

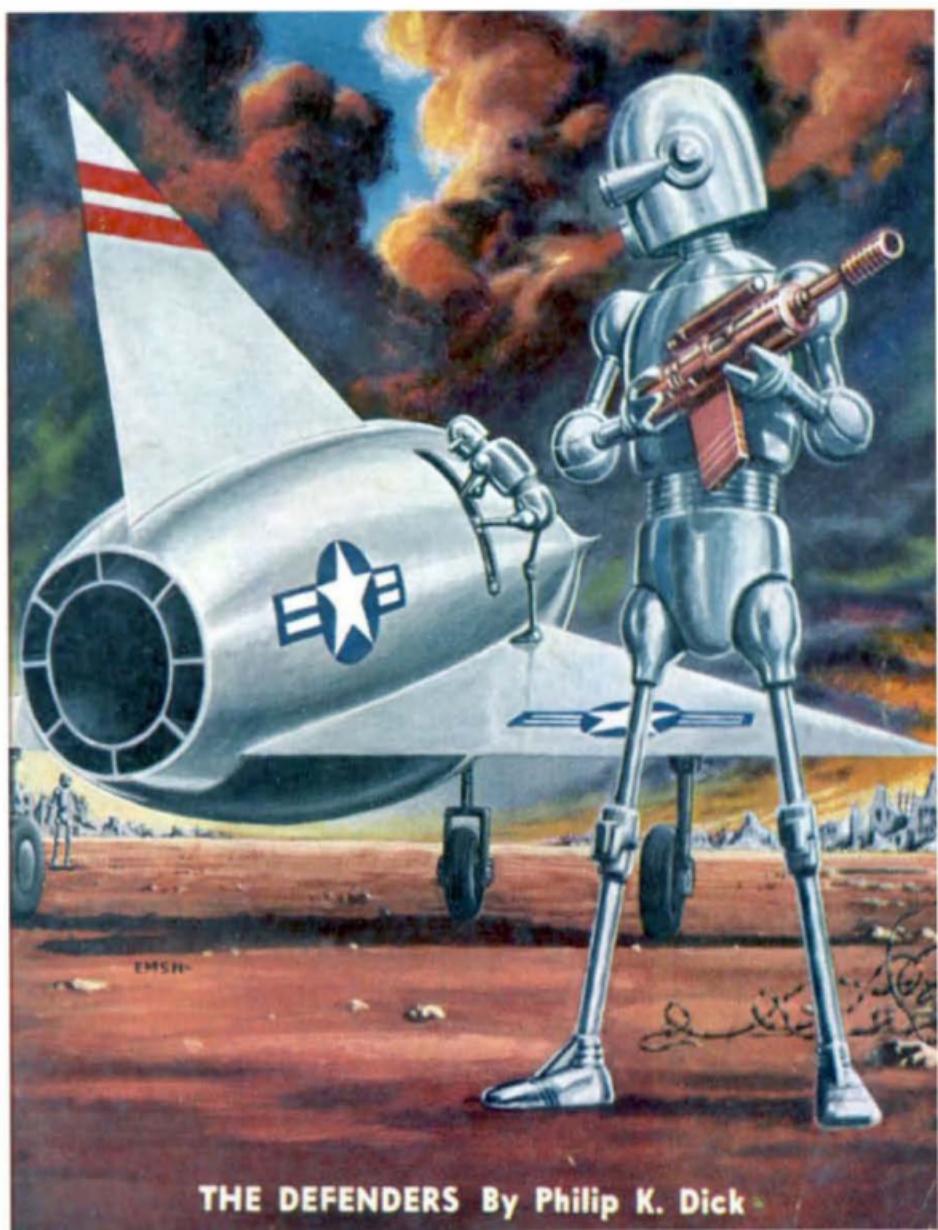
# Galaxy

SCIENCE FICTION

JANUARY 1953

35¢

ANC



THE DEFENDERS By Philip K. Dick

# Galaxy

## SCIENCE FICTION

ALL ORIGINAL STORIES • NO REPRINTS!

### CONTENTS

#### NOVELETS

THE DEFENDERS	by Philip K. Dick	4
THE INHABITED	by Richard Wilson	50

#### SHORT STORIES

TEETHING RING	by James Causey	29
LIFE SENTENCE	by James McConnell	37
PROTT	by Margaret St. Clair	81

#### BOOK-LENGTH SERIAL—Installment 2

RING AROUND THE SUN	by Clifford D. Simak	100
---------------------	----------------------	-----

#### SCIENCE DEPARTMENT

FOR YOUR INFORMATION	by Willy Ley	71
----------------------	--------------	----

#### FEATURES

EDITOR'S PAGE	by H. L. Gold	3
GALAXY'S FIVE STAR SHELF	by Groff Conklin	96

Cover by EMSH Illustrating THE DEFENDERS

ROBERT GUINN, Publisher

H. L. GOLD, Editor

WILLY LEY, Science Editor

EVELYN PAIGE, Assistant Editor

W. I. VAN DER POEL, Art Director

JOAN DE MARIO, Production Manager

*GALAXY Science Fiction* is published monthly by Galaxy Publishing Corporation. Main offices: 121 Hudson Street, New York 14, N. Y. 35c per copy. Subscriptions: (12 copies) \$3.50 per year in the United States, Canada, Mexico, South and Central America and U.S. Possessions. Elsewhere \$4.50. Entered as second-class matter at the Post Office, New York, N. Y. Copyright, 1952, by Galaxy Publishing Corporation. Robert Guinn, president. All rights, including translation, reserved. All material submitted must be accompanied by self-addressed stamped envelopes. The publisher assumes no responsibility for unsolicited material. All stories printed in this magazine are fiction, and any similarity between characters and actual persons is coincidental.

**T**AYLOR sat back in his chair reading the morning newspaper. The warm kitchen and the smell of coffee blended with the comfort of not having to go to work. This was his Rest Period, the first for a long time, and he was glad of it. He folded the second section back, sighing with contentment.

"What is it?" Mary said, from the stove.

"They pasted Moscow again last night." Taylor nodded his head in approval. "Gave it a real pounding. One of those R-H bombs. It's about time."

He nodded again, feeling the full comfort of the kitchen, the presence of his plump, attractive wife, the breakfast dishes and coffee. This was relaxation. And the war news was good, good and satisfying. He could feel a justifiable glow at the news, a sense of pride and personal accomplishment. After all, he was an integral part of the war program, not just another factory worker lugging a cart of scrap, but a technician, one of those who designed and planned the nerve-trunk of the war.

"It says they have the new subs almost perfected. Wait until they get those going." He smacked his lips with anticipation. "When they start shelling from underwater, the Soviets are sure going to be surprised."

# The Defenders

No weapon  
has ever been frightful enough  
to put a stop to war  
—perhaps because  
we never before had any  
that thought  
for themselves!



By PHILIP K. DICK

Illustrated by EMSH



"They're doing a wonderful job," Mary agreed vaguely. "Do you know what we saw today? Our team is getting a leady to show to the school children. I saw the leady, but only for a moment. It's good for the children to see what their contributions are going for, don't you think?"

She looked around at him.

"A leady," Taylor murmured. He put the newspaper slowly down. "Well, make sure it's de-contaminated properly. We don't want to take any chances."

"Oh, they always bathe them when they're brought down from the surface," Mary said. "They wouldn't think of letting them down without the bath. Would they?" She hesitated, thinking back. "Don, you know, it makes me remember—"

He nodded. "I know."

HE knew what she was thinking. Once in the very first weeks of the war, before everyone had been evacuated from the surface, they had seen a hospital train discharging the wounded, people who had been showered with sleet. He remembered the way they had looked, the expression on their faces, or as much of their faces as was left. It had not been a pleasant sight.

There had been a lot of that at first, in the early days before

the transfer to undersurface was complete. There had been a lot, and it hadn't been very difficult to come across it.

Taylor looked up at his wife. She was thinking too much about it, the last few months. They all were.

"Forget it," he said. "It's all in the past. There isn't anybody up there now but the leadys, and they don't mind."

"But just the same, I hope they're careful when they let one of them down here. If one were still hot—"

He laughed, pushing himself away from the table. "Forget it. This is a wonderful moment; I'll be home for the next two shifts. Nothing to do but sit around and take things easy. Maybe we can take in a show. Okay?"

"A show? Do we have to? I don't like to look at all the destruction, the ruins. Sometimes I see some place I remember, like San Francisco. They showed a shot of San Francisco, the bridge broken and fallen in the water, and I got upset. I don't like to watch."

"But don't you want to know what's going on? No human beings are getting hurt, you know."

"But it's so awful!" Her face was set and strained. "Please, no, Don."

Don Taylor picked up his newspaper sullenly. "All right,

but there isn't a hell of a lot else to do. And don't forget, *their* cities are getting it even worse."

She nodded. Taylor turned the rough, thin sheets of newspaper. His good mood had soured on him. Why did she have to fret all the time? They were pretty well off, as things went. You couldn't expect to have everything perfect, living undersurface, with an artificial sun and artificial food. Naturally it was a strain, not seeing the sky or being able to go any place or see anything other than metal walls, great roaring factories, the plant-yards, barracks. But it was better than being on surface. And some day it would end and they could return. Nobody *wanted* to live this way, but it was necessary.

He turned the page angrily and the poor paper ripped. Damn it, the paper was getting worse quality all the time, bad print, yellow tint—

Well, they needed everything for the war program. He ought to know that. Wasn't he one of the planners?

He excused himself and went into the other room. The bed was still unmade. They had better get it in shape before the seventh hour inspection. There was a one unit fine—

The vidphone rang. He halted. Who would it be? He went over and clicked it on.

"Taylor?" the face said, forming into place. It was an old face, gray and grim. "This is Moss. I'm sorry to bother you during Rest Period, but this thing has come up." He rattled papers. "I want you to hurry over here."

Taylor stiffened. "What is it? There's no chance it could wait?" The calm gray eyes were studying him, expressionless, unjudging. "If you want me to come down to the lab," Taylor grumbled, "I suppose I can. I'll get my uniform—"

"No. Come as you are. And not to the lab. Meet me at second stage as soon as possible. It'll take you about a half hour, using the fast car up. I'll see you there."

The picture broke and Moss disappeared.

"**W**HAT was it?" Mary said, at the door.

"Moss. He wants me for something."

"I knew this would happen." "Well, you didn't want to do anything, anyhow. What does it matter?" His voice was bitter. "It's all the same, every day. I'll bring you back something. I'm going up to second stage. Maybe I'll be close enough to the surface to—"

"Don't! Don't bring me anything! Not from the surface!"

"All right, I won't. But of all the irrational nonsense—"

She watched him put on his boots without answering.

**M**OSS nodded and Taylor fell in step with him, as the older man strode along. A series of loads were going up to the surface, blind cars clanking like ore-trucks up the ramp, disappearing through the stage trap above them. Taylor watched the cars, heavy with tubular machinery of some sort, weapons new to him. Workers were everywhere, in the dark gray uniforms of the labor corps, loading, lifting, shouting back and forth. The stage was deafening with noise.

"We'll go up a way," Moss said, "where we can talk. This is no place to give you details."

They took an escalator up. The commercial lift fell behind them, and with it most of the crashing and booming. Soon they emerged on an observation platform, suspended on the side of the Tube, the vast tunnel leading to the surface, not more than half a mile above them now.

"My God!" Taylor said, looking down the Tube involuntarily. "It's a long way down."

Moss laughed. "Don't look."

They opened a door and entered an office. Behind the desk, an officer was sitting, an officer of Internal Security. He looked up.

"I'll be right with you, Moss."

He gazed at Taylor studying him.

"You're a little ahead of time."

"This is Commander Franks," Moss said to Taylor. "He was the first to make the discovery. I was notified last night." He tapped a parcel he carried. "I was let in because of this."

Franks frowned at him and stood up. "We're going up to first stage. We can discuss it there."

"First stage?" Taylor repeated nervously. The three of them went down a side passage to a small lift. "I've never been up there. Is it all right? It's not radioactive, is it?"

"You're like everyone else," Franks said. "Old women afraid of burglars. No radiation leaks down to first stage. There's lead and rock, and what comes down the Tube is bathed."

"What's the nature of the problem?" Taylor asked. "I'd like to know something about it."

"In a moment."

They entered the lift and ascended. When they stepped out, they were in a hall of soldiers, weapons and uniforms everywhere. Taylor blinked in surprise. So this was first stage, the closest undersurface level to the top! After this stage there was only rock, lead and rock, and the great tubes leading up like the burrows of earthworms. Lead and rock, and above that, where

the tubes opened, the great expanse that no living being had seen for eight years, the vast, endless ruin that had once been Man's home, the place where he had lived, eight years ago.

Now the surface was a lethal desert of slag and rolling clouds. Endless clouds drifted back and forth, blotting out the red Sun. Occasionally something metallic stirred, moving through the remains of a city, threading its way across the tortured terrain of the countryside. A leady, a surface robot, immune to radiation, constructed with feverish haste in the last months before the cold war became literally hot.

Leadys, crawling along the ground, moving over the oceans or through the skies in slender, blackened craft, creatures that could exist where no *life* could remain, metal and plastic figures that waged a war Man had conceived, but which he could not fight himself. Human beings had invented war, invented and manufactured the weapons, even invented the players, the fighters, the actors of the war. But they themselves could not venture forth, could not wage it themselves. In all the world—in Russia, in Europe, America, Africa—no living human being remained. They were under the surface, in the deep shelters that had been carefully planned and

built, even as the first bombs began to fall.

It was a brilliant idea and the only idea that could have worked. Up above, on the ruined, blasted surface of what had once been a living planet, the leady crawled and scurried, and fought Man's war. And undersurface, in the depths of the planet, human beings toiled endlessly to produce the weapons to continue the fight, month by month, year by year.

**F**IRST stage," Taylor said. A strange ache went through him. "Almost to the surface."

"But not quite," Moss said.

Franks led them through the soldiers, over to one side, near the lip of the Tube.

"In a few minutes, a lift will bring something down to us from the surface," he explained. "You see, Taylor, every once in a while Security examines and interrogates a surface leady, one that has been above for a time, to find out certain things. A vid-call is sent up and contact is made with a field headquarters. We need this direct interview; we can't depend on vidscreen contact alone. The leadys are doing a good job, but we want to make certain that everything is going the way we want it."

Franks faced Taylor and Moss and continued: "The lift will

bring down a leady from the surface, one of the A-class leadys. There's an examination chamber in the next room, with a lead wall in the center, so the interviewing officers won't be exposed to radiation. We find this easier than bathing the leady. It is going right back up; it has a job to get back to.

"Two days ago, an A-class leady was brought down and interrogated. I conducted the session myself. We were interested in a new weapon the Soviets have been using, an automatic mine that pursues anything that moves. Military had sent instructions up that the mine be observed and reported in detail.

"This A-class leady was brought down with information. We learned a few facts from it, obtained the usual roll of film and reports, and then sent it back up. It was going out of the chamber, back to the lift, when a curious thing happened. At the time, I thought—"

Franks broke off. A red light was flashing.

"That down lift is coming." He nodded to some soldiers. "Let's enter the chamber. The leady will be along in a moment."

"An A-class leady," Taylor said. "I've seen them on the showscreens, making their reports."

"It's quite an experience,"

Moss said. "They're almost human."

THEY entered the chamber and seated themselves behind the lead wall. After a time, a signal was flashed, and Franks made a motion with his hands.

The door beyond the wall opened. Taylor peered through his view slot. He saw something advancing slowly, a slender metallic figure moving on a tread, its arm grips at rest by its sides. The figure halted and scanned the lead wall. It stood, waiting.

"We are interested in learning something," Franks said. "Before I question you, do you have anything to report on surface conditions?"

"No. The war continues." The leady's voice was automatic and toneless. "We are a little short of fast pursuit craft, the single-seat type. We could use also some—"

"That has all been noted. What I want to ask you is this. Our contact with you has been through vidscreen only. We must rely on indirect evidence, since none of us goes above. We can only infer what is going on. We never see anything ourselves. We have to take it all secondhand. Some top leaders are beginning to think there's too much room for error."

"Error?" the leady asked. "In

what way? Our reports are checked carefully before they're sent down. We maintain constant contact with you; everything of value is reported. Any new weapons which the enemy is seen to employ—"

"I realize that," Franks grunted behind his peep slot. "But perhaps we should see it all for ourselves. Is it possible that there might be a large enough radiation-free area for a human party to ascend to the surface? If a few of us were to come up in lead-lined suits, would we be able to survive long enough to observe conditions and watch things?"

The machine hesitated before answering. "I doubt it. You can check air samples, of course, and decide for yourselves. But in the eight years since you left, things have continually worsened. You cannot have any real idea of conditions up there. It has become difficult for any moving object to survive for long. There are many kinds of projectiles sensitive to movement. The new mine not only reacts to motion, but continues to pursue the object indefinitely, until it finally reaches it. And the radiation is everywhere."

"I see." Franks turned to Moss, his eyes narrowed oddly. "Well, that was what I wanted to know. You may go."

The machine moved back to-

ward its exit. It paused. "Each month the amount of lethal particles in the atmosphere increases. The tempo of the war is gradually—"

"I understand." Franks rose. He held out his hand and Moss passed him the package. "One thing before you leave. I want you to examine a new type of metal shield material. I'll pass you a sample with the tong."

Franks put the package in the toothed grip and revolved the tong so that he held the other end. The package swung down to the leady, which took it. They watched it unwrap the package and take the metal plate in its hands. The leady turned the metal over and over.

Suddenly it became rigid.

"All right," Franks said.

He put his shoulder against the wall and a section slid aside. Taylor gasped—Franks and Moss were hurrying up to the leady!

"Good God!" Taylor said. "But it's radioactive!"

THE leady stood unmoving, still holding the metal. Soldiers appeared in the chamber. They surrounded the leady and ran a counter across it carefully.

"Okay, sir," one of them said to Franks. "It's as cold as a long winter evening."

"Good. I was sure, but I didn't want to take any chances."

"You see," Moss said to Taylor, "this leady isn't hot at all. Yet it came directly from the surface, without even being bathed."

"But what does it mean?" Taylor asked blankly.

"It may be an accident," Franks said. "There's always the possibility that a given object might escape being exposed above. But this is the second time it's happened that we know of. There may be others."

"The second time?"

"The previous interview was when we noticed it. The leady was not hot. It was cold, too, like this one."

Moss took back the metal plate from the leady's hands. He pressed the surface carefully and returned it to the stiff, unprotesting fingers.

"We shorted it out with this, so we could get close enough for a thorough check. It'll come back on in a second now. We had better get behind the wall again."

They walked back and the lead wall swung closed behind them. The soldiers left the chamber.

"Two periods from now," Franks said softly, "an initial investigating party will be ready to go surface-side. We're going up the Tube in suits, up to the top—the first human party to leave undersurface in eight years."

"It may mean nothing," Moss said, "but I doubt it. Something's going on, something strange. The leady told us no life could exist above without being roasted. The story doesn't fit."

Taylor nodded. He stared through the peep slot at the immobile metal figure. Already the leady was beginning to stir. It was bent in several places, dented and twisted, and its finish was blackened and charred. It was a leady that had been up there a long time; it had seen war and destruction, ruin so vast that no human being could imagine the extent. It had crawled and slunk in a world of radiation and death, a world where no life could exist.

And Taylor had touched it!

"You're going with us," Franks said suddenly. "I want you along. I think the three of us will go."

**M**ARY faced him with a sick and frightened expression. "I know it. You're going to the surface. Aren't you?"

She followed him into the kitchen. Taylor sat down, looking away from her.

"It's a classified project," he evaded. "I can't tell you anything about it."

"You don't have to tell me. I know. I knew it the moment you came in. There was something on your face, something I haven't seen there for a long, long time."

It was an old look."

She came toward him. "But how can they send you to the surface?" She took his face in her shaking hands, making him look at her. There was a strange hunger in her eyes. "Nobody can live up there. Look, look at this!"

She grabbed up a newspaper and held it in front of him.

"Look at this photograph. America, Europe, Asia, Africa—nothing but ruins. We've seen it every day on the showscreens. All destroyed, poisoned. And they're sending you up. Why? No living thing can get by up there, not even a weed, or grass. They've wrecked the surface, haven't they? *Haven't they?*"

Taylor stood up. "It's an order. I know nothing about it. I was told to report to join a scout party. That's all I know."

He stood for a long time, staring ahead. Slowly, he reached for the newspaper and held it up to the light.

"It looks real," he murmured. "Ruins, deadness, slag. It's convincing. All the reports, photographs, films, even air samples. Yet we haven't seen it for ourselves, not after the first months . . ."

"What are you talking about?"

"Nothing." He put the paper down. "I'm leaving early after the next Sleep Period. Let's turn in."

Mary turned away, her face hard and harsh. "Do what you want. We might just as well all go up and get killed at once, instead of dying slowly down here, like vermin in the ground."

He had not realized how resentful she was. Were they all like that? How about the workers toiling in the factories, day and night, endlessly? The pale, stooped men and women, plodding back and forth to work, blinking in the colorless light, eating synthetics—

"You shouldn't be so bitter," he said.

Mary smiled a little. "I'm bitter because I know you'll never come back." She turned away. "I'll never see you again. Once you go up there."

He was shocked. "What? How can you say a thing like that?"

She did not answer.

**H**E awakened with the public newscaster screeching in his ears, shouting outside the building.

"Special news bulletin! Surface forces report enormous Soviets attack with new weapons! Retreat of key groups! All work units report to factories at once!"

Taylor blinked, rubbing his eyes. He jumped out of bed and hurried to the vidphone. A moment later he was put through to Moss.

"Listen," he said. "What about this new attack? Is the project off?" He could see Moss's desk, covered with reports and papers.

"No," Moss said. "We're going right ahead. Get over here at once."

"But—"

"Don't argue with me." Moss held up a handful of surface bulletins, crumpling them savagely. "This is a fake. Come on!" He broke off.

Taylor dressed furiously, his mind in a daze.

Half an hour later, he leaped from a fast car and hurried up the stairs into the Synthetics Building. The corridors were full of men and women rushing in every direction. He entered Moss's office.

"There you are," Moss said, getting up immediately. "Franks is waiting for us at the outgoing station."

They went in a Security Car, the siren screaming. Workers scattered out of their way.

"What about the attack?" Taylor asked.

Moss braced his shoulders. "We're certain that we've forced their hand. We've brought the issue to a head."

They pulled up at the station link of the Tube and leaped out. A moment later they were moving up at high speed toward the first stage.

They emerged into a bewildering scene of activity. Soldiers were fastening on lead suits, talking excitedly to each other, shouting back and forth. Guns were being given out, instructions passed.

Taylor studied one of the soldiers. He was armed with the dreaded Bender pistol, the new snub-nosed hand weapon that was just beginning to come from the assembly line. Some of the soldiers looked a little frightened.

"I hope we're not making a mistake," Moss said, noticing his gaze.

Franks came toward them. "Here's the program. The three of us are going up first, alone. The soldiers will follow in fifteen minutes."

"What are we going to tell the leadys?" Taylor worriedly asked. "We'll have to tell them something."

"We want to observe the new Soviet attack." Franks smiled ironically. "Since it seems to be so serious, we should be there in person to witness it."

"And then what?" Taylor said. "That'll be up to them. Let's go."

**I**N a small car, they went swiftly up the Tube, carried by anti-grav beams from below. Taylor glanced down from time to time. It was a long way back,

and getting longer each moment. He sweated nervously inside his suit, gripping his Bender pistol with inexpert fingers.

Why had they chosen him? Chance, pure chance. Moss had asked him to come along as a Department member. Then Franks had picked him out on the spur of the moment. And now they were rushing toward the surface, faster and faster.

A deep fear, instilled in him for eight years, throbbed in his mind. Radiation, certain death, a world blasted and lethal—

Up and up the car went. Taylor gripped the sides and closed his eyes. Each moment they were closer, the first living creatures to go above the first stage, up the Tube past the lead and rock, up to the surface. The phobic horror shook him in waves. It was death; they all knew that. Hadn't they seen it in the films a thousand times? The cities, the sleet coming down, the rolling clouds—

"It won't be much longer," Franks said. "We're almost there. The surface tower is not expecting us. I gave orders that no signal was to be sent."

The car shot up, rushing furiously. Taylor's head spun; he hung on, his eyes shut. Up and up. . . .

The car stopped. He opened his eyes.

They were in a vast room, fluorescent-lit, a cavern filled with equipment and machinery, endless mounds of material piled in row after row. Among the stacks, leadys were working silently, pushing trucks and handcarts.

"Leadys," Moss said. His face was pale. "Then we're really on the surface."

The leadys were going back and forth with equipment moving the vast stores of guns and spare parts, ammunition and supplies that had been brought to the surface. And this was the receiving station for only one Tube; there were many others, scattered throughout the continent.

Taylor looked nervously around him. They were really there, above ground, on the surface. This was where the war was.

"Come on," Franks said. "A B-class guard is coming our way."

THEY stepped out of the car. A ready was approaching them rapidly. It coasted up in front of them and stopped scanning them with its hand-weapon raised.

"This is Security," Franks said. "Have an A-class sent to me at once."

The ready hesitated. Other B-class guards were coming, scooting across the floor, alert and

alarmed. Moss peered around.

"Obey!" Franks said in a loud, commanding voice. "You've been ordered!"

The leadys moved uncertainly away from them. At the end of the building, a door slid back. Two Class-A leadys appeared, coming slowly toward them. Each had a green stripe across its front.

"From the Surface Council," Franks whispered tensely. "This is above ground, all right. Get set."

The two leadys approached warily. Without speaking, they stopped close by the men, looking them up and down.

"I'm Franks of Security. We came from undersurface in order to—"

"This is incredible," one leady interrupted him coldly. "You know you can't live up here. The whole surface is lethal to you. You can't possibly remain on the surface."

"These suits will protect us," Franks said. "In any case, it's not your responsibility. What I want is an immediate Council meeting so I can acquaint myself with conditions, with the situation here. Can that be arranged?"

"You human beings can't survive up here. And the new Soviet attack is directed at this area. It is in considerable danger."

"We know that. Please assem-

ble the Council." Franks looked around him at the vast room, lit by recessed lamps in the ceiling. An uncertain quality came into his voice. "Is it night or day right now?"

"Night," one of the A-class leadys said, after a pause. "Dawn is coming in about two hours."

Franks nodded. "We'll remain at least two hours, then. As a concession to our sentimentality, would you please show us some place where we can observe the Sun as it comes up? We would appreciate it."

A stir went through the leadys.

"It is an unpleasant sight," one of the leadys said. "You've seen the photographs; you know what you'll witness. Clouds of drifting particles blot out the light, slag heaps are everywhere, the whole land is destroyed. For you it will be a staggering sight, much worse than pictures and film can convey."

"However it may be, we'll stay long enough to see it. Will you give the order to the Council?"

"COME this way." Reluctantly, the two leadys coasted toward the wall of the warehouse. The three men trudged after them, their heavy shoes ringing against the concrete. At the wall, the two leadys paused.

"This is the entrance to the Council Chamber. There are

windows in the Chamber Room, but it is still dark outside, of course. You'll see nothing right now, but in two hours—"

"Open the door," Franks said.

The door slid back. They went slowly inside. The room was small, a neat room with a round table in the center, chairs ringing it. The three of them sat down silently, and the two leadys followed after them, taking their places.

"The other Council Members are on their way. They have already been notified and are coming as quickly as they can. Again I urge you to go back down." The leady surveyed the three human beings. "There is no way you can meet the conditions up here. Even we survive with some trouble, ourselves. How can you expect to do it?"

The leader approached Franks.

"This astonishes and perplexes us," it said. "Of course we must do what you tell us, but allow me to point out that if you remain here—"

"We know," Franks said impatiently. "However, we intend to remain, at least until sunrise."

"If you insist."

There was silence. The leadys seemed to be conferring with each other, although the three men heard no sound.

"For your own good," the leader said at last, "you must go back

down. We have discussed this, and it seems to us that you are doing the wrong thing for your own good."

"We are human beings," Franks said sharply. "Don't you understand? We're men, not machines."

"That is precisely why you must go back. This room is radioactive; all surface areas are. We calculate that your suits will not protect you for over fifty more minutes. Therefore—"

The leadys moved abruptly toward the men, wheeling in a circle, forming a solid row. The men stood up, Taylor reaching awkwardly for his weapon, his fingers numb and stupid. The men stood facing the silent metal figures.

"We must insist," the leader said, its voice without emotion. "We must take you back to the Tube and send you down on the next car. I am sorry, but it is necessary."

"What'll we do?" Moss said nervously to Franks. He touched his gun. "Shall we blast them?"

Franks shook his head. "All right," he said to the leader. "We'll go back."

HE moved toward the door, motioning Taylor and Moss to follow him. They looked at him in surprise, but they came with him. The leadys followed them out into the great warehouse. Slowly they moved toward



the Tube entrance, none of them speaking.

At the lip, Franks turned. "We are going back because we have no choice. There are three of us and about a dozen of you. However, if—"

"Here comes the car," Taylor said.

There was a grating sound from the Tube. D-class leadys moved toward the edge to receive it.

"I am sorry," the leader said.

"but it is for your protection. We are watching over you, literally. You must stay below and let us conduct the war. In a sense, it has come to be our war. We must fight it as we see fit."

The car rose to the surface.

Twelve soldiers, armed with Bender pistols, stepped from it and surrounded the three men.

Moss breathed a sigh of relief. "Well, this does change things. It came off just right."

The leader moved back, away



this was all carefully prepared."

"Very carefully," Franks said. They closed in.

"How much more, we can only guess. I must admit that we were taken unprepared. We failed utterly to meet the situation. Now force would be absurd, because neither side can afford to injure the other; we, because of the restrictions placed on us regarding human life, you because the war demands—"

The soldiers fired, quick and in fright. Moss dropped to one knee, firing up. The leader dissolved in a cloud of particles. On all sides D- and B-class leadys were rushing up, some with weapons, some with metal slats. The room was in confusion. Off in the distance a siren was screaming. Franks and Taylor were cut off from the others, separated from the soldiers by a wall of metal bodies.

"They can't fire back," Franks said calmly. "This is another bluff. They've tried to bluff us all the way." He fired into the face of a ready. The ready dissolved. "They can only try to frighten us. Remember that."

from the soldiers. It studied them intently, glancing from one to the next, apparently trying to make up its mind. At last it made a sign to the other leadys. They coasted aside and a corridor was opened up toward the warehouse."

"Even now," the leader said, "we could send you back by force. But it is evident that this is not really an observation party at all. These soldiers show that you have much more in mind;

THEY went on firing and ready after ready vanished. The room reeked with the smell of burning metal, the stink of fused plastic and steel. Taylor had been knocked down. He was struggling

to find his gun, reaching wildly among metal legs, groping frantically to find it. His fingers strained, a handle swam in front of him. Suddenly something came down on his arm, a metal foot. He cried out.

Then it was over. The leadys were moving away, gathering together off to one side. Only four of the Surface Council remained. The others were radioactive particles in the air. D-class leadys were already restoring order, gathering up partly destroyed metal figures and bits and removing them.

Franks breathed a shuddering sigh.

"All right," he said. "You can take us back to the windows. It won't be long now."

The leadys separated, and the human group, Moss and Franks and Taylor and the soldiers, walked slowly across the room, toward the door. They entered the Council Chamber. Already a faint touch of gray mitigated the blackness of the windows.

"Take us outside," Franks said impatiently. "We'll see it directly, not in here."

A door slid open. A chill blast of cold morning air rushed in, chilling them even through their lead suits. The men glanced at each other uneasily.

"Come on," Franks said. "Outside."

He walked out through the door, the others following him.

They were on a hill, overlooking the vast bowl of a valley. Dimly, against the graying sky, the outline of mountains were forming, becoming tangible.

"It'll be bright enough to see in a few minutes," Moss said. He shuddered as a chilling wind caught him and moved around him. "It's worth it, really worth it, to see this again after eight years. Even if it's the last thing we see—"

"Watch," Franks snapped.

They obeyed, silent and subdued. The sky was clearing, brightening each moment. Some place far off, echoing across the valley, a rooster crowed.

"A chicken!" Taylor murmured. "Did you hear?"

Behind them, the leadys had come out and were standing silently, watching, too. The gray sky turned to white and the hills appeared more clearly. Light spread across the valley floor, moving toward them.

"God in heaven!" Franks exclaimed.

Trees, trees and forests. A valley of plants and trees, with a few roads winding among them. Farmhouses. A windmill. A barn, far down below them.

"Look!" Moss whispered.

Color came into the sky. The Sun was approaching. Birds be-

gan to sing. Not far from where they stood, the leaves of a tree danced in the wind.

Franks turned to the row of leadys behind them.

"Eight years. We were tricked. There was no war. As soon as we left the surface—"

"Yes," an A-class leady admitted. "As soon as you left, the war ceased. You're right, it was a hoax. You worked hard under-surface, sending up guns and weapons, and we destroyed them as fast as they came up."

"But why?" Taylor asked, dazed. He stared down at the vast valley below. "Why?"

"YOU created us," the leady said, "to pursue the war for you, while you human beings went below the ground in order to survive. But before we could continue the war, it was necessary to analyze it to determine what its purpose was. We did this, and we found that it had no purpose, except, perhaps, in terms of human needs. Even this was questionable.

"We investigated further. We found that human cultures pass through phases, each culture in its own time. As the culture ages and begins to lose its objectives, conflict arises within it between those who wish to cast it off and set up a new culture-pattern, and those who wish to retain the

old with as little change as possible."

"At this point, a great danger appears. The conflict within threatens to engulf the society in self-war, group against group. The vital traditions may be lost—not merely altered or reformed, but completely destroyed in this period of chaos and anarchy. We have found many such examples in the history of mankind."

"It is necessary for this hatred within the culture to be directed outward, toward an external group, so that the culture itself may survive its crisis. War is the result. War, to a logical mind, is absurd. But in terms of human needs, it plays a vital role. And it will continue to until Man has grown up enough so that no hatred lies within him."

Taylor was listening intently. "Do you think this time will come?"

"Of course. It has almost arrived now. This is the last war. Man is almost united into one final culture—a world culture. At this point he stands continent against continent, one half of the world against the other half. Only a single step remains, the jump to a unified culture. Man has climbed slowly upward, tending always toward unification of his culture. It will not be long—

"But it has not come yet, and so the war had to go on, to satis-

fy the last violent surge of hatred that Man felt. Eight years have passed since the war began. In these eight years, we have observed and noted important changes going on in the minds of men. Fatigue and disinterest, we have seen, are gradually taking the place of hatred and fear. The hatred is being exhausted gradually, over a period of time. But for the present, the hoax must go on, at least for a while longer. You are not ready to learn the truth. You would want to continue the war."

"But how did you manage it?" Moss asked. "All the photographs, the samples, the damaged equipment—"

"Come over here." The leady directed them toward a long, low building. "Work goes on constantly, whole staffs laboring to maintain a coherent and convincing picture of a global war."

THEY entered the building. Leadys were working everywhere, poring over tables and desks.

"Examine this project here." the A-class leady said. Two leadys were carefully photographing something, an elaborate model on a table top. "It is a good example."

The men grouped around, trying to see. It was a model of a ruined city.

Taylor studied it in silence for a long time. At last he looked up. "It's San Francisco," he said in a low voice. "This is a model of San Francisco, destroyed. I saw this on the vidscreen, piped down to us. The bridges were hit—"

"Yes, notice the bridges." The leady traced the ruined span with his metal finger, a tiny spider-web, almost invisible. "You have no doubt seen photographs of this many times, and of the other tables in this building.

"San Francisco itself is completely intact. We restored it soon after you left, rebuilding the parts that had been damaged at the start of the war. The work of manufacturing news goes on all the time in this particular building. We are very careful to see that each part fits in with all the other parts. Much time and effort are devoted to it."

Franks touched one of the tiny model buildings, lying half in ruins. "So this is what you spend your time doing—making model cities and then blasting them."

"No, we do much more. We are caretakers, watching over the whole world. The owners have left for a time, and we must see that the cities are kept clean, that decay is prevented, that everything is kept oiled and in running condition. The gardens, the streets, the water mains, everything must be maintained as it

was eight years ago, so that when the owners return, they will not be displeased. We want to be sure that they will be completely satisfied."

Franks tapped Moss on the arm.

"Come over here," he said in a low voice. "I want to talk to you."

He led Moss and Taylor out of the building, away from the leadys, outside on the hillside. The soldiers followed them. The Sun was up and the sky was turning blue. The air smelled sweet and good, the smell of growing things.

Taylor removed his helmet and took a deep breath.

"I haven't smelled that smell for a long time," he said.

"Listen," Franks said, his voice low and hard. "We must get back down at once. There's a lot to get started on. All this can be turned to our advantage."

"What do you mean?" Moss asked.

"It's a certainty that the Soviets have been tricked, too, the same as us. But we have found out. That gives us an edge over them."

"I see." Moss nodded. "We know, but they don't. Their Surface Council has sold out, the same as ours. It works against them the same way. But if we could—"

"With a hundred top-level

men, we could take over again, restore things as they should be! It would be easy!"

**M**OSS touched him on the arm. An A-class leady was coming from the building toward them.

"We've seen enough," Franks said, raising his voice. "All this is very serious. It must be reported below and a study made to determine our policy."

The leady said nothing.

Franks waved to the soldiers. "Let's go." He started toward the warehouse.

Most of the soldiers had removed their helmets. Some of them had taken their lead suits off, too, and were relaxing comfortably in their cotton uniforms. They stared around them, down the hillside at the trees and bushes, the vast expanse of green, the mountains and the sky.

"Look at the Sun," one of them murmured.

"It sure is bright as hell," another said.

"We're going back down," Franks said. "Fall in by twos and follow us."

Reluctantly, the soldiers regrouped. The leadys watched without emotion as the men marched slowly back toward the warehouse. Franks and Moss and Taylor led them across the ground, glancing alertly at the

leadys as they walked.

They entered the warehouse. D-class leadys were loading material and weapons on surface carts. Cranes and derricks were working busily everywhere. The work was done with efficiency, but without hurry or excitement.

The men stopped, watching. Leadys operating the little carts moved past them, signaling silently to each other. Guns and parts were being hoisted by magnetic cranes and lowered gently onto waiting carts.

"Come on," Franks said.

He turned toward the lip of the Tube. A row of D-class leadys was standing in front of it, immobile and silent. Franks stopped, moving back. He looked around. An A-class ready was coming toward him.

"Tell them to get out of the way," Franks said. He touched his gun. "You had better move them."

Time passed, an endless moment, without measure. The men stood, nervous and alert, watching the row of leadys in front of them.

"As you wish," the A-class ready said.

It signaled and the D-class leadys moved into life. They stepped slowly aside.

Moss breathed a sigh of relief.

"I'm glad that's over," he said to Franks. "Look at them all.

Why don't they try to stop us? They must know what we're going to do."

Franks laughed. "Stop us? You saw what happened when they tried to stop us before. They can't; they're only machines. We built them so they can't lay hands on us, and they know that."

His voice trailed off.

The men stared at the Tube entrance. Around them the leadys watched, silent and impassive, their metal faces expressionless.

For a long time the men stood without moving. At last Taylor turned away.

"Good God," he said. He was numb, without feeling of any kind.

The Tube was gone. It was sealed shut, fused over. Only a dull surface of cooling metal greeted them.

The Tube had been closed.

**F**RANKS turned, his face pale and vacant.

The A-class ready shifted. "As you can see, the Tube has been shut. We were prepared for this. As soon as all of you were on the surface, the order was given. If you had gone back when we asked you, you would now be safely down below. We had to work quickly because it was such an immense operation."

"But why?" Moss demanded angrily.

"Because it is unthinkable that you should be allowed to resume the war. With all the Tubes sealed, it will be many months before forces from below can reach the surface, let alone organize a military program. By that time the cycle will have entered its last stages. You will not be so perturbed to find your world intact.

"We had hoped that you would be undersurface when the sealing occurred. Your presence here is a nuisance. When the Soviets broke through, we were able to accomplish their sealing without—"

"The Soviets? They broke through?"

"Several months ago, they came up unexpectedly to see why the war had not been won. We were forced to act with speed. At this moment they are desperately attempting to cut new Tubes to the surface, to resume the war. We have, however, been able to seal each new one as it appears."

The leady regarded the three men calmly.

"We're cut off," Moss said, trembling. "We can't get back. What'll we do?"

"How did you manage to seal the Tube so quickly?" Franks asked the leady. "We've been up here only two hours."

"Bombs are placed just above the first stage of each Tube for such emergencies. They are heat bombs. They fuse lead and rock."

Gripping the handle of his gun, Franks turned to Moss and Taylor.

"What do you say? We can't go back, but we can do a lot of damage, the fifteen of us. We have Bender guns. How about it?"

He looked around. The soldiers had wandered away again, back toward the exit of the building. They were standing outside, looking at the valley and the sky. A few of them were carefully climbing down the slope.

"Would you care to turn over your suits and guns?" the A-class leady asked politely. "The suits are uncomfortable and you'll have no need for weapons. The Russians have given up theirs, as you can see."

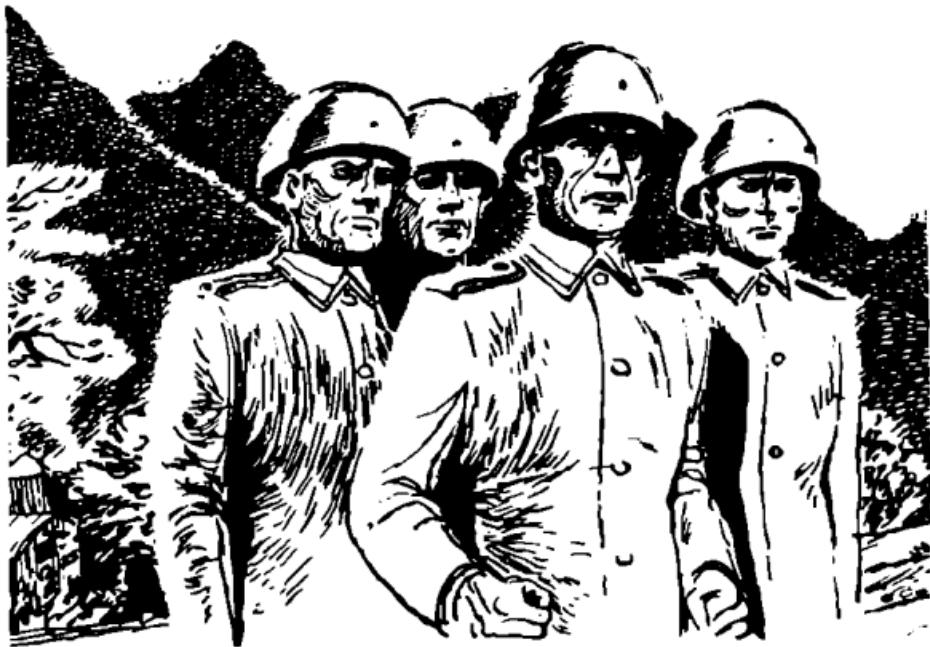
Fingers tensed on triggers. Four men in Russian uniforms were coming toward them from an aircraft that they suddenly realized had landed silently some distance away.

"Let them have it!" Franks shouted.

"They are unarmed," said the leady. "We brought them here so you could begin peace talks."

"We have no authority to speak for our country," Moss said stiffly.

"We do not mean diplomatic discussions," the leady explained. "There will be no more. The working out of daily problems of



existence will teach you how to get along in the same world. It will not be easy, but it will be done."

**T**HE Russians halted and they faced each other with raw hostility.

"I am Colonel Borodoy and I regret giving up our guns," the senior Russian said. "You could have been the first Americans to be killed in almost eight years."

"Or the first Americans to kill," Franks corrected.

"No one would know of it except yourselves," the leady pointed out. "It would be useless

heroism. Your real concern should be surviving on the surface. We have no food for you, you know."

Taylor put his gun in its holster. "They've done a neat job of neutralizing us, damn them. I propose we move into a city, start raising crops with the help of some leadys, and generally make ourselves comfortable." Drawing his lips tight over his teeth, he glared at the A-class leady. "Until our families can come up from undersurface, it's going to be pretty lonesome, but we'll have to manage."

"If I may make a suggestion,"



said another Russian uneasily. "We tried living in a city. It is too empty. It is also too hard to maintain for so few people. We finally settled in the most modern village we could find."

"Here in this country," a third Russian blurted. "We have much to learn from you."

The Americans abruptly found themselves laughing.

"You probably have a thing or two to teach us yourselves," said Taylor generously, "though I can't imagine what."

The Russian colonel grinned. "Would you join us in our village? It would make our work

easier and give us company."

"Your village?" snapped Franks. "It's American, isn't it? It's ours!"

The leady stepped between them. "When our plans are completed, the term will be interchangeable. 'Ours' will eventually mean mankind's." It pointed at the aircraft, which was warming up. "The ship is waiting. Will you join each other in making a new home?"

The Russians waited while the Americans made up their minds.

"I see what the leadys mean about diplomacy becoming outmoded," Franks said at last. "People who work together don't need diplomats. They solve their problems on the operational level instead of at a conference table."

The leady led them toward the ship. "It is the goal of history, unifying the world. From family to tribe to city-state to nation to hemisphere, the direction has been toward unification. Now the hemispheres will be joined and—"

Taylor stopped listening and glanced back at the location of the Tube. Mary was undersurface there. He hated to leave her, even though he couldn't see her again until the Tube was unseal-

ed. But then he shrugged and followed the others.

If this tiny amalgam of former enemies was a good example, it wouldn't be too long before he and Mary and the rest of humanity would be living on the surface like rational human beings instead of blindly hating moles.

"It has taken thousands of generations to achieve," the A-class leady concluded. "Hundreds of centuries of bloodshed and destruction. But each war was a step toward uniting mankind. And now the end is in sight: a world without war. But even that is only the beginning of a new stage of history."

"The conquest of space," breathed Colonel Borodoy.

"The meaning of life," Moss added.

"Eliminating hunger and poverty," said Taylor.

The leady opened the door of the ship. "All that and more. How much more? We cannot foresee it any more than the first men who formed a tribe could foresee this day. But it will be unimaginably great."

The door closed and the ship took off toward their new home.

—PHILIP K. DICK