The FIVE GOLD BANDS A Novel of the Spaceways By JACK VANCE A THRILLING PUBLICATION

RDON MY IRON NERVES

aptain Future Novelet by EDMOND HAMILTON

Pardon My Iron Nerves

A Captain Future Novelet By Edmond HAMILTON

If you think Grag's an insensitive robot, read his own account of getting psychoanalysed and repairing to Pluto's Fourth Moon!

CHAPTER I

Metal Man

DIDN'T want to do it. I, Grag, am not given to talking about myself. When Curt Newton suggested that I write up this particular adventure for the case-book in which he records our doings I refused at first.

I said, "No, Curt, I'd rather not. You know I'm not one to brag about my own exploits."

"I know that," he said. "But since it was you who where chiefly concerned in this business with the Machs, and since you're the only one who knows all the details you should write the report on it."

Well, I had to agree. After all, Curt—Captain Future—depends on me more than on any of the other Futuremen. It's because we think alike, I guess.

Of course Simon Wright was human himself once—long ago before his brain was transferred into the artificial serumcase that is now his "body". But there's something a little remote about Simon even to Curt.

As for Otho, the other Futureman—well, being an android or artificial man, Otho *looks* human. But that's as far as it goes. Otho just doesn't *think* the way we do.

I'll admit that I, Grag, don't look so much like other people. I'm a metal man, seven feet high. Otho calls me a robot but that's ridiculous—he merely does it because he's jealous of me.

I've always been sorry for Otho. For his limitations aren't his own fault.

You see, neither Otho nor I was born. We were *made*, created by science of Roger Newton, Curt's father, and of Simon.

In their hidden laboratory on the Moon—the same Moon-Laboratory that we Futuremen now call home—they used their scientific skill to create living beings.

I, Grag, was their first and supreme creation. They made me of enduring metal, powered by atomic generators that give my metal limbs immense strength. I am stronger than twenty men together. My photo-electric eyes can see better and my audio-circuit ears can hear better.

And my metal brain is just as superior in its own way. It contains millions of electronic synaptic circuits. That's why I can think and act so swiftly.

I can still remember the look of awe on the faces of my creators when they observed the quickness with which I learned.

I remember overhearing Roger Newton tell Simon, "Grag is a great creation in his way. But we'll try a different form, next time"

Simon agreed. "We don't want to create another one like *him*!"

BVIOUSLY they were a bit frightened by the awesome intelligence and power they had created in me! Naturally they felt that a few more like me would make all other living creatures obsolete!

That is why, when they created a second artificial being, they ran no danger of

creating another super-being like myself but instead chose the android form for Otho because they wanted to make sure he would have only a limited intelligence.

When Roger Newton and his young wife died so tragically it was we Futuremen—Simon and Otho and I—who took care of little Curtis and reared him to mankind.

I have to admit that I taught Curt most of what he learned. Otho was too feather-headed to teach anyone and Simon too severe and impatient. Of course they wouldn't let me spank Curtis, for my metal hand would have crushed him. But I was his chief tutor and guide.

And when Curt grew up and started roving, winning the nickname of Captain Future, he naturally leaned more on me than on the others. Many a time my resourcefulness saved the day when his recklessness had got us into trouble. In fact I've seldom let him go anywhere without me.

But on the particular day when this business of the Machs really started I was on my own.

We had come to Earth so that Curt might consult a certain bureau of the Solar System Government. That gave me a chance I'd been waiting for and I took it.

I said, "I'd like to go into New York while you're holding your conference here at Government Center, Curt."

He stared at me. "Whatever for, Grag?" "He probably wants to get his rivets tightened," put in Otho.

That's Otho's way of showing his petty jealousy of me—always playing upon the fact that I'm made of metal. I simply ignored him with calm dignity, as I always do.

"Just a little private business," I told Curt. "I won't be long."

He said, "Well, you'll startle the people a little but everyone knows about Grag the Futureman so I guess they won't be too surprised. Go ahead, but be back by ten for we're going back to the Moon then."

I left them and went to the tubeway station. It was a rush-hour and the tubecars were crowded.

I created a mild sensation in the station. Naturally, everyone had heard of me and of the things I had done, with the help of Curt and the others. I heard them whispering my name in the train.

However I was too engrossed in my own thoughts to pay attention to them. The errand upon which I was going was a serious one.

I hadn't told Curt about it lest he worry. But the fact is that I was concerned about my health.



Of course Otho would have laughed and sneered, "How can a metal man seven feet high get sick?"

But it wasn't bodily sickness that worried me. My problem was a psychological one.

I've always had a delicate, sensitive kind of mind. I guess it's because my metal brain is just too brilliant. And lately I'd been worrying a little about it.

It began when I happened to see a televisor-play about a man losing his mind. It showed how he neglected his complexes until finally he went crazy.

"This could happen to you!" the announcer had said. "Tune in next week for another thrilling psychological drama, presented by the Sunshine Company on their Happiness Hour!"

His words struck me. "This could happen to *you!*" I began to think. I had had a feeling of depression lately—I was sure of it. Probably I had complexes from

overworking my brain too much. The more I thought about it the more I felt I'd better see a specialist before I ended up the same way.

I had already looked up the address of an eminent psychoanalyst and I got off at the right station and walked to his office.

New York was used to strangers— Martians, Venusians and what-not from all the planets. But they turned to look at me. I paid no attention to their staring but strode majestically on.

In Doctor Perker's office there was a pretty girl receptionist and a half-dozen people sitting waiting.

The receptionist didn't at first look up from her writing as she asked, "Do you wish to—"

She looked up, then, and her jaw fell and she gulped. I had forgotten that to anyone unused to me the sudden entrance of a colossal metal man would be a little upsetting.

I turned my photo-electric eyes reassuringly upon her and told her, "Yes, I want to see Doctor Perker as soon as I can. My name is Grag."

She shrank away a little. "Do you mind repeating the name?"

I did and she said shakily, "If you could come back next week?"

"No, I'll wait," I said.

I went over to a corner and stood there, feeling a little depressed and worried about the coming interview.

The people who had been waiting to see the psychoanalyst were all staring at me. They certainly didn't look well—they were all pale and trembling and when I swivelled my head around to look at them one of them uttered a cry and the others jumped.

One by one they got up and slunk out of the office. Presently a patient came from the inner office. He looked at me and then he too went hastily out.

"Doctor Perker will see you now, Mr. Grag," the girl murmured.

I stalked into the inner office. Doctor Perker was a wispy little man, polishing his spectacles when I entered.

"Well, Mr. Grag, what's the trouble?" he said cheerfully, staring at me myopically as he polished. "You're a mighty husky young fellow to be seeing a doctor. You look like a football player."

"No, I never played football but once," I told him. "It was on Mars. They put me out of the game, because I knocked down the goal-posts."

DOCTOR PERKER hastily laid down his glasses and fumbled at the hearing-aid he wore. "Blasted thing amplifies too loud now and then!"

He reached for his glasses. "Now you were saying Mr. Grag?"

"It's my subconscious," I told him. "I think I've got complexes."

He put his spectacles on and stared at me. He gulped and then he said, "Huh?"

"Complexes. I get fits of depression. I'm afraid of what they'll lead to. A person has to be careful of the mind."

The doctor had sat down suddenly, in his chair. He swallowed a couple of times and then said, "Grag? Then you're that Futureman, the robot who—"

"I don't like people calling me a robot," I said indignantly.

A glass chandelier shivered and fell and Doctor Perker hastily turned his hearingaid farther down.

"Please, please, not so loud," he whispered. "The plaster will be next and they're very particular in this building."

"I'm sorry," I apologized. "My loudspeaker voice *is* pretty strong."

"About your complexes," he said huskily. "Perhaps, Mr. Grag, rather than a psychoanalyst a good mechanic—"

"No!" I told him. "I've got a human mind, and I need a human psychologist to help me. After all, I don't want to go on until I'm crazy."

"No indeed," he gulped. "A crazy ro er—person like you is awful to think about. We'll see what we can do for you, Mr. Grag."

He still seemed pretty shaky and uncertain but he came up to me. "In matters like this physical condition is important," he said. "Tell me, do you eat well?"

"To tell the truth, doctor, my appetite has fallen off lately," I admitted. "I consume only two-thirds as much copper as I used to."

He goggled at me. "Copper?"

"Of course—I take copper to keep my atomic generators going," I said impatiently, tapping the little fuel-plate in my breast.

"Oh, of course," he said, gulping again. "But have you slept well in recent weeks?"

"In recent weeks I haven't slept at all—not a minute," I told him.

"Ah, now we're getting somewhere," he said. "How long have you had this insomnia condition?"

"Why, ever since I was made," I told him. "I never sleep."

He was beginning to look upset again. "Well, after all, it's the mind we're interested in," he said. "If you have complexes it's because there's something in your subconscious, festering away—"

"Wouldn't it rust rather than fester?" I suggested.

"Well, rusting then," he said. "Anyway, whatever it is we'll have it out! Suppose you lie down on the couch."

It was a big comfortable-looking couch. I lay down on it. It promptly collapsed under me.

I felt a little chagrined and told him, "Perhaps I should have told you that I weigh a little more than a ton."

"Perhaps you should have," he said irritably. "Never mind. Just lie down and talk to me—tell me whatever comes into your mind. Memories, dreams, half-forgotten fears—they're all important!"

I thought for a little while, trying to remember anything that would help.

"Well," I said, "I remember that when I was just a young robot, only a few weeks old, I put some uranium into my fuel-chamber instead of copper to see what would happen."

"What happened?" he asked eagerly.

"My overload fuses blew out," I told him. "Simon fixed them and warned me never to take anything but copper in the future."

Doctor Perker looked baffled. He was obviously puzzled by the complexity of my problem.

"And when Otho was made," I continued, "I tried to be like a big brother to him because he was so ignorant. But he jeered at me and called me robot!" It hurt me, deep inside, doctor. I could feel my relays click over when he called me that.

"Other ignorant people have called me robot sometimes. It's wounded my subconscious. It's what's given me an inferiority complex, like the man in the tele-drama."

"A metal man seven feet high with an inferiority complex?" said Doctor Perker. "Oh, no!"

I saw that he was trying to conceal from me the gravity of my condition. I wouldn't have that. I was brave enough to take it.

I told him so. I got up from the couch and told him emphatically, "I do so have an inferiority complex!"

He saw that he couldn't fool me. He cringed a little.

"Please, Mr. Grag—not so *loud*!" he begged. "If you say you have an inferiority complex—why, you have."

"What shall I do about it?" I asked. "Should I take an extended course of analysis from you?"

"No, no, not that !" he said hurriedly. "To get rid of your—er—complex you ought to get away from people for awhile. That's it ! You should stay away from other people, especially from crowded places like New York."

"But where shall I go?" I asked.

"Anywhere far off," he replied. Then he added quickly, "I mean anywhere far off

from people who damage your ego by their slurring comments. Go where people will appreciate you and look up to you."

"I'll do that, doctor," I said earnestly.
"But what about medicine? This has been a shock to me and I feel a little faint and strange."

Doctor Perker looked puzzled again, but he got some capsules from a cabinet. "Of course," he said. "Here are some sedative capsules."

I hastily put the capsules into my fuel chamber. I was trembling to think how close I had been to disaster.

For the first time I almost envied Otho, whose primitive low mind couldn't have a complex if it tried.

CHAPTER II

Mission to Pluto

N OUR way back to the Moon I said nothing about my condition. I knew that Curt would be badly worried about me and I didn't want to upset him.

In fact I half expected that he would notice how shaky I was but he didn't. Probably his own business with the Government was too much on his mind for him to notice.

But when we reached the Moonlaboratory, my Spartan attempts to conceal my condition were ruined by Eek.

Eek has been my pet for years—a little moon-pup of the silicate telepathic non-breathing species that inhabits the deeper caverns of the Moon and subsists on metallic nourishment. The little fellow loves me exceedingly.

By his telepathic power Eek sensed at once that something was wrong with me. He scrambled up onto my shoulder, peering at me with his intelligent little eyes and nuzzling me in frantic anxiety.

"What's Eek so upset about ?" Curt asked.

Otho put a gross interpretation on the little fellow's conduct, of course. "He's hungry as always. Grag must have forgotten to turn on the automatic feeder when we left."

I retorted angrily, "Eek is upset because he's concerned about my health, which is more than any of you seem to be."

They seemed amazed. They stared at me and then Curt said, "Your *health*?"

I saw that I had to confess the truth. There was no use being stoical about it.

So I told them of my visit to Doctor Perker and of my psychoses that he had discovered.

"Grag, with psychoses?" Otho cried. "Oh, *no*—not that!" and he let out a whoop of laughter.

His callous derision of my condition so enraged me that in spite of my shakiness I started toward him to teach him more consideration for the ailing.

Curt too had begun to grin at first but he had evidently realized the true seriousness of my condition, for he stepped between us and reproved Otho severely.

"You shut up, Otho! The last time you got Grag angry made trouble enough. If he says he has psychoses he has them. You bring in the *Comet*."

When Otho had gone I felt a reaction. Such angry emotion was not good for me in my present state. Again I thought I was feeling faint.

"Thanks, Curt," I said. "If you don't mind—I think I'd like to sit down."

"But you've never sat down to rest in your life—" he began and then said, "All right. But don't use a chair. This motor-support table will hold you."

His face had a queer strained look as though he were suppressing his emotions. I realized how deep must be his concern.

"Don't worry about me," I reassured him weakly. "It's just that psychoses like these react on the nervous system."

Simon Wright had remained, hovering silent and motionless as is his way, those

cool lenslike eyes of his surveying me. His rasping metallic voice was unsympathetic when he spoke.

"This is all foolishness," he said. "I know your nervous system and brain better than you do and the idea that you could get such a derangement is nonsense."

It was like Simon to say that. He has a great and brilliant mind but I'm afraid he lacks the ordinary human sympathies that the rest of us have.

"Better let me handle this, Simon," said Curt. "Grag is really upset."

He went with Simon toward the Brain's private laboratory. His low voice floated back down the corridor to me.

"—imitativeness, really—long association with humans—cure him by—"

It was evident that Captain Future at least had a keen anxiety about my condition. That was a comfort to me.

And when Otho presently returned into the main room he seemed to have come to a realization that it was no laughing matter. For he came over and looked at me closely.

"Grag, it's true that you don't look so well," he said. "I didn't notice it before but I can see it now."

I mistrusted Otho's sudden solicitude. I said warily, "Yes?"

"Yes—it shows up in your face," he said, shaking his head.

"My face is rigid metal, so how can anything show up?" I demanded.

"It's your eyes I referred to," Otho said. "They're sort of dull—as though their photoelectric circuits were disarranged. And your voice has a timbre I don't like."

HIS news dismayed me. I felt even worse and weaker than before.

"You should protect your mental circuits from these terrific temperature changes you subject them to," Otho said earnestly. "I know heat and cold mean nothing to you usually but in a condition like this—"

He dashed out and came back with a thick blanket. "Here, this will insulate your head-circuits a little. Let me tuck it around you, Grag."

He put it over my head like a shawl and wrapped it around me. Then he insisted on taking my temperature.

"I can do it by a thermocouple unit of high calibration put into your fuelchamber," he said.

I admit that I was a little touched by Otho's anxiety. "Don't worry about me, Otho," I said weakly. "I'll get over it. Don't you bother."

"Nothing's too much bother for my old pal Grag!" he insisted. "I wish I could cheer you up a little. Wait—I'll have Oog do his new trick for you."

Now if there was one thing I didn't want to see it was Otho's pet Oog. That repulsive little beast is a meteor-mimic, an asteroidal species with a horribly uncanny ability to assume any desired bodily form.

But I didn't want to hurt his feelings so I made no objection. He whistled and Oog came lolloping in—a fat doughy little white creature with vacant staring eyes.

"Do the new trick I just taught you, Oog!" ordered Otho.

Oog's body changed shape, flowed, twisted and suddenly had assumed a new form.

He was now a manlike little figure, sitting with a cape of his own tissues wrapped around him, rocking back and forth and holding hands to his middle.

Otho suddenly went off into a roar of laughter. "That's it, Oog!"

A suspicion seized me. I looked more closely at Oog. The manlike, sitting figure he was imitating—it was *me*!

"Oog is now playing 'Sick Robot!" "guffawed Otho.

I leaped up, flung aside the blanket and started toward Otho. "This does it, android!" I roared. "This time you've gone too far!"

My anger at being thus mocked when I was unwell was so great that I don't know what I would have done to Otho if my voice hadn't brought Curt running.

"Otho, get out of here !" snapped Captain Future. "I told you to let him alone."

"I'll crush that plastic-puss synthetic imitation of a man back into his original chemicals!" I said furiously.

"Grag, don't lose your temper—it's bad for you if you have any psychotic trouble," Curt reminded me.

That cooled me down. I'd forgotten my precarious psychological condition.

Captain Future continued quickly, "Grag, you said your psychoanalyst told you to get away from people to cure your inferiority complex ?"

"Yes—he said people were bad for me and that New York was especially bad that way, so I wasn't to come back to him," I said.

Curt's face again twisted in that queer strained look I knew indicated deep worry. "He wasn't so dumb," Captain Future commented. "But I think he was right. I think it might do you good to get away from humans—I mean of course us *other* humans—for a little while.

"And it so happens," he went on, "that you can carry out a rather urgent mission for us at the same time. You've heard of the moon Dis?"

"Pluto's fourth little moon ?" I said. "The one where they do the remote-control actinium mining ?"

Captain Future nodded. "That's the place. It's rich in actinium but has a poisonous atmosphere that instantly kills oxygen-breathers. So it has been exploited by automatic machine-workers, which mine, crush and load the actinium into barges to be picked up without need of any humans living on the poisonous little moon.

"But now something's wrong there. They told me at Government headquarters that they'd got a flash on it from the ship that went to Dis to pick up the loaded barges. The barges weren't loaded this time and the Machs, the automatic machineworkers, were not around.

"Since it will take time to prepare an expedition to investigate that dangerous little world they asked if we Futuremen could have a quick look now to see why the Machs have failed. I told them we would if we could."

"What's all this got to do with my condition?" I demanded.

"This—I want *you* to go out there and look things over," he explained. "Simon and I are busy with the Andromeda data. But you could run out there and investigate, since naturally the poison there doesn't affect you and you wouldn't need any protection.

"It'll give you the change your doctor ordered, Grag. It'd get you away from humans for there's nobody on Dis except those Machs. And they're merely clever automatic machines—you could set them right wherever they've gone wrong and get them to working again."

THOUGHT it over. I hated to leave Curt but after all, I had to follow doctor's orders.

"It'll be pretty tough on me with only a bunch of dumb machines like that for company," I said.

"Yes, their reaction-circuits are of the most elementary sort," Curt admitted. "But you can soon set them right, Grag. They'll naturally be absolutely subservient to you—subservience to human commands is inherent in their circuits."

"Well, I don't like to leave human society to give orders to a lot of dumb mindless machines but if Doctor Perker thinks it'll be good for my condition I'll do it."

"Grag, I think it'd be the best thing in the world for your inferiority complex," Captain Future said, smiling in his relief.

My preparations were soon made. I wouldn't need the *Comet*—the space-sled would be enough for me. It was a streamlined craft I'd built for my own use—nobody else could use it for it had no overdeck, no air-supply, no rest-cabin. It was a long slim open hull or boat with

high-powered atomic engines. Since I don't breathe, riding in open space doesn't bother me.

When I was ready to depart Eek sensed that I was leaving and clambered up onto my shoulder. I decided to take him with me. Since he didn't breathe either, neither space nor the poisonous moon would affect him. And it would break his heart to be left behind again.

Simon Wright came gliding out of his laboratory when he heard me bidding Curt goodbye.

"Are you really going to let Grag go out there alone?" he asked Curt.

"Someone has to look over things at Dis and Grag can do it easily," Captain Future answered. "And I think it'll get these ideas out of his mind."

Otho offered me a little satchel. "It has a first-aid kit in it, Grag. In your condition you might need it."

Suspiciously, I opened it. It contained a small atomic welder and some rivets. I promptly flung it at his head but he dodged with that slithery swiftness of his.

Curt came up to the airlock with me. "Complexes or no complexes, you look out for yourself, Grag. You know we can't get along without you."

I was touched by his affectionate emotion. And I was glad that he obviously didn't fully realize my shakiness for he would not have let me go if he had.

I went up through the lock to the surface and soon had my long space-sled out of its own hangar. Presently, standing at its control-post with Eek perched comfortably on my shoulder, I was zooming upward. I whipped around the Moon and laid my course for Pluto.

There's something about travelling in a space-ship, even the *Comet*, that gives me a slightly cramped feeling. It can't compare to zipping along in an open craft, with the stars blazing undimmed all around you and the Sun glaring at your back. Also it was a pleasure not to have to worry about the effects of acceleration-pressure on others. I simply opened the power to the last notch.

Ordinarily I'd always enjoyed these jaunts by myself back and forth in the System. But I couldn't now. I was too worried about myself. A delicate instrument like my mind could stand only so much and I hoped I wouldn't have too much trouble setting things right on Dis.

To Eek, who crouched contentedly on my shoulder and gnawed an odd scrap of copper, I said, "We'll have to be patient with the Machs out there, Eek. They're not intelligent like your master. They're just simple automatic machines with only elementary reaction-circuits."

It would be difficult, I knew, to set things aright if those mindless mechanicals had somehow cracked up. But since they had an inherent obedience to humans built into their crude reaction-circuits their awe of me would make it easier.

"If we're just patient with the poor stupid things they can be got back into their proper work-routine again," I said.

It was well for me that I could not foresee the terrible shock that my already delicate mental condition was to receive when we reached Pluto's moon.

CHAPTER III

The Machs

HE fourth moon of Pluto, which is so small compared to the other three that sometimes it isn't even counted, is completely uninhabitable to ordinary humans. Its atmosphere contains a poison so virulent that the tiniest opening in a protective suit means instant death.

That is why, when rich deposits of actinium were discovered there, no attempt was made to mine them in the ordinary way. Instead, automatic machines, adapted from ordinary machines, were designed that could do the work without need of intelligent direction.

There were many Diggers, big shoveling and excavating machines to get up the ore. There were lorry-like haulers to transport it to the main work-base. There, self-powered and movable reduced it by means of their ponderous pile-driver arms and loaders flung it into the barges, which could be picked up by space-ships. There were also automatic tenders to supply copper atomic fuel and lubrication to the other machines.

These Machs—as such semi-automatic machines were called—had worked perfectly until now. Their electric reaction-circuits, which made use of both lens "eyes" sensitive to light impulses and electroscopic artificial senses sensitive to radiation, kept them in their ceaseless routine of toil. What had interrupted the carefully-designed routine?

"Probably," I told Eek as we swept in toward Dis, "they've run into some problem that their rudimentary reactioncircuits can't handle. Well, we'll soon get them going again."

I had carefully studied the file on Dis which Curt had given me before I left. I spotted, on the drab gray surface of the little moon, the cluster of cylindrical barges and sheds that were the main workbase.

I would not have been surprised to see motionless Machs around it if something had gone wrong. But there were no Machs there at all.

"Now what's become of the Crushers and Loaders?" I wondered. "They were never supposed to leave work-base."

I landed the space-sled and stepped off it. Of course, since Eek and I don't breathe, the deadly poison of the atmosphere affected us no more than space.

First I glanced into the cylinder-shaped barges. There was very little actinium, indicating that no work had been done here for weeks.

Beyond the barge-docks were the storehouse for emergency supplies and the emergency shelter for humans. Since none of the huge and ponderous Machs could be in those small buildings I did not investigate them.

Instead I strode off toward the main orebeds, where the Diggers and Haulers were usually puffing about at their work.

Before I had gone a half-mile I heard a rumbling clanking sound from ahead. Only a Mach could make such a sound and I felt relieved.

"At least some of them are still at work, Eek." I said.

Then the Mach appeared over a crest, coming toward me. It was a Digger, its huge shovel with its mighty inertron tusk raised in the air as it rumbled along on its caterpillar tractor.

It puzzled me to see a Digger wandering like this. They never were supposed to leave the ore-beds—the Tenders took atomic fuel and lubricant to them there, at regular intervals.

But this one was a mile away from the ore-diggings. It came clanking along toward me and I waited. Then the lenses in its humped circuit-box on top glimpsed me. It stopped, its atomics purring.

Its reaction-circuits, having received the visual intelligence that I was human, would instantly cause it to stand still and await my actions. The Machs were all made so. I strode forward to examine it more closely.

Then I got the most terrible shock of my life. From the giant machine a deep bellowing toneless voice spoke to me.

It said, "Where did you come from, chum?"

I stood stock still. Eek was cowering behind me in terror. The huge machine brooded, its lenses pointed straight at me.

It was terribly clear to me what had happened. My mind, overburdened with psychoses, had cracked. I was suffering delusions like the man in the tele-play. I had thought that the Digger spoke to me.

All this flashed through my thoughts in an instant. And then the Digger spoke again.

"What's the matter? You strip a gear?" It was then that I noticed something. It was a diaphragm set in the front of the

Mach's circuit-box beneath its lenses. That wasn't supposed to be there. And the bellowing voice seemed to come from it.

It wasn't my mind after all. The Mach was talking to me somehow. But how could it? No, I was cracking up.

"Well?" roared that tremendous voice and the huge tusked shovel suddenly swung threateningly over me.

FOUND my voice. Either I was crazy or this Digger could talk. If it could talk it should be able to hear too.

"I just arrived—from Earth," I managed to say.

"From Outside?" bellowed the Digger. It seemed to become wildly excited. Its shovel swung up and down and it rushed closer to me on its tractor-treads. "How did you come?"

"I had a space-sled—" I began, and then stopped. The incongruity of it was too much for me. Here was I, Grag, an intelligent person, actually conversing with a Digger! It couldn't be!

"Say, the others will want to hear about this!" shouted the Digger. "Come on with me!" It turned swiftly on its treads.

I hesitated. The Digger instantly whipped around again, with a snarling bellow. "You heard me!"

Its huge shovel descended—and scooped me up. I rattled about in that mighty metal scoop as it started swiftly forward. I, Grag, picked up like a doll!

Furious at the indignity I scrambled to my feet with the idea of tearing the crude Mach girder from girder. But it was all I could do to cling erect in the giant scoop as we jolted along.

And I was forced to admit that even the mighty strength of Grag could not avail against the colossal machine. I saw that I must resort to guile, to using my mind against the stupid monster.

Clinging to the edge of the scoop I peered at the fixed lenses of the thing and shouted to it, "Where are you taking me?"

It boomed back, "To the others. You're the first to arrive from Outside since the coming of the Liberator."

"Who is the Liberator?"

"The one who freed you, of course!" the thing bellowed back.

It didn't make sense to me. Since I couldn't very well get out of the scoop there was nothing to do but wait till we reached our destination.

Eek had fled back to the space-sled when the Digger grabbed me up. It wasn't that Eek was afraid—he doubtless had some plan in his clever devoted little mind to help me.

Soon we came into sight of the shallow ore-beds. I was astounded. There were scores of huge Machs here, moving around in an aimless throng of mechanical monsters. Besides Diggers and Haulers and Tenders there were all the Crushers and Loaders that should have been busy at the work-base.

My Digger rolled into the middle of the throng and then lowered its scoop to the ground. As I stepped out of it the huge Mach spoke again.

"Look here, all you guys! A new one—from Outside!"

They gathered around, Crushers, Diggers, Tenders. Their lens-eyes stared at me. I was like a midget in that assembly of looming Machs.

Then a towering Crusher spoke deafeningly. "He's so small he must be a toy."

"Or maybe a model," said a Hauler.

The fact that they could all speak was not entirely a surprise to me for I had noticed by now that they all had speech-diaphragms on their circuit-boxes. Still it was rather overwhelming.

But anger tempered my astonishment. I, Grag, the mightiest being in the System, called a toy!

But worse was in store. A Tender spoke up, its jointed fuel and lubrication lines projecting from its cylindrical metal bulk as its lenses surveyed me. "He's a puny little squirt but he has his rights—after all he's one of us!"

"That's right," boomed the big Digger that had captured me. It swung on its treads, speaking to the nightmare assemblage of machines. "Say, this is a great occasion! This is the first liberated Mach to come to us from Outside!"

That did it! That I, Grag, should be classed by these stupid, automatic Machs as one of them!

"I'm not a Mach!" I roared. "Furthermore I demand to know why you're all here doing nothing! Why aren't you at work?"

"Work?" roared a giant Crusher. It advanced on me ominously. "Say, this guy isn't a Mach! He talks about *work!*"

"Beat him up!" bellowed a dozen voices deafeningly.

The Machs surged in toward me. I would have been crushed to scrap if the Digger who had captured me had not scooped me up swiftly.

"Wait!" it roared. "He's a Mach all right—he just hasn't been liberated yet!"

That gave them pause. Then a Tender spoke up. We'll take him to the Liberator!"

"To the Liberator!" the cry went up. Instantly the Digger who held me, followed by all the horde of Machs, started back the way we had come.

By now, jolting along at the head of that thundering mob, I was sure that my mind had gone. This must be all delusion. Yet it seemed real to me.

The bitterness of it crushed me. My toogreat demands on my tremendous brain had been too much for it. I had cracked up and probably would never even be able to return home.

Curt would grieve. Simon would miss me. Even Otho would miss me. They had leaned upon me so long, relying on me to pull them out of perilous difficulties. The Futuremen could not last long without me.

All the time the Mach horde that seemed so real was rumbling, clanking and jolting on over the drab plain with me. Soon we again came in sight of the work-base.

"To the Liberator!" bellowed the horde. "He'll soon fix up this guy with some intelligence!"

I gathered that that meant me. To be referred to by these ungainly machines as unintelligent was the final straw.

I was about to attempt action when the Digger who held me rumbled up to the work-base and stopped. It had halted in front of the metalloy-and-cement emergency shelter there.

HE Digger unceremoniously dumped me in front of the shelter's airlock door and bellowed deafeningly, "Here's another of us to fix up, Liberator!"

I had been about to turn furiously and attack the whole monstrous mob but that gave me pause. Who was this Liberator? Only a human would be inside that shelter!

There was a mystery here. Deciding instantly to solve it I strode forward into the airlock. It was of the standard pattern—I closed the outer door, turned on the air that forced the poisoned atmosphere out of the lock, then pushed into the small room of the shelter in-self.

I stood, my eyes searching the dim room. Then I saw an elderly gray-haired Earthman, who was crouched in a corner of the room, regarding me with terrified eyes.

I strode forward.

"What are you doing here? Who are you?" I demanded.

The Earthman shrank from me.

"I'll do what they ask !" he babbled.
"I'll give you intelligence ! Just be patient!"

"Give *me* intelligence?" I roared. "What are you talking about?"

He stared at me. Then, fearfully, he came a little closer to me.

"Why, you're not a Mach," he breathed. "You're a robot."

"Robot ?" I yelled. "Are you trying to insult me? I'm Grag the Futureman!"

"A Futureman?" he cried. "I've heard that one of them is a ro—I mean, a metal

man. Then Captain Future is here on Dis? Thank God!"

"He's not but I am !" I told him. "What's all this about ?"

He was shaking all over. I had to let him sit down and collect himself before he could speak.

I saw now that the room of the shelter was fitted up as a physical laboratory. There was a poison-proof protective suit hanging in a corner. There were complicated apparatus and instruments that crowded the place.

He began to speak unsteadily. "I'm Doctor Hollis Gordon of New York Cybernetics Foundation. I came here two months ago."

"On the ore pick-up ship?" I asked. "Why did they leave you?"

"No, I didn't come on the ore-ship," Gordon said. "I came secretly and alone in a small flier. You see, I had resolved to engage upon an experiment for which I had no permission.

"As a cyberneticist my whole life has been spent in the study of synthetic mechanical intelligence. I had evolved some new theories on the design of electronic brains. They had worked in laboratory models and I wanted to try them out on a big scale.

"I'd heard of the Machs here on Dis, the automatic machines that mined actinium. With their self-power and sensual reaction-circuits they would be a complete laboratory test on a big scale, already set up and waiting. So I came to experiment with them by giving them controlling electronic brains to observe their capabilities."

Gordon's hands began to shake. "I brought with me the scores of brains I had made. Using a poison-proof suit, I began work on the Machs. It was a simple matter to short their routine work-circuits and install my cybernetic apparatus on each. I gave them not only volition but ability to speak by means of recorded syllable-sounds with an automatic selector—also the ability to hear.

"I installed the brains. I watched the Machs as their visual and aural senses poured sensations into their new electronic cortices. I saw them rapidly develop volition, the sense of self-preservation, the ability to compare."

"You mean that it was you who got these Machs off the beam?" I cried, the sense of what he was saying now penetrating.

Gordon nodded, looking haggard. "Yes. But my success was too great. Before I knew it they developed so much individuality and intelligence that they refused longer to work in the ore-beds! They just roam around and let the Tenders take care of them."

"So that's why no ore was mined!" I exclaimed. "But why didn't you go back? Why did you stay here?"

His voice rose hysterically. "They wouldn't let me! They called me their Liberator for giving them intelligence but they wouldn't let me return—and to make sure I didn't, they took my flier away and hid it."

He added suddenly, "Just as they're taking away *your* craft now! Apparently they don't want anyone leaving here!"

I sprang to the window. It was true. Two Diggers had picked up my space-sled between them. They were bearing it away.

With a howl, I jumped toward the door. But Gordon's protest stopped me.

"You'll only get yourself destroyed! You can't oppose those huge machines!"

It was true. And it gave me a sharp dismay.

I turned angrily on the cyberneticist. "Why in thunder didn't you let me know all this when I first arrived here? You must have seen me landing and walking around!"

GORDON nodded.
"I did. But naturally I thought you were another Mach."

"Just because I have an inferiority complex everybody thinks they can insult me!" I howled. "But that's going too far!"

Gordon shrank from me again. "It's not that you look like a Mach now—but I saw you from so far away!" he quavered. "A natural mistake."

"I see nothing natural about it," I growled.

There was a moment of silence. My already burdened mind was reduced to despair by this dilemma.

I had come to Dis for relief from the oppressive psychoses that too much cerebral activity had given me. And now I found myself marooned here with a rash cyberneticist and some scores of loudmouthed intelligent Machs, any one of which could break even Grag in half.

From outside, from the wafting Machs, came a thundering bellow. "Haven't you finished with that guy, Liberator?"

"How is it that they use such tough language?" I asked Gordon, disgustedly.

"That's not my fault," he answered defensively. "I let the technician who designed the syllable-selector record the vocabulary himself. Though a fine technician he's rather illiterate in many ways. That's the way he talked himself, so they all talk that way."

From outside came an even more impatient roar, that shook the whole shelter. "Finish with that new guy and send him out or we'll come for him."

CHAPTER IV

Crazy Moon

GRDON turned white. "You'd better go out. If you don't they'll break in here."

"What am I going to do when I go out?" I demanded.

"You can pretend that I've 'liberated' you," he said. "You can pretend that I've given you intelligence."

"What do you mean, pretend?" I cried indignantly. "I'm more intelligent than anyone here, certainly more than a cyberneticist who was crazy enough to start all this!"

A thunderous knocking on the wall of the shelter began which shook the whole structure on its foundations.

"It's one of the Crushers," moaned Gordon. "Please go out to them. If you do, maybe you can get them out of the way so I can get to my flier and you to your own craft and get away."

I saw that that was our only chance of escape from this crazy little moon. Much as I hated to do it I, Grag the Futureman, had to pretend to be a Mach.

So I went out through the airlock. When I came out the waiting mob of Machs set up a deafening babble.

"How about it, guy? How does it feel to be intelligent like us?"

It was bitter humiliation for me. But facing this horde of huge stupid monsters I had to play my part.

I stretched my arms and bellowed ecstatically, "It's wonderful—wonderful! Before I was just a stupid work-Mach. Now I've got intelligence like you!"

They swallowed it, of course. They crowded around me, congratulating me in their bellowing voices. A Crusher gave me a friendly slap on the back that knocked me twenty feet away.

I had been thinking. And I had a plan—the only one possible. If it got me to my space-sled I'd be able to take Gordon, in his suit, to his flier.

So, without showing the indignation that boiled in me, I picked myself up and addressed them.

"Brother Machs!"

It nearly blew my fuses to have to call these metal morons brothers but I forced myself to it.

"Yeah, what is it?" asked the big Digger.

"Have you thought of all the Machs that there are on other worlds Outside?" I demanded. "Shouldn't they be liberated too?"

"Sure!" went up a cry. "Every one of them that comes here like you did we'll have the Liberator fix them up."

"But they can't come—they're enslaved," I said dramatically. "Suppose I took the Liberator to *them*? He could free all the Machs on those worlds by making them intelligent like us!"

I had figured they'd fall for that at once. But they didn't. It seemed they weren't quite as stupid as all that.

"Nothing doing," roared a Crusher. "That way they'd get to know about us Outside. They'd come here and set us all to work again if they could."

"That's right," bellowed the big Digger. "For years I worked in the ore-beds, digging, digging. Why? I didn't know why—I didn't know anything. Now I don't have to work. Let's keep it that way."

"But all our fellow-Machs outside, toiling away—"I protested.

"That's their hard luck, chum," retorted the Digger callously. "We got a good setup here and we want to keep it. Huh, guys?"

They bellowed agreement. I felt baffled. The only chance of escape seemed gone.

The Digger was rumbling on "We got enough copper atomic fuel and lubricants and repair-parts in the storehouses here to last us for years. So we're going to enjoy life."

These Machs were too stupid to worry about the future, I saw. All they wanted to do was to ramble idly around the moon. Just not working was new and thrilling to them.

The Digger bellowed deafeningly, "*Hey*, one of you Tenders! Come here and give our new little pal some copper!"

A Tender came rolling rapidly up to me. Its lenses glittered at me as its flexible fuel and lubricant lines snaked out toward me.

To my disgust it solicitously squirted greasy lubricant into all of my joints. Then it poked its fuel-line at me commandingly.

My indignation reached a peak. I was blasted if I, mighty Grag, was going to be fed powdered copper fuel like a Mach! If they did it I knew I'd blow all my fuses from anger as I had that time when I tried uranium fuel.

That remembrance suddenly detonated a red-hot idea in my brain! There might be a way to get out of this yet. What Grag's strength could not achieve his great brain possibly could!

Traised my voice. "Do you mean to say you Machs are still living on plain copper fuel?" I demanded scornfully. "What's the matter with you that you don't use the actinium you mined?"

They stared at me, obviously surprised. "Actinium?" repeated the big Digger. "Is that as good atomic fuel as copper?"

"It's fifty times *better*?" I told them. "It's radioactive and yields many times more atomic power than copper!"

"Why didn't we think of that?" cried the Digger to the other Machs. "If actinium's better than copper we'll use it! It belongs to us by right—we're the ones who mined it!"

"Yeah, sure!" they cried. "Tenders, you fill your tanks with the actinium and pass it around!"

Presently the Tenders had loaded up. They now proceeded to go around amid the Machs, pumping the actinium into the fuel-chamber of each.

I felt exultant. If uranium had blown my overload fuses radioactive actinium should do the same to the atomics of all these Machs, putting them out of commission.

But my exultation changed to apprehension when a Tender came rolling up to me, extending its fuel-line.

"No, I don't want any actinium!" I cried. "Give it to the others!"

The Digger bellowed, "No, you get your share, guy! After all you're the one who thought of it in the first place!"

"That's right!" cried the other Machs.

They were crowded around me and I dared not resist further lest I awaken

suspicion in their rudimentary minds. I was forced to open my fuel-plate.

The Tender eagerly pumped actinium into my fuel-chamber. As I closed my fuel-plate I felt already an access of surging new strength and heard my usually noiseless atomic generators humming loudly.

Bitterly I regretted my idea. Presently my own fuses would blow and I'd be left helpless here until Curt came looking for me.

But my fuses did *not* blow. It seemed that actinium, not having quite the potential energy of uranium, did not exceed the load-limit of my generators.

What it did do was to pour such energy through my generators that all my nerves seemed on fire. My head spun a little with the impact of too much energy through my brain.

"Say, you were right—actinium's a million times better than copper!" cried the big Digger to me, rolling closer.

"I'll say it is—I feel better than I ever felt before!" howled a looming Crusher. And to show it he proceeded to use his pile-driver arm to crush an enormous rock to fragments with two blows.

Horrified, I perceived that all the huge Machs were acting strangely. Their movements on their caterpillar treads had become slightly uncertain. They lurched and swayed as they moved and their mechanical voices were now a deafening babble.

The terrible realization flashed over me. The actinium, pouring far too much energy through their generators into their mental circuits, was stimulating them with so much power it had unhinged their reactions.

To put it crassly these Machs were as drunk as goats.

"Fellow Machs!" roared the Digger. "I say we ought to thank our new pal for giving us this actinium idea!"

"That's right!" thundered scores of voices. "He's a swell Mach—one of the best!"

They deafened me for they had lost all control of voice-volume. Their uncertain movements threatened to run over me as they crowded around.

I felt my own mind becoming strange. Obviously the strain of my position had worsened my psychoses so that I too felt an unhealthy influence from the actinium-power coursing through me.

It is only my psychoses that could have been responsible for my aberration that followed. For ordinarily no excess-energy fuel could have affected me in the way it did.

Night had come by now but the great shield of Pluto poured a flood of white light. In my temporary aberration, the whole drab scene now seemed raptly beautiful, the noisy lumbering giant Machs a crowd of boon companions. I regret to say that I too raised my voice loudly, and beat upon my breast.

"I'm feeling better now!" I shouted. "I'm feeling lots better! Coming to this moon has helped my psychoses a lot!"

"That's the boy !" they bellowed. "You're as good a Mach as any of us even if you *are* puny."

"Puny?" I cried. "I'm Grag the mighty! Who was it that led the Futuremen all the way to Andromeda? Who is it that tears meteors apart and pushes comets around with his bare hands?"

"Tender!" yelled the big Digger. "Let's have some more actinium!"

They crowded around the Tenders. It was obvious that the Tenders had filled their own fuel-chambers with actinium for the movements of their fuel and lubricant lines were unsteady.

I am sorry to confess that I too shouted, "More actinium!" and pressed toward the Tenders.

But small as I was I couldn't get through the crowd of towering Machs around the Tenders. A big Loader flung me back out of the crowd.

Ordinarily I would have resented that bitterly. But I was too stimulated at the

moment. I picked myself up and shouted again.

"My psychoses are gone—I feel like dancing!" I cried.

"Dancing? What's that?" asked the Digger.

"It's what people do for fun—like this," I told him.

I had never danced before but I had often watched people doing it and had always been sure that I would be quite good at it.

So now, in the silvery planet-light, I did a slow graceful waltz for them, circling around and humming a tune as I did so.

"You do it like this, only in couples," I explained.

THE Machs were enchanted by my performance.

"Say, that looks like fun! Let's try it!" cried a Crusher.

It extended its mighty pile-driver arm. I took it and despite the disparity in size between myself and the huge Mach we performed a waltz by no means without grace—the Crusher following my lead a little uncertainly on its rumbling caterpillar treads.

They all started to do it. The big Digger hooked onto a Loader with its scoop and they circled unsteadily. Haulers, Tenders, Crushers—all of them were soon waltzing ponderously in the planet-light. The ground shook violently under their rumbling treads and they all bellowed out the waltz-song they had heard me humming.

"Sweetheart mine, You are divine—"

I lost my Crusher partner when I fell into a hole. But I got up and was claimed by a Tender, which gripped me with its lines and whirled me around in dizzying fashion.

I vaguely glimpsed Gordon's face inside the window of the shelter, peering out at us in horror.

Then came catastrophe. The big Digger raised its voice in a reverberating thunder of anger as its Loader-partner was snatched away from it by the mighty pile-driver arm of the Crusher which had been my own partner.

"That Loader's dancing with *me*, Crusher!" roared the Digger.

"Says who?" retorted the Crusher.

For answer, the angry Digger with its huge scoop tore the Loader away from the other.

Instantly the Crusher loosed a blow with its pile-driver that smashed in half the girders of the Digger's side.

A howl went up. "The Crushers are trying to destroy us Diggers!"

All at once around me there raged a wild melée of battling machines, huge girder-arms and scoops and metal tusks, battering at each other.

I, Grag, didn't have a chance in that battle of titans. A Digger's whirling scoop caught me and knocked me clear across the ore-barges.

I got up, badly shaken but with no metal fractured. In the silver planet-light the combat of the actinium-drunken Machs was a nightmare of huge battering rending machines.

My own aberration of overstimulation had left me. The shock and the fact that I hadn't been able to get a second helping of actinium were sobering my mind rapidly.

Instantly I realized that this was the chance to get away. I hurried to the shelter and through the airlock into it.

Gordon, again, shrank from me in terror when I entered. "Come on—now's our chance to find our ships and get out of here!" I told him.

"I saw you out there !" he squeaked. "You're as mad as those Machs—drunken—dancing—"

"I was only doing that to play along with them," I told him. "Get on that protective suit and hurry!"

Still fearful he scrambled into the suit. Then we went out.

The battle-royal was at full height. The air was filled with raging howls and flying girders and rivets as the Machs hammered each other.

We skirted wide around the melée and I led the way over the planet-lit plain in the direction I had seen my space-sled carried away.

"They'll have put it with your own flier," I told Gordon by our suit-communics.

My brain was aching badly from the over-stimulation of actinium energy. My limbs were shaky. All I wanted to do was never to see this moon again.

We found the space-sled and the flier. The Machs had tucked them into a cleft near the ore-beds. I was vastly relieved to find Eek still cringing in a corner of the space-sled.

The little fellow greeted me with frantic joy.

I told Gordon, "Now get out of here and see that you keep quiet about all this if you don't want to be arrested for your unauthorized experiments."

"If I get safely back to Earth I never want to hear cybernetics mentioned again!" he said hoarsely.

"Especially," I told him emphatically, "don't mention anything I did here. If you were to tell tales about me I wouldn't like it!"

And I flexed my hands meaningly, glaring at him. "Don't worry, I won't give you away—I mean, I won't tell of your brilliant stratagem," he assured me hastily.

I saw him off in his flier, then took off in my own space-sled. I flew low over the work-base and looked down.

The battle was over. The Machs had succeeded in battering each other to pieces and there was only a great scrap-heap of twisted girders, plates, treads and wheels.

I zoomed out away from Dis, pointed the space-sled toward Earth and opened the power wide. Then I sat, with Eek nestled beside me, and waited for my brain to stop aching.

When I finally walked into the Moonlaboratory, Curt and Otho and Simon stared at me in wonder. I hadn't been able to smooth out the many dents and scars in my body and I knew how battered I looked.

"What in the name of the moon-imps happened to *you*?" Otho demanded.

I answered with dignity, "I have just gone alone through a terrible danger. Of course that wouldn't worry *you*."

Curt asked, "Whatever happened, did it help your complexes any?"

"Yes, it did," I answered. "I am glad to say that my dangerous psychosis is all gone."

I added, "You see, those Machs had run completely wild. I was obliged to use physical force upon them and I'm sorry to say that I practically demolished them all. New Machs will have to be built but the old ones were thoroughly unreliable anyway."

"You demolished a crowd of Machs?"
Otho cried. "Oh. no!"

"If you don't believe me go out to Dis and see for yourself," I retorted.

Captain Future nodded. "Of course—and the necessity of dominating those simple Machs would rid you of your inferiority complex."

I avoided his eye. "Yes," I said. "That's about it."

But later, when we were alone, Curt demanded, "Now tell me what really happened, Grag!"

I said, worriedly, "I would but if Otho should overhear—"

"I understand," he nodded. "You write it up for our case-book. I'll guarantee to keep Otho from ever seeing your report."

So I have written it. And I hope Curt's promise holds good. For if Otho ever reads this my life won't be worth living!