. Definitely."

"I'm glad."

"All right," he said, with amusement. "Now, you like me?"

Her laughter tinkled. "Yes. Defi-nitely."

He looked at her with a glow in his eyes. "I think," he said, "before this goes any further, we'd better get down from this ladder."

"I can't come up?"

"Persistent, aren't you?" he returned. "Sorry, but orders is orders, ma'am."

He laughed again. "Down with you, lady. Or have you a name?"

"I've a name," she said softly. "Tam. Tam Graham."

He felt a sudden keen pleasure in being alive. Three days of monotony, of watching charts and moving keys, hunched in a back-breaking crouch—three days full of overhanging terror were wiped away and he was glad he breathed and could see and smell and hear and taste. He tasted a word now, touching it tenderly with his tongue; the word was "Tam."

"Lovely," he said, without thinking. "It fits. So few people have the right names."

SHE dropped down the ladder in a swift sinuous motion, and he followed her, closed his arms suddenly around her, and kissed the fragrant rosebud of her mouth.

"Some day soon," he said softly, "I'll take you up in the control cabin—if you're very nice to me."

He held his arms in the same tight circle, but somehow she slipped easily from his hold, and he stood empty-handed and a little stunned.

Gravely her smooth voice came: "I've a husband somewhere. You may have heard of him. John Graham."

He dropped his hands, the smile fell away from his lips, and his face was covered by a shadow; before this, he had considered himself as not without honor. He was somehow ashamed.

"Yes. Jupiter key man."

"I love him," she said simply. "I'm going to him."

"You're brave," he said. And then: "I'm sorry."

"Forgiven and forgotten," she said, now smiling. "I want you to be a friend to me. You're a friend of John's, aren't you?"

"G-16?" he said. "Oh, yes! My name is Hansen. I'm navigator, in case you didn't know."

"I knew," the girl said.

They looked at one another and laughed together, but the sound of his mirth was strained.

"You're wise. Too wise for me."

"In some ways, perhaps. About ships and space you know things that I shall never know. You're a navigator—that's hard. I've heard John say it was hard."

"Ordinarily," he said, eyes darkening, "it's pretty soft stuff. But not for me this trip. I wish we'd left you back on Mars!"

"Why?" she asked slowly.

"You're taking a long chance. It's fifty-fifty we'll never make Jupiter."

"There's danger," she whispered. "I know."

He glanced at her with admiration. "You have no fear. If you were afraid, I'd feel it. I can feel things like that."

She said softly: "You see, whatever comes, I'll always have the memory of the night we left Mars. The lights crossing in the sky, like pale fingers pointing. The lines of silver ships, and then this ship, a polished cylinder, lying in that immense trestlework—what do you call that?"

"Slip cradle," he answered, looking at her with glinting eyes. "It's the same with me. I remember every blast-off; even to the first trip I took as navigator, on the Mars-Earth run, five years ago. There's something about it."

"The thick Martian night," she said dreamily. "All those confused voices shouting. Monstrous machines and puny people. I'll never forget my first sight of those luminous letters on the side of this ship, stamped on the sleek curve of it: *Star Ship Invincible*." \_

He nodded, his face strong with exultance. "*Invincible*—that's a proud name. Defiant!"

"Throwing back the light of the stars," Tam whispered. "As if to say —not afraid, not afraid, not afraid of what you can do to me. Not afraid of emptiness, of vastness, of the hard hostility written in the stars."

He shook his head. "The stars aren't hostile. They're indifferent."

"No," she said. "They hate us; I can sense it. They resent our arrogance, our impudence in voyaging out into the colossal sea of space where they have been so long alone."

He grinned. "They're only suns and planets; bright lights along the Broad-way of the universe."

"Suns and planets," she repeated softly. "And beyond them?"

He shrugged. "More suns and planets, I suppose."

"Forever and forever?"

"Forever, perhaps," he said, laughing.

"Worlds without end," she whispered, and shivered a little. "I feel small and insignificant. We won't talk of those things."

"All right," he said.

THEY stood silent an instant, then he muttered:

"I suppose you've been all over the rest of the ship?"

"Yes," Tam answered. "I've been exploring. All those cold cells crowded with stellite drums and beryllium cylinders—they hold supplies?"

"That's it."

"For us? I didn't know we'd use so much."

He turned away from her, then swung back. "For us, and for the Dome on Jupiter. We'll use very little. This will be a short trip, if we make it. The ship has a new power source—etheric drive."

The girl looked at him soberly. "Now you talk of things incomprehensible to me. What is it, this etheric drive?"

"You remember your instructions in space school concerning three-dimensional calculations?" he asked. "Well, the drive is possible because we've gone back to the theory of an all-pervasive medium including the universe in its scope. By using a four-dimensional tesseract we are able to exert power directly on the ether.

"Think of the ether as a river in which we are completely immersed; by coming to the surface of the river we are able to ride a current and choose the direction of flow; the motions of the suns and planets are everlastingly stirring currents in the ether—ether drifts. They go in all directions, constantly crossing and recrossing one another. We've found a current Jupiter-bound, and we're riding it. All clear?"

The girl said, very low: "You mean, then, that at any time we may be hurled away from Jupiter instead of toward it if the drift changes direction?"

He frowned. "No. Naturally we've got a set of Donlin sun engines in reserve. And there's little chance of the direction of the ether flow changing. We can choose any drift we want and calculate its probable direction for twenty years to come. That is, we can do that by using the mechanical calculators. No man could think that fast—not even me. About all I do is feed the calculators problems. I think up the puzzles, they chew them up, and give me the predigested results."

The girl put one hand to her smooth forehead. "You've given me an ache—here."

He glanced at the little chronometer strapped to one wrist. "Well, you're going to be rid of me now for a while. I've got to back-track to the C cabin. Came aft to take a stroll through this part of the ship and see

how things were going. Moran will expect some kind of a report. What shall I give him?"

"Tell him," the girl said, "all's well!"

"In more ways than one," Hansen muttered.

His mouth still burned with remembrance of that swift kiss. He was yet stunned with the knowledge that this was the wife of John Graham—this girl married to the flabby little key-man who had been for ten years marooned in the Dome. It wasn't easy to believe, because he didn't want to believe it.

The girl touched his arm timidly. "You'll come back again and talk to me?"

"Sure," Hansen said, slow-voiced. "Sure, I'll come back again. And maybe—I don't know, because Moran's a pretty sour old space-buster, but maybe, I say, I'll be able to take you up in the C cabin. I'll come again as soon as I can."

He made an exaggerated bow, kissed her hand, then smilingly turned away and vanished up the ladder. After he had gone, the girl raised her fingers and slowly rubbed them across her lips.

She went back slowly to the little cell in the ship's hull that had been given to her. It was no better, no worse, than the accommodations offered the other passengers. It was cramped and cold, but it was clean, almost Spartan in its austerity.

There was a wide bed, nearly level with the floor, the smooth silky surface of it shining softly. She sank down in the soft stuff, felt the warm fabric close around her, hold her in a firm yet tender embrace. She was tired, with a weariness arising from monotony, yet no desire for sleep came to her.

She was lying very still, half dreaming, half waking, and it seemed only a part of the dream when a spot of yellow light appeared on the wall and a voice spoke to her with exultant eagerness:

"Tam, I've found you!"

THIS was not dreaming. It was real. Too real. With a little gasp she answered, speaking wildly into the cone of saffron light that thickened and strengthened while she spoke:

"John—you can see me?"

His voice came, brokenly, the voice of a man given a rare vision: "Yes; I can see you. And you're beautiful. You're more beautiful than you were so long ago. The years have not changed you, nor time altered you, except to make you more wonderful."

She couldn't move, but her body shivered in a kind of ecstasy.

"This is like magic; like a miracle. John, where are you?"

"The Dome," he said faintly. "Jupiter."

"Let me see you," she said. "Darling, let me see you."

He didn't answer at once. Then: "This beam—works only one way. Hard to keep it narrowed on your cabin. No receiver at your end, no transmitter. Can't build a reverse arc."

She said softly: "It isn't possible?"

"No. It isn't possible."

She thought he seemed glad. That was strange. Yet it might have been only her imagining. She whispered:

"You've changed a little. Your voice is different."

He said: "Darling, I'm still the same, and you're still the same, and our love is as it has always been. And it will be the same through life everlasting."

"Ten years," she whispered. "A long time, John."

"Then you mean—well, I don't deserve you. And no woman could be faithful through ten years."

"But I have been faithful," she answered simply.

He would remember those words all his days.

"The ship," he said, after a silence. "Everything's all right?"

"Yes. In a little while I'll be with you."

His voice shook. "Darling, I can't wait. My arms have been empty so long."

"We waited ten years," she whispered softly. "The years are gone, and we shall not remember them. We have the hours that remain to us."

The shaft of vibrant light quivered and died away, leaving the room full of shadow and the echo of his exultant voice:

"Tam, you're coming to me!"

"Only a little longer," the girl cried to him. "Only a little longer, darling."

The light was gone and somehow a shadow lay over her heart. She had a sudden remembrance of the cold hostility she had seen written in the stars; and the ship still rode the sea of space.

### III.

HANSEN climbed the ladder into the control cube, feeling like an old man. His joints were stiff and bitterness was in his mouth. All his life he had waited for a woman like the one he had seen below; his eyes had been warmed by the vision of her, and the warmth had gone through his body, lighting torches in his veins. Now that flame was dead, abruptly quenched, and he was blinded by the pain of his spent longing.

He reached the end of the ladder and pulled himself up into the crowded room that had been his whole world during many hours of tense labor. His legs shook under him.

Captain Moran was standing in the middle of the cabin, looking at him. "You've come back so soon?" Moran asked. "Why didn't you do as I said—take an empty cabin aft and sleep a while? You're very tired. So am I—but not so weary as you seem. Your face shows that, sir."

"Does it?" Hansen mumbled.

He rubbed an elbow against a slot in the wall and felt the smooth round sur-face of a sealing plug slip into place behind him. He stood an instant with his back against that cool metal stuff, unsmiling, his eyes on the dull gray of the floor.

"I can't sleep back there—with them."

Moran's lips tightened. "You mean, you're afraid the thing we're hoping won't happen, may happen, and you'd be caught with the passengers?"

"Hell, no!" Hansen said, his voice savage. "I'd rather take my place with them than carry this knowledge around with me. They don't know they're doomed. When the thing happens to them, it will be sudden, sharp, complete, like an execution. They haven't been turning the possibility over and over in their minds, fighting the thought of it, then letting the thought sweep in and grow and grow, until it's like a monster devouring a man's thought-stuff. You and I have the joy of that."

Moran came closer to him, walking with tight, clipped steps. The captain put a hand on his shoulder.

"Nothing's gone wrong yet, Hansen. You're borrowing trouble."

Hansen's eyes flamed up at him. "Am I? Am I? So it hasn't been worrying you, eh? It hasn't been worrying you that we've the lives of twenty-eight people in our hands; that maybe we've got to let those twenty-eight people die, because we have our orders, and we obey—damned fools, we do what we're told, even when it comes to murder."

The older man didn't move for a minute. The hard, quiet face remained with that curious surface stillness all over it, the mask that had never fallen before Hansen or any other so far as he knew. Then Moran said:

"This isn't murder. They were warned, over and over. They came freely, knowing the chance they took. You and I would be glad to die with them. But we've got a different part to play—a harder part, maybe. I don't know about that. We're men. We'll behave as men."

Hansen straightened. He no longer needed the support of the cold metal slab against his back.

"Hell, you're right! But I—I've seen a woman; not an ordinary woman—she knocked me a little off balance. She seemed to me too beautiful to die. I wanted to save her. I couldn't breathe straight for a little while."

"Some women can do that to you," Moran said, understanding. "You've never taken a wife, have you? And it has come to you that this is the woman for whom you have waited."

"I know it," Hansen said very softly. "But it just couldn't be arranged. She's Tam Graham, G-16's wife, and she happens to love him."

Moran's eyes flickered. "Johnny Graham's wife! On this ship! I re-member her. She is—beautiful. I can't forget the way he used to look at her. There's something between them like—like adoration. If anything happens to—"

"Yes," Hansen said. "No good think-ing about it. We can't do anything for her. She's only one among many. There are other women riding with us—maybe not so beautiful physically, but beauti-ful with the same kind of love. It's the same with them as with Tam. It must be the same with them, or they wouldn't have taken this ship. They came with their eyes open. We can't save them all."

"No," Moran said. "You and I didn't make the Hole. We've got our job to do, and we'll do it the best

way we know how. The rest is on the knees of the gods."

Hansen nodded slowly. "Have you checked the chart since I left?"

"Twice," Moran said. "Speed's hold-ing. We're on our course. We've got a good chance of pulling away clean."

THEY went over to the Danler spacial chart and stood staring at it to-gether. A black smear, twisted like a snake, cutting across the smooth ivory luminosity of the board—that was the Sink Hole.

Swinging across the upper end of that ebony blur they could trace the faint red line of the Walton Arc. A green sliver of glow was the *Invincible*; the ship crawled deliberately, it seemed to them, along the scarlet curve. As it crawled, it came nearer and nearer the blob of unfolding darkness that was the Hole. It seemed as though some one had spilled ink on the white surface of the chart, and the ink was spreading, spreading

Moran said: "We're doing better than Garth figured. I've balanced the chro-nometer readings with space-path cal-culations and made allowances for light distortions due to etheric faults, but still our speed is pretty nearly inconceivable."

"And if anything happens," Hansen said quietly, "we've still a trick in re-serve. I don't understand how it's going to be done, but Garth gave you the directions."

"Listen," Moran said impatiently, "I explained it to you once. It's not simple, but you're a navigator with AA rating and dimensional mechanics should be understandable to you. Garth and the lab men believe the Hole is a dimensional warp. Using the etheric drive won't keep us from being pulled into it, or through it, or across it, if a vortex has been formed by the spacial strain caused by the opening of that gap in the void.

"All the etheric currents may be sucked one way, and we're riding an etheric current, you know. If the cur-rent we're on goes in the ship goes in. We're hoping against that. We're counting on the strength of the ether stream we're skimming now; we believe this flow will carry us by the Hole before it has fully widened across the Walton Arc. But we may be wrong."

Hansen grinned without mirth. "That's funny. You sound like an ex-pert—'we *may* be wrong.' Hell, it's an odds-on chance the whole damned thing is cockeyed. I don't trust those lab men. Sure—they think up something like this, and then they stay where *they're* safe enough, but they send us space-wranglers out to try it on the dog. If it doesn't work right—that's too bad. Write it off. Unsuccessful experiment. They make a hell of a lot of unsuccessful experiments."

"That's the only way science gets any-where," Moran said heavily. "Trying and trying and trying. This is a swell ship we've got here, isn't it? It's pretty comfortable, it's clean, it's warm, we've got as good air to breathe as you'll find on any planet, we've got speed and power to burn—not much like the old space boats that used to creep out to the Moon from Earth and then crawl back. There have been improvements; we owe them to the lab men. We owe a lot to the lab men. We've got to take our chances, sure, but they're doing the best they can to make things easier and safer for us.

"Most of them would rather lock the doors of the laboratories and never come out again ; they've got what they think is the holy of holies, and the world, our world, the practical world, the world of men and money and machines, is just a damned nuisance to them. We're a lot of childish creatures always begging for new toys, new gadgets, new playthings. We build a civilization, then tear it down, building something

different. We don't know what we want."

"I know what I want," Hansen muttered. His fingers twitched. "I want to get this damned ship safe into the Dome at Jupiter, and then I never want to see another damned space-buster again as long as I live. I'm sick of seeing stars; I've got a bellyful of monotony without end."

"You're tired," Moran said. "You've taken too long a trick at the controls. I've felt the same way; world-weariness born of physical weariness. Why don't you trust the automatic pilot when you're on duty? Machines are better than men—for most things."

Hansen swung around, his face contorted. "Damn you, you're not human! You'd rather look at the shine of a stellite stud than see a smile break on a woman's face. You're all wheels and levers and clicking cogs; sometimes I expect to hear a humming and buzzing come from inside you."

Moran laughed with metallic amusement. "I can depend on machines. When you need them, they're there. This ship is a machine. The thing that may save you and me from going in the Hole with the rest of them—that's a machine, too."

"I don't know," Hansen grunted, staring at it. "Maybe it is; sometimes I think it's alive. It's a damned funny-looking thing."

Moran looked across at the dimensional converter with a kind of loving reverence. Smiling, he said: "It's beautiful. Notice! Not a wheel anywhere. That's why you can't believe it is a machine."

THE CONVERTER was oddly like a flower—a flame flower with metal petals of vivid blue, and a purple cylindrical stalk luminous with an unceasing sweat of cold translucent bubbles that sifted out through a network of tiny apertures on the underside of the petals and flowed downward in a singing stream. It seemed to be covered by a shimmering veil of something shining and smooth and transparent like glass, yet not glass.

Moran whispered: "Try to follow the lines of it with your eyes. You can't. They seem to begin and end nowhere. Yet they have beginnings and endings—not in our universe, not in our dimensional range, but somewhere; somewhere beyond or around or over or under our world. When I think that our laboratory men shaped that mechanism, prisoned free power in it, and gave control of that power to the little cube in the wall there, I'm proud. I'm glad I'm a man. We're only crawling scum maybe, lice infesting the surfaces of dying planets—but by Heaven, we've got a few brains."

Hansen shivered. "I don't like it."

The other laughed. "You're afraid of it, because it's so beautiful and terrible."

"Yes," Hansen said, "I am." Then: "Well, what does the damned thing do?"

"When the time comes that we have to use it," Moran said, "you'll see. I'm trying now to tell you how it works. They've called it a dimensional converter, and that's the right name for it. When I touch that cube in the wall, it will swing, and the angles of its planes one to another will be reversed, and the shape of this room and everything in this room, including your body and my body, will be converted across the dimensions—just for an instant, a fragment of a second, we shall be nowhere. We shall still be in this ship and at the same time we shall be in a million other-where.

"There is only one dimension—shape. When we talk about length and width and thickness and existence in relative time, we are only attempting to describe shape. And not even that—what we are really doing is

describing size. Size is real, is physical, is solid and touchable. But shape—how can you get hold of that and describe it?

"Shape is the estimation of a thing that we form from the physical and mental impressions and perceptions, sensations and stimulations, that impinge on our receptive mechanisms. We know how a thing looks, but we can't describe it; we can describe some of its physical aspects, and make a few fumbling comparisons with other inadequately described things, and finally we conclude with the generality that everything is relative. This converter is like reality—beautifully incomplete."

"Still what you've said isn't clear to me," Hansen muttered, moving his hands protestingly. "I can't get all this straight in my head. Where the hell will we go when this thing starts working on us—and where will we arrive?"

"We'll come back as nearly as possible to where we were," Moran said, grave-voiced. "Maybe that will be somewhere within the shell of this ship—if the ship exists after passing through the Hole."

His cold glance swung to the spacial chart. The green blob had moved forward: nearly half of the red line had been eaten away, but the arc that remained was very near to the ebony blur of the dead spot. The Hole was widening like a hungry mouth

Moran nodded toward the space-drive dial. He said, with a kind of savage confidence: "Speed still the same. Course all even. We're not going to have any trouble."

"No," Hansen said. "No; of course not." He looked at the gray metal of the floor. "But I think I'll sleep here. It'll be better if we don't unseal that plug again until we reach Jupiter."

"All right," Moran said, bending over the chart.

HANSEN stared at him; absorbed, intent on graphs and dial readings, he seemed indifferent to the existence of human weaknesses, human emotions. With him there could never be a great love. And yet—it might be that he loved his machines with a cold intellectual passion.

Hansen couldn't help shivering. He was thinking of the girl; all that beauty obliterated, sucked into nothingness, destroyed by a devouring darkness. It couldn't be. He couldn't let it be.

Muttering a little to himself, he put his hot hands up to his head. Looking at Moran's stiff back, he whispered:

"I'm going to do something. I can't let her die without doing something. I can't—"

Moran swung. "Did you speak to me?"

"No," Hansen said in a mumble. "I didn't say anything."

"Thought I heard you talking."

Hansen grinned queerly. "Now you're getting the jitters. Maybe you got 'em from me."

Moran frowned. "You'd better take a little sleep while you've got the chance. I'll be needing some myself pretty soon and it'll be your trick again; you'll want to be in good shape, if you're not going to use the automatic pilot."

Hansen's face contorted; veins stretched in white tracery under the skin of his cheeks. "Listen, why don't

you let me alone? Sure, I'll be in good shape. But let me worry about it, see? I'm sick as hell of your fussing and nagging."

"Sorry," Moran said, with a flush. "Nerves, I guess. Didn't realize how it must seem to you. All right; I'll let you sleep."

The other turned his back again. Hansen stretched himself out on the cool metal of the floor. The cabin was quiet, too quiet; he missed the hum and throb that would have been there if they'd been using the Donlin engines. This etheric drive was ghostly; no sound, no vibration, no crushing sense of acceleration when you were building power.

But he didn't trust it. Too many damned machines nowadays. Machines and more machines all the time. More machines than men pretty soon. Then what? That would be a hell of a fix, if the machines got bright ideas. Thank God, the devils in the dynamos couldn't think. Couldn't they, though? He didn't trust a machine, any kind of a machine. Didn't trust them—

A minute later Moran came over and stood looking down at the big blond body stretched on the floor. Hansen slept, restlessly, muttering, voicing stifled groans, rolling a little from side to side.

"A weak sister," Moran said with contempt. "A job like this and they give me a load like him to carry."

He raised his eyes upward, his glance passing through the transparent dome of the control room to touch the steely stars. He saluted them with a lifted fist.

"Hard, aren't you?" He grinned, showing small pointed white teeth. "Hard and secretive and stolid. You don't give yourself away. Me—I'm like you, and I'm glad. To hell with the weak sisters!"

The ship plunked, like a thrown knife, across the empty depths and vacant canyons that gaped between the shaky platforms of the winging worlds. Jupiter loomed close, a haven and a target, but still the Hole stretched like a black wound unfolding in dark flesh. The ship might yet be an unwilling lance forced to probe that wound.

Moran rocked on his two legs, defy-ing and adoring the angry lights that broke the bleakness of those dark skies. Ebony infinity surrounded him, en-gulfed him, submerged him with a roar of mental surf, yet he remained a rounded entity, complete and unbroken as he had been since he had been cut as a flap from his mother's flesh, since he had emerged as a skein from her skein.

He was a man; he was unique. There were millions very like him, but they were not as he was in all ways. This vision of the void smashed against his eyes, became a part of him, but he was not even now merged with this hungry immensity; like a blind amoeba, the uni-verse extended pseudopodia to take him, to absorb him, but he remained unsoft-ened and unabsorbed. He was a man; he was unique.

Suddenly he put his head back and laughed, freely and fully, without mak-ing any sound.

#### IV.

HANSEN, shivering, suddenly came awake. The shadow of a man's body was over his face; Moran had knelt close to him, was shaking him. He lay still for a minute, frowning, trying to think what it was that seemed so strange. Then he knew; the floor quivered under him, in ripples of rhythmic vibration. The Donlin engines were operating. That meant—

Moran, watching him closely, saw realization creep into the half-opened eyes.

Nodding, the captain said somberly: "I thought I'd better waken you. Though there's nothing you can do. Except wait."

Hansen stood up, not straight, because his shoulders slumped and he had the look of an old man again in his face. He groaned. "Why didn't you let me sleep? When I'm awake, I've got to think. I don't want to think."

Moran sneered: "Soft belly! You're afraid?"

"Yes," Hansen said. "Of myself."

He walked slowly over to the chart; when he saw what was mirrored there, he had no need for words. The green sliver of light had left the scarlet arc; slowly the blob of green glow slid toward the edge of the black smear. Hansen covered his face with his hands.

"No good," Moran said softly. "Dance to the music, friend. The ship's going under."

"How long have you known?" Hansen asked; his voice was tired.

"Just saw it now. Everything seemed to be all right until a minute ago. Then something slipped. I could feel it, as if the ship had lurched on one side. The dials didn't register a thing. No warning. But when I looked at the chart—I saw what you saw."

Hansen dropped his hands at his sides. "The Hole—how far away do you think it is?"

Moran thought an instant. Then: "About a million miles, I'd say." He was so cool, so calm, so indifferent; he didn't seem to feel anything at all.

Damn him, Hansen thought. But aloud: "Then we've got about an hour."

"That's it." Moran said pleasantly. "If we keep this speed. But we're accelerating, see. The Hole exerts a definite pull; that bears me out. I always thought it was a kind of vortex, which naturally would develop suction."

"Stop!" Hansen screamed. He was pale around the eyes. "I can't stand much of that. Save your damned drivel for a classroom lecture in space school when you're retired—if you think you'll ever see Korna-on-Mars again."

"I'll see it, all right," Moran said quietly. "So will you, if you hang onto your guts. All we've got to do is sit tight, and when the time comes, I'll turn the cube; we'll take our swing along the dimension line, swing back, and the Hole will be behind us, Jupiter dead ahead. Swell!"

Like a madman, Hansen leaped at him. Without preamble, without words, the navigator sprang. Moran, his mouth gaping in a face suddenly left vacant by complete astonishment, fell backward and went down. His head smacked the stellite flooring of the cabin, the angry glow went out behind his eyes, and his body stiffened to a dead weight in Hansen's frenzied grip.

Hansen laughed, looking at the lolling head, the limp body.

"How's that, eh? Swell, huh! How does it feel to be dead, hard guy? How does it feel?"

Moran didn't answer, because he couldn't. Hansen jumped up, moving with a jerky nervous energy, and crossed the cabin to the seal in the wall. He touched a stud, the gimbaled plug dropped out, revealing the ladder seem-ingly stretching "down" but really going back into the passenger section. He looked over his shoulder; the automatic pilot held the controls, working smoothly and silently.

He scrambled along the ladder, his legs shaking. At the end of it, a long corridor opened, with numbered cells on either side. He stared at the closed doors blankly; he didn't know what cell she occupied. She hadn't told him, be-cause he hadn't asked her. Before, he hadn't wanted to know; he had been afraid.

SUDDENLY a door a little distance from him slid into the wall and Tam Graham came into the corridor. She saw him; eyes lighting, she hurried toward him. She was as beautiful as he remembered. For her he had killed; for her he would kill again, if need be.

She came up to him. "Something strange happened," she began breath-lessly. "Did you feel it? The ship seemed to go over on one side. There's nothing wrong?"

"Everything's wrong," he said, face grim. "Come with me."

"You're going to take me to the C cabin?"

"Yes."

"But what's wrong? What's hap-pened?"

"I'll tell you when we get forward," he said swiftly. "Are you coming?"

"Of course!"

"Then hurry," he said, his voice strange. "I can't take anybody else, you know. After all, I couldn't save every one of them, could I? Couldn't get twenty-eight people in the C cabin, to begin with; silly to think of it. Though there'll be more room when we've thrown Moran out."

He pushed her ahead of him. Going along the ladder, she went first; he fol-lowed very closely, his breath puffing. When they were both inside the control room he turned and closed the seal. It seemed to take almost the last of his strength. The blood had been siphoned from his face; he was the color of paper. There was something wrong about his eyes; they didn't seem to focus.

"Here we are," he said. "All nice and cozy. You and I and a dead man."

IT WAS then, looking beyond him, that the girl saw Moran flattened against the floor. Calmly, she stepped a little closer to Hansen and lifted a cool hand gently to his hot face; she covered his eyes an instant.

"Rest a minute," she said soothingly. "You've been going too fast. Close your eyes. Think straight. Something has slipped away behind your eyes, but it will feel its way back, if you go care-fully. Don't get excited."

She took her hand away. Hansen had shut his eyes and had been rocking on his heels, listening to the rhythm of her voice. When he opened his eyes, very slowly, the horrible brightness she had seen before was no longer there.

His eyes seemed a little vacant and washed-out; they looked curiously new, as if he was a child, without experience at all, without many memories, without the impressions and sensations that the years and the actualities of living had recorded on his brain. He said, stum-bling with his words:

"Something important happened, but I can't remember what it was. Just a little while ago. Maybe if I take a little time to think, it will come back to me."

She walked past him and stopped, near the chart. She had no knowledge of these things, but the record written in light was plain to read—the ship was slipping into the Hole. Now the mean-ing of Hansen's queer flood of words was clear to her. They were doomed, and Hansen hadn't been able to face the fact. But he had thought of her, and he had come to her with the purpose of somehow protecting her against the death that loomed for them all; he had wanted to save her.

But Moran—his silence, his immo-bility, the crumpled position of his body, the thin trickle of scarlet flowing from his head—that didn't seem to fit in. She knelt, held the captain's head in her lap, wiped away the blood; there wasn't much blood, but the blue bruise at the back of the skull was very ugly. Still he wasn't dead, or dying, and Hansen had spoken of a dead man.

"Is this the man you meant?" she asked softly, looking across at the navi-gator.

Hansen still stood like a sleeper in a dream, vacantly staring.

"Is this your dead man?"

Hansen jerked around. "He isn't dead, then?"

"No. Stunned."

Hansen laughed a little, very bitterly. "I might have known. You can't kill the devil."

"You—you tried to kill him?"

"Hell, yes!"

"But why?"

"Why?" Hansen muttered. "I had a damned good reason, beautiful lady; he was willing to let you die. He didn't want to let me save you, and I had to save you."

The girl lifted her head and looked at the navigator soberly. "We're all going to die. I've seen the Chart. The ship's driving toward the Hole."

"Yes," Hansen said, chuckling. "But we're not all going to die. You and I and Moran—we're safe. We're going to live."

"I'm afraid you're a little mad," Tam said softly. "How can that be?"

"We're in this cabin. As long as we stay here, we're safe. Moran knows. Moran knows how to work the gadget. That thing there, against the wall—he calls it a dimensional converter."

The girl turned her eyes toward the sinister flower; it was beautiful and terrible. Fascinated, she asked:

"How does it work?"

Hansen's face drew together in a sudden tight mask. He said heavily: "I don't know. Moran can explain it to you, maybe. He knows. When the time comes, he'll turn that little cube in the niche in the wall, and this thing will shift the C cabin and everything in it across the dimensional line. That will happen just as the rest of the ship strikes the Hole.

"But we won't be in the ship, understand? This cabin is like a ship inside a ship; we'll be in it, and Moran says it will be in a million other places—I've just happened to think. The cube—you've got to know the angles before you can adjust it; like a safe, you've got to have the combination. And Moran is the only one who knows the combination."

He stared stupidly at the man on the floor. "And I've knocked him out. We've only got a little less than an hour, before the ship hits the Hole. I'm a fool."

THE GIRL lifted her bright head. "Then we've got to do something. I don't believe there's any concussion. He's stunned; that's all. We can try to bring him around."

"Sure," Hansen said eagerly. "Sure, that's it. Maybe we've still got a chance, darling."

"Have you got any cold water?" the girl asked; her face was calm, evidencing no emotion.

Hansen said: "I'll get it—to put on his head. That's the thing they always do, isn't it? Sure, we've got some. We've got water, synthe-food, everything. I told you this was a ship inside a ship."

"All right!" Tam cried. "I'll take your word for it. Now get me the water."

He rubbed one hand across the back of his neck, grinning sheepishly. "Yeah; I'm talking too much, I guess. I feel kind of funny. I can't think straight or something."

He went over to the W-generator, re-turned with a flask full of cold, abso-lutely colorless fluid. "Synthetic," he said in queer voice, "but *he* won't know the difference, will he?"

"Give me the flask," Tam said.

He handed it to her like an obedient child, his round eyes adoring her with a vacant intensity. Shivering a little, she commanded:

"Now go sit down somewhere. You're tired; I can see you're very tired. I'll try to bring Moran around. There's nothing for you to do."

Solemn-faced, he saluted her, giving her the full ritual of the space code. "Right, chief!"

He walked to the control board, now ablaze with warning lights futilely sig-naling that the ship was off course. Buzzers and bells made a subdued clamor at his approach, and as his body came within range of the photo-electric eye, the automatic pilot quietly disconnected itself.

"Damned clever!" he said dizzily, "Damned clever, these machines! Ex-cept now they're no good. No good at all. Can't save us, can you? Can't save us, you clever little clicking devils. I better sit down."

He dropped heavily into the pilot's seat and rested his twitching face in his hands. He began to groan softly to himself, muttering over and over: "I'm sick, I'm sick, I'm sick as hell."

It was the wailing of a frightened child.

The girl, leaning close to Moran, rubbed his cold temples with the tips of her fingers. Quiet and steady, her warm hands traveled over his forehead. Then she took the flask of water and let the liquid fall, one icy drop at a time, on the blue swelling at the back of his skull. He shifted his head feebly, whispered:

"Who are you? Thanks, thanks; that feels good. I can't see you yet, but you've got fine hands, soft hands. You're a woman. Get away. No women allowed in this cabin. Get away from me!"

His eyes went wide all at once, blazing like suddenly lighted windows, and his hatred gleamed out at her, mingled with a curious fear. She sensed instantly that he hated her because she was a woman and yet he was afraid, afraid to melt the bars he had welded around him long ago, afraid he might yield to a little tenderness and warm human feel-ing. He was a scientist first and only human now and then.

"I'm Tam Graham," the girl said simply. "Didn't Hansen mention me?" He struggled up on his elbow, pulling his head from her lap. He was terribly conscious of the scent of her enveloping him.

"Hansen. I see, I see! He brought you here. He thought he'd killed me, so he was going to put you in my place. You know about the converter?"

"Yes," Tam answered. "I know." "Then why did you call me back? I was very close to the gate of death. The gate was opening, and suddenly I was pulled away. Something took hold of me and wouldn't let go. That was you."

The girl whispered: "I just couldn't let you die. Unfortunately, I'm a Christian. By your creed of scientific savagery, I'm soft. But I couldn't let you die even though I knew you were my enemy."

STRENGTH was returning to Moran's body in a creeping tide. He had his armor on again, all over; he had no weak spots showing. He grunted, the sound full of contempt.

"You're lying, of course. Probably don't realize it yourself, but you are lying. Overlaid with all that careful rationalization of humanity and Christianity, there's a real reason why you revived me. I'll know as soon as I've talked with Hansen. Hansen can't hide anything from me—that's why he tried to murder my body."

With a grinding effort, he sat up. The room was a broken blur of lights and shadings; he squinted his eyes with a painful concentration and waited, beating down the taut nausea that crept over him. His head ached horribly, but he ignored it.

"Where's Hansen?" he demanded, after an instant.

The girl glanced at him. "Right before you. In the pilot's seat. Can't you see him?"

"Yes; of course," Moran growled. The room began to settle down around him. Pieces fell into place until the shape of the walls, the glow of the lights, the contours of the many mechanisms that crowded the cabin, were no longer a puzzle; things were not quite the same, but he made out a painful semblance of reality.

"Your eyes," the girl said. "They're queer. You're—you're not blind?"

Moran laughed. "You may wish I was before I've finished with you two—but I'm not. I'm in pretty good shape. I can handle you and that murderer. I've just figured out why you brought me around. Hansen remembered that he hasn't got the combination to the cube. He couldn't work my magic. That makes me boss again. He'll do what I say because he has to."

The girl said fiercely: "One thing you'd better consider. He isn't right in his head. If you push him too far he'll go at you again. If you don't want to die—"

"I've been very near to dying," Moran whispered, his eyes receding. "And it isn't bad. It isn't bad at all. In fact, it's quite pleasant. You'll like it."

The girl stood up, tight-lipped. "What do you mean?"

"It's your turn," Moran answered, flat-voiced. "Hansen is going to take you back to the rest of the sentimental cattle who threw their right to live away by coming aboard this ship. You were warned, weren't you? They told you at Korna you could probably expect death."

"I was warned," the girl said, looking down. She stood very still, her breath making a faint rattle in her throat. "Give Hansen the order. If he obeys your command, I'll go."

Moran got on his hands and knees and then pulled himself to his feet with a jerk. He swayed a little, but remained erect; the muscles in his hard hands knotted together and his veins were big with blood, but he stayed on his feet.

He shouted: "Hansen!"

The man in the pilot's seat turned, creasing his low mumble. Empty eyes regarded iron eyes:

"Yes, commander?"

"Take this girl to the ladder. She goes aft. You know no women are allowed forward here."

The dazed blond giant stumbled to his feet. "Yes, commander."

The girl shut her eyes; with pale lips she whispered to Moran: "This is your victory, scientist. Glory in it!"

MORAN braced his legs wide apart. He regarded her without passion, without animus; his hatred, his fear, were both gone, or pushed far under the surface of his thoughts; unguarded by his will, his brain had experienced a rebirth of emotion, but his control had returned. He was dispassionate. He sat in the seat of his consciousness and touched the studs, worked the levers, turned the switches of the efficient mechanism he had made of his body.

"It isn't a question of victory, woman. We decided on a plan for this emergency. His life is more valuable to me than yours; his brain is better than yours. The cells of his cerebral cortex are stored with intricate technical knowledge upon which I may need to draw. You have nothing; you are only a woman. There are many women."

"There are many men."

"You are pleading?"

The girl bowed her bright head. "I and myself—afraid. I'm sorry. Dying may be pleasant, as you say it is, but life to me is more pleasant. I've got so much to live for."

"How very original!" Moran said softly. "You're unselfish. You're a Christian—yet you're pleading for your-self. You're willing to stay here with Hansen and myself, where you have at least a chance for life, rather than go back there with those who have been your companions. Are none of them your friends? Do none of them mean anything to you?"

The girl tightened her hands together. "Yes, yes! But I can live without them. It's not for myself so much that I want to go on living."

"I see," Moran said. "There's a man on Jupiter. You're going to him."

"Yes," the girl whispered. "After ten years."

"Yours is a great love," Moran said soberly. "I'll grant that. But what about all these others on the ship? Do you think they came on this voyage, risking everything, because they were stirred by a small desire or a puny long-ing, by faint friendship or light love?"

"Ours is a rare thing," the girl said proudly. "An equal love. His is no greater than mine; mine is no greater than his. He loves, and he is loved. I love, and I am loved."

The vacant voice of the blond giant said, all at once: "The woman stays, commander. Here. With us."

Moran hit him with a gouging glance.

"You're noble, of a sudden. If she stays, we all three die."

"You mean—" the girl cried.

"Listen," Moran said. "Dimensional mechanics aren't like simple arithmetic. The converter is inconceivably delicate. Hansen—you remember the examination, the physical searching and pounding, to which we submitted before we left Korna-on-Mars?"

"I remember," the giant said, wandering in a maze.

"We were weighed, down to the last molecule. The lines of our bodies were measured with calipers. Our uniforms were fitted and shaped to a certain size. Every mechanism in this room was treated the same way; dimensionally photographed. Those dimensional pictures were fed into the calculators while the converter was being assembled and powered. The converter will swing you and me along the dimensional line, bring us back somewhere inside this cabin, maybe a few inches off center, but we'll make allowances for that. The girl can't go. Nobody else can go. The converter is set to handle two bodies of a certain weight, a certain size, a certain shape. See?"

Hansen turned his pleading, bewildered eyes on the girl. "I tried to save you, didn't I, didn't I? But I guess he's right. He's always right. Now I can't do any more."

THE GIRL raised her hands and touched her hair carelessly. Something like laughter pulsed from her white throat. "You've been grand, space man. You've tried to be a hero, haven't you? All right—I won't let you down."

She looked straight into Moran's hard face. "You've saved me in spite of myself, scientist."

"I don't get that."

"I crawled at your feet, begging for my miserable little life. I thought I was important because I was a woman, because I loved a man, because love is a rare thing in the scheme of the universe. But I see it now—love isn't rare. It's common. There are millions on Earth who have the kind of love I thought I shared with one man alone.

"It's glorious to think of that. I'll think of it when I'm dying—back there with those plain little people you called 'sentimental cattle.' I realize now, I'm not important in myself; only what I had was important. And the universe is overflowing with it. If I didn't believe that, if I thought that kind of tenderness would die with me, I'd fight you. But it won't die. It never dies."

Hansen followed her across the room, opened the seal.

He watched her go along the ladder; for a long time he could see her bright head, held high like a torch; then that, too, vanished in the gloom that crept over the back part of the ship.

"Close that seal and lock it home!" Moran ordered with sudden urgency. "We've only a minute longer."

Hansen turned around; his hands were damp with some kind of moisture that had fallen from his face. He blinked his eyes.

"She was glorious!"

Moran was at the chart, muttering calculations and abstruse formulae.

He called over his shoulder: "Take three steps from the seal and lie down on the floor. Close your eyes.

The swing along the dimension line is bound to knock us both cold, and we may as well be comfortable. When I've set the cube to reverse itself, I'll be there be-side you."

Hansen took three stiff steps into the room, his knees jerking like those of an automaton. He flattened, folded his arms on his chest, shut his eyes. He whispered, hugging himself: "I'm so tired—"

Moran touched the cube in the wall and sprang back from the blaze of burn-ing brightness that seemed to splash outward from the brilliant surfaces.

Blinded and reeling, he felt his way along the floor of the cabin, stumbled into Hansen's body, and sank down, bruising his shoulders on something metallic and adamant.

Sensations left him, and perceptions he had no more. His world of being was not black, but blank.

The control cabin became riotous with ropes of light—light visible and invis-ible, shaded and colorless, warm as flame and cold as space

## V.

WHEN MORAN returned to the controls of the mechanism that was his body, he felt like a stranger in an old" house ; there were so many things that seemed familiar, yet none of them re-sponded to his presence as they might have to a remembered master. He had been gone so long, he had traveled so far away, that his body had forgotten him.

He struggled to get back into his own brain; to crawl within the shell that had been his ; grimly he attached himself to nerve centers and dug into the folded convolutions of his cortex. Then he got home—contact! He sent messages, and faint responses returned from the far-reaching periphery of his nervous system. He gave commands, and there were feeble efforts at obedience.

He was very cold. His body seemed to have taken on a frozen rigidity while he had been absent. Now he could sense the fire of awakened life climbing his body, circling dead nerve ends, span-ning some still sleeping synapses, mov-ing forward in little aching pulsations. The hot broth of his blood began to circulate, halting an instant to burn some knotted cold spot from his arteries, then booming and roaring through the great valves around his heart.

His heart woke; there was a heavy blow against his chest, racking him all over with dull pain. Something thudded and thundered against the walls of his body cavity, hurled his blood stream out-ward in spurting fountains that filled his empty veins; then began a regular thumping and pounding, like the beat of compression engines. His heart had begun to throb.

Still he didn't move, because as yet he could not. Caught somewhere in a dusty corner of his brain was the impulse that could tell his muscles his bidding, but it took him a little time to reach into his mind and remember where the nerve spark lay hidden.

He was sure of one thing only—he was alive. He could move. He heard himself breathing. He felt the pound of his heart beating the reluctant blood through his veins. In a minute he would open his eyes and he would see—

What?

For a little while he lay where he was, waiting. He did not know what he expected. There was no change. All was quiet. He stopped his breath an instant—complete silence. He could hear nothing then except the loud sound of his own heart.

There was something smooth and hard-surfaced under his body, holding him up, supporting him. Then he remembered—he must be lying on the floor of the control cabin. Exultation quivered through him; the cube had worked, evidently; they had gone along the dimensional line and returned. Successful experiment! Write that down. Score another victory for science.

He wrenched his eyes open. For an instant he got the full glare of a bright cold light full in the face. Then he was blind again, and the black dark was so deep around him that he seemed more blind than he had been before. But the darkness fell away, a layer at a time, until he could see again.

Very carefully, because he could hear his muscles creak and groan like tight wire, he put his hands behind him, braced himself first on his arms, then pulled himself to one elbow, and at last sat up.

He looked around. The room was familiar to him, almost the same as he remembered it from the time he had glanced at it last, and yet it was not the same at all. It was still the control cabin of the *Star Ship Invincible*, but he was lying on the floor under the pilot's seat; there had been a perceptible shift, then, in his space-time position. Of course! Couldn't expect the thing to work perfectly. He would probably notice other changes.

The lights were turned on, just as they had been at the instant the ship had gone into the Hole; cold Benson globes, all white, snowy glow, harsh and direct, casting thick black shadows in straight lines. He looked at them steadily for a minute, sitting cross-legged like an Oriental and staring upward.

"Queer effect!" he muttered slowly.

A little shiver went over him. After all, this whole room and everything in it had been subjected to an unprecedented change, taken over by an alien force; he couldn't be surprised at anything, if he was going to be logical. But what an opportunity—he had the chance of making a critical study at firsthand of the results of a unique experimental undertaking. He'd have to be impersonal, dispassionate; even if there had been changes in his own body.

"Record everything on a tape spool," he admonished. "Mustn't forget that."

He couldn't get his eyes away from the lights. All the round white globes had a reddish halo, and the light they gave was shot through with black twisting, streamers, impalpable, intangible, like the shadows of shadows.

With difficulty, he took his glance from the Benson globes. He looked at the control set-up. Queer, very queer! The great balanced cylinder of the control base was out of line, slanted wrong; it was the wrong shape. The cylinder seemed to stretch away interminably, gleaming all over with reflected glare that hurt his eyes, as if this brightness was full of little sharp burning spears. The pilot's dais had been touched with the same luminous veneer, gave the same illusion of distortion and distention.

"Elegant!" Moran said. His voice rang hollow, but he wanted to hear himself talk. "Very elegant, indeed—I don't think. I wonder if I'm going to be sick."

HE FELT that if he sat still any longer he would be. He got on his feet. His legs wavered like rubber stilts under him. Rubbing the back of his hand across his forehead—his hand came away damp—he glanced

down at him-self; there appeared to be something odd about the shape of his feet, but he couldn't make out exactly what it was.

All at once he was taken about the middle by a hammering nausea; he had hoped to avoid it by standing; no good, evidently. The sensation that shook him was more physical than chemical, he knew that; a mere contraction of his smooth muscles due to shock and nerve tension.

Yet it was odd, very odd. He'd never been sick like this before. An uncon-trollable trembling began in his rubbery legs and shot over his body in vicious recurrent waves. The trembling, the vibration in his legs, the torn soreness of his muscles, had no great significance for him then. Later he was to think strange thoughts.

The first step he took, his left knee gave way, as if the bones had melted. He fell, hitting the floor hard. No sen-sation at all; that was the queerest thing yet. His body must still be numb from its long freezing.

He got up, feeling stronger. He had better luck the second time he tried walking. Looking at the polished floor of the cabin, which was bright as a mirror, he saw that he wobbled like a duck, yet it was locomotion. He won-dered, as he began to take a few steps cautiously, why he wasn't hungry. But how long had it been since they had made the dimensional swing? It might have been a millenium; it might have been only a minute ago.

He didn't think he would want food again for a long while. He felt full and warm inside now, and throbbing with a curious pulse of exultation; he had an unreasoning desire to leap up and touch the "ceiling" of the control room. He actually tried it, but fell back after going upward about five feet, which seemed to prove that the ship's gravity grids were in operation. The ship—was he in the *Star Ship Invin-cible*, or in the control cabin floating free in space? If the cabin had left the ship behind in the Sink Hole, the cabin was now a small ship itself.

He crossed to the visi-plate above the Danler navigation chart. The plate still operated; a faint blue aura surrounded it. He touched a button and the blue became black, the black of outside space. Stars! The plate was speckled all over with perforations of tight. In the dis-tance, receding, he saw a web of dark-ness deeper than infinity; a black hole in the void so dark that it was a purple scar blotting out the stars behind it.

As he stood there, he was conscious of a humming that came through the silence. The automatic switch had jerked along its slot, and the special Donlin engines in the cabin had taken up their beat. He looked down; there was a slight luminescence rising from the gravity grids in the floor plating. Good; the power circuits inside the cabin were unbroken.

There was good air for him to breathe, warm and slightly scented, as it had been before he had gone down into that sea of blackness. It seemed to be all right again everywhere, except for that curious impression his eyes took in every time he stared at anything for very long. There was a scrambling of his vision, so that he briefly thought he could see the air he was breathing, as a white vapor sucked in and out by his lungs. The great glowing panels of the direction board were twisted out of focus, indefinitely extended behind themselves in blurry reflections, as if they were partly shadows and partly real.

Then he saw Hansen, still crumpled on the floor. He took two quick steps, bent down and touched the other. The navigator's skin was so cold all over that it crackled under the tips of Moran's fingers like frozen fire. Moran turned back the other's eyelids with his thumb and looked at the balls; the man's eyes were turned upward in their sockets and showed all whites.

To any evidence the blond giant was dead. Moran slapped him in the face. He didn't move. Not a muscle jerked or quivered. His jaw didn't even take on any greater color. It remained ice cold and very

white—a dazzling ivory pallor. There seemed to be absolutely no blood under the skin of Hansen's cheeks. Moran had seen a man once who had been found frozen in a glacier on Earth, and he had been like that.

Then Moran looked again at Hansen's eyes. The lids had begun to slip shut, as if pulled by springs, but, as Moran watched, Hansen seemed to exert a sav-age effort, and the eyelids stopped just short of covering the under edge of the eyeballs. Then Moran couldn't believe that Hansen was dead.

Moran bent over him a second time. Very carefully, the scientist took a thumb and held the eyelids back, kept the pressure until when at last he let go, Hansen's eyes remained open and fixed. Now Moran was sure there was a gleam somewhere in their dazed depths—a spark, grimly struggling upward, at-tempting to find some way of signaling.

His telepath headgear was still on his body; Moran saw it hanging loose on the belt of his emergency suit. Moran picked up the narrow band of silvery metal and slipped it in a loop around the cold temples. Then he put on his own helmet and concentrated his thoughts in a tight beam of mental energy. Urgently he prodded the inert brain of the limp giant, then waited. If Hansen was con-scious enough to will a single labored thought, contact would be made; Moran's alert intelligence could bring him to awakening.

TAUT, Moran crouched, waiting. Hansen's mind was dark, calm as a placid pool, so far as Moran could probe into it without the other's will aiding him.

Moran roared, in a great soundless bellow: "Come out of it, space man! I command you!"

And Hansen moved. The eyes turned. Moran leaned very close, glaring into that frozen face.

"You've heard! Now obey!"

Creaking, the stiff lips parted, a little puff of breath came out, a faint groan-ing whisper : "Yes, commander." Moran tore off his headgear tri-umphantly, sprang up, ran to the W-generator, got water. A cold spar-king rain fell in Hansen's face.

"Enough!" Hansen grunted in a hoarse voice. "What the hell you trying to do—drown me?"

Moran felt better all over. Now he had some one to command, some one to feel superior over, a man to perform obediently at the urge of his will. He warmed; it wasn't good for him to be alone. Even this fool offered a kind of companionship.

"I couldn't drown you," Moran said, grinning. "You've been dead once, to all intents and purposes. You can't die twice—or can you?"

"So the damned thing worked!" Han-sen exclaimed with awe. "We've swung along the dimension line, and we've got back, shipshape. That's magic!"

"Magic?" Moran shouted, swelling with anger. "Don't be a superstitious fool. That's science!"

"About the same, isn't it?" Hansen asked.

"No; it isn't," Moran growled. "Don't be an ape."

"Have it your way," Hansen agreed submissively.

Moran stared at him, very sober. For some reason the blond man seemed smaller than he had been, his

face was wrinkled and wizened into a dried mask, and his legs were twisted to a queer shape. Moran wondered if he would be able to walk, using those dead legs.

Yet when Moran stared into those strange eyes at close range, he saw a reflection of himself, and he seemed to be the same as the navigator was—turned and shifted in his body, as if the center of his equilibrium had been re-versed. Moran thought, so there have been great changes in us, as in the ma-chines crowding this room. But—how deep did the alterations go? His calm curiosity probed for the answer of that question.

Hansen observed, in a hoarse voice: "Say, you look damned funny! Like you've had the bends, or something. Been space sick?"

"Listen," Moran said harshly. "You don't think we took that joy ride in the grip of dimensional forces and got away clean, do you? Sure, I look funny. So do you. It's one of the—the changes. You'll notice other things that are—damned funny."

"Maybe I talked too fast," Hansen mumbled. "Maybe the converter didn't work after all. Where are we? Where's the Hole?"

"Behind us," Moran stated, calm-voiced. "We're on course, and close to Jupiter. Take a look in the v-plate."

Hansen got up and went over to the little screen. The Sink Hole didn't show there at all now, nor any trace of it. The sky looked calm, and it was black the way it always had been since Hansen had been aspace, but it was the kind of black a man can look at and understand; there were stars in it, dif-ferent colors, and the Sun away off in the distance like a red-hot blinking eye put there to watch over you. Jupiter the giant seemed closer, and Hansen thought with sudden hope that they now had at least an even chance of making the Dome.

Moran crossed the cabin and examined the three cylinders standing against the curved wall. That wall was blank, had no glassite porthole, and most of it was covered with a curled mesh of wire, an intricate network of apparatus, because the three tanks carried all the little ship's supplies of air and water and synthe-food. If something went wrong in any part of that maze—

Hansen watched him as he tested the tanks. He came around on his heel, face impassive.

Hansen said: "Well?"

"Enough there, if we're careful." Hansen expelled his breath gratefully. "We're in luck."

"Luck? No. It was calculated how much supplies we'd need before the ship left Korna. The calculations are a little in error, but very little. And I counted on a marginal deviation."

Hansen said: "Oh, hell!"

Then for an instant the navigator felt that something had gone wrong in his eyes. Yet it wasn't that. The truth was that Moran was getting smaller.

"Chief!" Hansen whispered hesi-tantly.

Moran looked up, eyes tight with an inward struggle. "What?"

Hansen stuttered: "I dunno how to say it. But you—you're kind of shrink-ing."

"Yes; I know."

MORAN kept his cold composure. But his body was terribly changed; he was altogether different from the com-mander who had shipped with Hansen on the *Invincible*. Then he had been a fairly big man, almost as big as the navigator, and strong as stellite; still young, still with the full look of youth and strength in his face. This was a shrunken little old man.

He came close, stood a moment with his face up against Hansen's. He put out a hand to touch the navigator, and the other jerked back, because that out-stretched hand looked like a brown and withered claw. He seemed—he seemed to have caved in upon himself.

Hansen shook; his teeth clicked. "What—what's happening to you, com-mander?"

Moran grinned crookedly. "You'll know soon, I hope. You've been sub-jected to the same forces. The effects should be very much the same on you."

"How—how does it feel?" Hansen whispered. "What's it like?"

"Wait," Moran answered confidently. "Just wait. You'll get a dose of this medicine soon enough, friend."

His face was chopped in little wrin-kled squares by short bitter lines of agony.

"I'll tell you this much," Moran said with a livid smile. "It isn't very pleasant. Not at all."

"Damn you!" Hansen groaned. "You needn't torture me before my time comes. Why are you always throwing little knives into me?"

Moran didn't answer. He was too intent on keeping any sound of pain from escaping through his lips.

## VI.

MORAN tightened his mouth; as he did so, Hansen could see a plainly vis-ible sifting and sinking that seemed to go on simultaneously all through his body, as if the orbits of the atoms that composed his flesh had abruptly been decreased in the diameter of their paths and closed in upon themselves.

"I'm still getting smaller?" Moran said after a few seconds.

Hansen nodded. "Every minute I'm standing here I can see it happening. You don't come quite up to my shoulder now, commander."

He seemed to stand there considering something abstract, looking very quiet and detached. He appeared to have gone away off and was observing him-self as from a reasonable distance. Be-fore then Hansen had hated Moran very heartily, with the deep hatred of an inferior for a superior mind, but something like admiration crept into the navigator now; the commander was so cool and calm, as if he had climbed out of the shell of himself, somehow, and could stand to one side, regarding him-self with no prejudice.

"It'll stop soon, I think," Moran said suddenly. "I've had it once before, right after I woke. Then I didn't realize what was happening to me. I just thought I was getting pretty sick. But now it's plain. All clear."

"You're right," Hansen said, "about one thing at least. It seems to be stop-ping."

In another instant Moran ceased to shrink. The effects remained; his skin hung in loops and folds all over him, and his cold eyes looked too big for his unraveled face. With difficulty he moved, climbed up on the pilot's seat, and sat with his little legs hanging over the edge of the metal-fabric chair.

Hansen couldn't look directly at him. The navigator said: "Well, what's next? What'll happen after this?"

Moran gave a slow shrug. It was queer to see his skin quiver in a ripple along his loose-jointed shoulders.

"That," Moran said, "is what I don't know—yet."

Hansen didn't move. There was silence between them.

Then Moran said: "I know what it's doing to me, and that it will come to you in a little while, but I haven't quite figured out certain things. I haven't found out why it stops once it gets started, and where it will end if it keeps on. Theoretically, I don't suppose there's any limit at all."

Hansen frowned. "You haven't explained a damned thing to me yet."

"Well, the conditions are paradoxical," Moran said thoughtfully. "There's room in this for some beautiful para-doxes. It's plain that the effects you and I have undergone, along with every-thing else in this room, are due to the distortion caused by dimensional change. We weren't built to be in a million places at once, see. That's why we can't hold our old shapes; you know, I'm not sure that I'm actually getting any smaller. It's a change in shape, visible to you and me as a change in size."

"Go slow," Hansen said, heavy-voiced. "I'm stumbling along behind you."

Moran grinned. "Our constituent atoms, friend, have been twisted and shuffled around, and they're having a devil of a time finding their places. They've had the most awful wrench they could have got anywhere in the universe; they've been jammed all to-gether, and then stretched structurally outward, and then set free in their old orbits again. But they're not staying put; that's all. They haven't got to a condition of equilibrium yet. That nice balance between attraction and repulsion, between protons and electrons in the nucleus, and electrons outside the nucleus—that balance is overthrown, re-leasing chaotic forces within the atoms, and naturally the atoms shape the molecules. See?"

"I think so," Hansen muttered. He rubbed a hand across his eyes. "If you're right, and you're always right, time's called for you and me. There's no limit. There's no telling where this thing will stop?"

Moran shook his head. "No. Only there's no guarantee that we'll die, now or later. There was some fault and molecular slippage when I contracted this time. I got out of proportion, at least to my eyes and your eyes. That's the reason my skin's loose and I look so queer. If it comes again it may take up the slack. I don't know."

Hansen blinked. "If it stops, maybe we'll be kinds of dwarfs, or something."

"Yes," Moran said. "But I don't think it's going to stop at any imagin-able point."

MORAN'S eyes gleamed; he was fascinated by that thought. He might sink down slowly into a submicroscopic universe. Or if the change was, as he believed, a relative alteration in shape, he might enter a cosmos of different dimensions, a brand-new world, unex-plored, opening to his avid gaze, his insatiate curiosity. The possibilities were illimitable for experimental opera-tions. The chance was his.

Then Hansen remembered something. "The ship!" The navigator's voice was hoarse with excitement.

Moran said: "What about the ship?" "If we keep on getting smaller, and the ship doesn't shrink—it hasn't so far—how will we eat? What the hell will we drink?"

Moran laughed. "Don't worry about that. Are you hungry now? Fill your belly up, then. If you have time to digest it before your contraction begins, you'll be all right."

"Look," Hansen muttered. "If we're eventually no bigger than a drop of water, we're not going to be able to swallow anything of that size. And food—the atoms will be so big they won't go down our throats. Maybe they'll be bigger than we are."

"I've failed to make it clear to you," Moran said. "That's because it's a paradox. We aren't shrinking; we're changing size. The ship isn't shrinking, because it's made of metal; metal's rigid, the atoms are bound tight to-gether. When we came back from the dimensional swing, the metallic mole-cules fitted together and they've stayed together; but they're not the same. They've changed shape. So have we, only in a different degree."

Hansen didn't say anything, because he couldn't speak. He had begun to diminish in size; at least to Moran's eyes it seemed that he shrank, though Moran's brain accepted it as a relative alteration in shape. An indistinctness seemed to hang about the blond man, like half a shadow. Even the features of his face, which were close to Moran, so close that the commander might have reached and touched them, were vague and blurred.

The contraction ended. Hansen didn't seem mutilated. His body was more in proportion than it had been; his face was tiny, rather wrinkled but perfectly formed; his legs had lost most of their crookedness; his head was set firmly on his neck, his arms and shoul-ders flowed together in a smooth line.

Hansen whispered: "I can't take much of that."

Sweat dribbled from the end of his chin. His eyes swiveled wildly. He said, in a high-pitched voice:

"We thought we were pretty damned smart, didn't we? Nothing was going to happen to us. We were safe. To hell with the Hole, to hell with those twenty-eight people we murdered! We'd get through, because we had that damned thing you called a dimensional converter. It's got us—it's got both of us around the throat."

He sucked in his breath. "Listen, I'm going to finish this. Maybe this damned shrinking will go on even when we're both dead, but we won't know it. We won't know it, see?"

Moran slid one hand down his side to the metal-linked belt at his hips and touched the round butt of his ionic pro-jector.

He said: "All right. You've got your I-gun. Pull it out, and we'll fire to-gether. That will end it for both of us."

"Sure!" Hansen said softly. Moran could see the gleaming in Hansen's belt where his hand projector was, and in his brain the commander had a vision of a bright silver thread, hot and white, spiraling across the nar-row space between them, striking death home to them both.

Hansen dropped his fingers to the grip of his little gun, but he had no chance to lift it from where it swung at his waist. Moran had drawn, thumbed a stud, sent an arrow of flame scorching into the blond man's face.

Hansen swayed backward, bending at the knees; he went over, hitting on his shoulders and head. There was a slight thump, like knuckles striking metal; that was the sole sound, except for the snake-like hissing of Moran's flame-thrower.

Moran tossed the little gun away. "I'm ready," he said softly, looking at the stars. "I'm not going to die."

## VII.

FOR THREE days there had been rain on Jupiter the giant. The rain was scalding hot ; it turned to steam as it fell, burned the ground where it struck. The great bronze Dome of the inter-planetary station felt the touch of that liquid fire; scales were melted off the outer shell of the Dome, metal ran down in molten waves.

The air above and around the Dome was crowded with tortured flying things, the bizarre creatures that inhabited the upper levels of the great planet. There were strange currents going upward through the atmosphere; the laws that governed the magnetic forces of worlds were seemingly broken.

Over the Red Spot was created a re-verse field of gravity. They observed it from the Dome; flying things passing that way were hurled outward at savage speed into the far reaches of the atmosphere. The Red Spot itself remained as always—an enigmatic sea of luminescent flame.

First into the writhing atmosphere above the Red Spot the little ship from space had entered. There was no down pull of Jupiter's immense gravity to increase its terrific speed, but instead was this magnetic repulsion that checked the ship's free fall, wrenched it partly off its course. The controls of the small ship were locked; it traveled along the Walton Arc that had its ending within the interplanetary station.

The little ship fell in a slow bright curve through Jupiter's thick and steamy atmosphere, crumpled its silver shell into the red ground two miles from the Dome.

The electro-telescopes in the station had followed the strange ship in from space. A man came up into the little room at the top of the Dome where John Graham, G-16, sat silently at his key. The man saluted and said in a stiff voice:

"The ship Garth told you a day ago we were to watch for—"

"Yes," Graham said, grim-faced. "I saw it fall."

"You're to take charge of the search party, G-16. The station commander's orders."

Graham nodded. "I obey," he said gently. "I always obey orders."

A day later the rain stopped. Six men ventured out from the Dome, wearing space suits, breathing Earth's atmosphere. John Graham led them. They had taken readings from direction-finders before leaving the station, and they knew about where the ship had fallen. The search was not long.

The little ship was found, almost un-damaged, the curious dull metal of which it was fashioned being neither twisted nor broken; where it had given way it had been forcibly torn apart. It was a strange shape for a space ship. It was like a flying cube, oddly distorted along its angles.

There was a seal in one side of the cube. They broke the seal and Graham went in first. He went in,

stumbling.

There was nobody alive inside. One glance told him that.

FOR A MINUTE he halted there with the blind agony of his unreasoning disappointment mirrored in his eyes; long ago he had believed he had given up hope, yet evidently there had been a spark still left. He shook himself, swinging his hands, and moved for-ward into the ship.

It wasn't a ship at all. It was the control cabin of the *Star ship Invincible*. There was a dead man lying on the floor, the body curiously shrunken.

"Hansen," Graham muttered softly. "Moran?"

No sign of the commander. But in one of the curved seats near the control board he found a spool of metallic tape, and beside it a flash tube for recording messages.

The men from the station had come in quietly behind him and stood staring. One of them asked: "What's that, sir?"

Graham turned and pushed past them, unseeing. He flung back over his shoulder a mutter of words. The man who had spoken glanced around the room.

"He's found some kind of a record. He's going back to the station. We're to stay here with the ship until he gets further orders."

Graham traveled fast to the recording room in the Dome. He sat down, put his eyes to the eyepieces provided, fitted earphones to his head. Then with slow careful hands loosened the clip that held one end of the tape from unraveling; he fed the thin metallic strip into the slot of the translator, touched a dial.

A long time later he reached up slowly and thumbed a stud. The narrow tongue of metal ceased to flow into the trans-lator. He took off the headphones he had been wearing, tore away the eye-pieces. He put his head in his hands and groaned.

Two men had come into the dim room. One was the station commander.

The commander said: "What have you found?"

Graham grinned queerly. "This is the recording made by Captain Moran. It's all there—what happened to the *Invin-cible*. But it's not a very pretty story."

"I see," the commander said. "What have you done about the little ship we saw fall?"

"I'm having it brought into the Dome. Are there any orders you want to give me?"

The commander hesitated. "No; I don't think so. Wait! We've got to make some disposition of the bodies."

"Bodies?"

"The bodies of Hansen and Moran," the commander said impatiently. "Didn't you find them in the ship?"

"There was only one body," Graham answered, grim-faced. "Moran is still alive—somewhere. He's gone into a different dimensional universe, but he's alive. He recorded everything that hap-pened until his

change in size took him beyond contact with the tape he was using. He even recorded his murder of Hansen."

"He murdered Hansen?" the com-mander whispered.

"Hansen and my wife," Graham said, very low. "I'm waiting for further orders, sir."

"No orders," the commander said heavily.

Graham traveled upward to the signal room high on the curve of the Dome. His relief stared.

"You're early, G-16. You've an hour yet."

"Let me take over," Graham said. "Let me take over, will you?"

The other shrugged. "All right with me. You're a fool for work. Why don't you get a little sleep?"

"I don't need much sleep these days," Graham said.

He sat down, closed in once more by sky and stars; he looked at the black, pitiless void that was all around him, and the taste of bitterness was in his mouth.

**In the last 3 months there have been 294 separate re-quests by readers for Astounding Stories to become a twice-a-month magazine. Do you agree? Write your opinion to Brass Tacks and give your reasons. Will you?**