

Impediment

Boss ducked back from the outer lock as a whirl of wings became audible outside. The warning came barely in time; a five-foot silvery body shot through the opening, checked its speed instantly, and settled to the floor of the lock chamber. It was one of the crew, evidently badly winded. His four legs seemed to sag under the weight of the compact body, and his wings drooped almost to the floor. Flight, or any other severe exertion, was a serious undertaking in the gravity of this world; even accelerine, which speeded up normal metabolism to compensate for the increased demand, was not perfect.

Boss was not accustomed to getting out of anyone's way, least of all in the case of his own underlings. His temper, normally short enough, came dangerously near the boiling point; the wave of thought that poured from his mind to that of the weary flier was vitriolic.

"All right, make it good. Why do I have to dodge out of the path of every idiotic spacehand who comes tearing back here as though the planet was full of devils? Why? What's the rush, anyway? This is the first time I ever saw you in a hurry, except when I told you to hop!"

"But you told me this time, Boss," was the plaintive answer. "You said that the moment that creature you were after turned into the path leading here, I was to get word to you. It's on the way now."

"That's different. Get out of sight. Tell Second to make sure everybody's in his quarters, and that all the doors along the central hall are locked. Turn out all lights, except for one at each end of the hall. No one is to be visible from that hallway, and no other part of the ship is to be accessible from it. Is that understood?"

"Yes, Boss."

"Clear out, then. That's the way you wanted things, isn't it, Talker?"

The being addressed, who had heard the preceding dialogue with more amusement than respect, was watching from the inner door of the air lock. Like the blustering commander and the obsequious crew member, he supported his body almost horizontally on four slender legs. Another pair of appendages terminated in prehensile organs as efficient as human hands, and a double pair of silvery-gray, membranous wings were folded along the sides of his streamlined, insectile body.

He could best be described to an Earthman as a giant hawk moth, the resemblance being heightened by the broad, feathery antennae projecting some eighteen inches from a point above his eyes. Those appendages alone differentiated him from the others of his kind; those of the captain and crew were a bare eight inches in length, narrower, and less mobile.

His eyes were the most human characteristics—more accurately, the only ones—that he possessed. Two disks of topaz, more than three inches across, they lent a strangely sagacious expression to the grotesque countenance.

"You have understood well, commander," radiated Talker, "even though you seem unable to realize the necessity for this action. The creature must see enough of the ship to arouse his curiosity; at the same time he must gain no inkling of our presence."

"Why not?" asked Boss. "It seems to me that we could learn to communicate much more quickly if we capture him. You say he must be allowed to come and go as he pleases for many days, and must remain under the impression that this ship is deserted. I know you've been trained to communication all your life, but—"

"But nothing! That one fact should make it evident that I know more than you can hope to understand about the problem we're facing. Come up to the control room—that native will arrive shortly, and that's the only place from which we can watch him without being seen ourselves."

Talker led the way forward along the dimly lit main corridor, into which the inner door of the air lock opened directly. At its end, a low doorway opened, and a spiral ramp led to the control deck, half a level higher. Here the two paused. Metal grillework, its interstices filled with glass, formed the rear wall of the room and afforded a view the whole length of the corridor. Talker extinguished the control-room lights, and settled himself at this vantage point.

His name was no indication of his temperament. The narrator, in fact, must accept full blame for the

former. Had it been merely a question of translating from one vocal language to another, it would have been possible to set down a jumble of vowels and consonants, the more unpronounceable the better, and claim that the English alphabet provided no means of coming closer to the true pronunciation. Unfortunately, these beings were able to sense directly the minute electrical disturbances that accompany nerve currents; they conversed by broadcast-ing reproductions of the appropriate sensory impressions. The "language," if it could be so called, might be thought of as possessing the elements of a vocal tongue—nouns, verbs, and modifiers; interjections were replaced by the appropriate emotions, but most of the conversation was reproduced visual imagery.

Obviously, personal names were nonexistent; but the knowledge of identity was in no way impaired. An individual was thought of with respect to his position; temporary or permanent, in the group, or by his personal characteristics. The names used are attempts to show this fact.

No name would suit the arrogant, peppery commander of the vessel, other than the one we have used; but the cognomen "Talker" merits further explanation.

The rulers of his home planet had many of Boss' characteristics. They were the outcome of ages of government similar to the feudal systems of Earth's Middle Ages. Ranks corresponding to kings, lords, and dukes existed; warfare was almost continuous. Talker belonged to a class having almost exactly the same duties as medieval heralds; he had been trained from infancy in the traditions, obligations, and special abilities of that class. He was one of a clique which, within itself, formed an international fraternity almost as powerful as any of the governments. Their indispensability protected them; they formed, in addition, probably the most intelligent group in the world. The rulers, and through them, the other inhabitants, looked up to them, and perhaps even feared them a little. The enormously developed faculty of communication implied an unparalleled ability to catch and decipher the mental radiations of others; the development of that power was the "herald's" chief exercise. These last facts should suffice to explain the power of the group, as well as the origin of Talker's name.

Once comfortably settled, Talker again addressed the captain.

"I can't blame you too much for failure to understand the need for this procedure. You lack the training, as you have said; and in addition, there is a condition present whose very possibility never before occurred to me. Tell me, Boss, could you imagine someone—one of your engineers, let us say—acting quite normally, and yet radiating impulses that meant absolutely nothing to you?"

"None of them knows enough to think anything I couldn't understand," was the incredulous answer. "If one of them did, I'd lock him up for examination."

"Exactly. You can't imagine a perfectly sane mind giving off anything but clear thoughts. But what are the thoughts, the waves, that you hear?"

"I hear what he's thinking."

"You don't. Your antennae pick up waves which are generated by the chemical processes going on in his brain. Through long practice, you have learned to interpret those waves in terms of the original thoughts; but what thought actually is, neither you nor I nor anyone else knows. We have 'thought' in the same fashion all our lives; one brain radiates just like another. But this creature, with whom we have to communicate, is a member of another race; the same thoughts in his mind produce different radiations—the very structure of his brain is, quite likely, different from ours. That was why I was so long finding him; I could not disentangle his radiations from the nerve waves of the other relatively unintelligent life forms around here, until I actually saw him performing actions that proved unquestionably that he does possess a reasoning brain. Even then, it was some time before I realized just what was wrong—it was so new and different."

"Then what can you do? What good will those observations do us!" asked Boss, almost tremulously. "I don't get it entirely, but you seem to. If you can't talk to him, how can we get the stuff we need? And if we don't get it, please tell me how we dare show our faces again within five light-years of home!"

"I am far from sure of just how much can be done," replied the other. "It will be necessary to determine, if possible, the relation between what this creature thinks and what he radiates; I don't think it

will be easy. These observations are for the purpose of getting a start in that direction. ,

"As to the other questions, they are entirely your business. You command this ship; and this is the first time I ever saw you want to talk to someone before you helped yourself to his belongings. If you find yourself unable to do so, we can go back, anyway—if labor is scarce, we might get off with a life sentence in the King's mines on the big moon."

"If they still belong to the King by then. I think I'd rather die here, or in space."

"At least, there would be no trouble in getting hold of arsenic," said Talker dryly. "Those mines produce more of that stuff than anything else. If there is any at all on this planet, we have no time to waste on a probably fruitless search, we must get it from the natives, if they know what it is and have any."

"And to find out if they have any, we must talk to them," answered Boss. "I wish us luck, Talker. Go to it."

The astroplane rested in a small arroyo not much wider than its own hull. The banks of this gully rose nearly to the control-room ports, and from where he lay, Talker could see the gap which marked the point where the trail across the main valley emerged from among the trees. Down that trail the native must come; he had been seen coming through the gap in the hills that bounded the valley on the south side, and no other trail led to the pass in the northern boundary, which was marked by even higher and far steeper cliffs. There seemed little in the valley itself to attract an intelligent being, except animals of various species; and the Talker knew that the camp on the other side of the southern hills was well supplied with food, so that the native would probably not be hunting.

Would he be superstitiously afraid of the ship, or intelligently curious enough to examine it more closely?

The question was not long in being answered. Talker sensed the nearness of the creature some time before it became visible; the herald judged, correctly, that it had seen the vessel first and was approaching cautiously, under cover. For several minutes, nothing happened; then the man walked boldly to the edge of the bank and stood there, carefully examining the long metal hull.

Both aliens had seen him before, but only at a considerable distance. Talker's chief surprise at the human form was that a being should support a mass about four times his own, against the relatively enormous gravity of Earth, on but two legs—though the legs, it is true, resembled tree trunks when compared to the stalk-like limbs of the visitors.

The man held a rifle in one hand. The watchers recognized it as a weapon of some sort, but were unable to make out its details even in the midmorning sunlight which shone upon the native. They waited, even Boss maintained an unaccustomed silence, while the new-comer took in the details of the forty-meter, cigar-shaped spaceship. He noticed that there were ports—round windows along the sides; these were covered, except for some near the bow, with metal shutters. The exposed windows contained round panes of glass or quartz; the room or rooms within were dark, however, and he could see nothing through them.

A little more than a quarter of the vessel's length back from the nose, was a larger port, evidently an entrance. It was elliptical, and about five feet high and twice as wide. It was half open, giving a curiously deserted appearance to the ship.

Talker and Boss could see the indecision in the man's attitude, although his thought waves, which the former could perceive clearly, were completely indecipherable.

The doubt manifested itself in restless motion; the man paced toward the stern of the ship, passing out of the watchers' sight, and reappeared a few minutes later on the opposite bank of the gully. He crossed once more, under the curve of the ship's nose, but this time did not climb the bank. Instead, he disappeared sternward again, evidently having made up his mind.

Talker was sure he knew the decision that had been reached; for a moment he was jubilant, but an instant later he came as close to cursing himself as anyone can without benefit of language. The being quite evidently could not fly; the port was ten feet above its head and fifteen feet from the bank. Even if the man wished to, how could he enter?

Climbing, for obvious reasons, did not occur to Talker; he had never in his life had to climb, except in buildings too cramped for flying. He caught a glimpse of the man disappearing among the trees, and

toyed with the idea of moving to some other part of the planet and trying again.

He did not crystallize this thought sufficiently to mention it to Boss; before he could do so, his attention was caught by something in motion. The man slowly reappeared, dragging a hardwood sapling pole nearly twenty feet in length. He tossed this down the bank, and scrambled after it; then he picked up one end and dragged the pole out of sight along the hull.

Talker realized the plan, and gained new respect for the strength, to him almost inconceivable, that lay in those blocky arms and legs. He heard and correctly interpreted the scraping sound as the pole was laid against the lower sill of the air lock; and moments later, an indicator on the control panel showed that the outer door had been swung a little wider; to admit a pair of human shoulders.

Both aliens glued their eyes to the grillework, looking down the dimly lighted length of corridor to the place where the inner lock door swung wide open, partly blocking further vision. The hinge was to the rear, fortunately; the man would not be hidden from them by the door, if and when he stepped into the hallway.

Boss grew impatient as moments slipped uneventfully by; once he shifted his position, only to freeze motionless again at a warning flicker of radiation from Talker. He thought the latter had seen something, but another minute rolled by before the shadow dimming the light that came through the lock moved enough to show that the man had really entered.

An instant later he had stepped into view. He moved soundlessly, and carried his weapon in a manner that showed it was certainly something more than a club. He was evidently ill at ease; his cramped position accounted largely for that fact—the ceiling of the corridor was barely five feet above the floor. The owners of the ship, with their nearly horizontal carriage, needed little head room.

The man's first action was to peer behind the inner door, rifle held ready. He saw at once that, except for himself, the corridor was empty; but numerous low doors were visible along its full length, with larger portals at each end, and one directly opposite him. The one by which he had entered was the only one open; that immediately facing led, he judged, to a similar air lock on the port side of the ship.

For a minute or two he listened. Then he partly closed the inner door of the lock, so as to allow an unimpeded view the full length of the hall, and walked cautiously forward. Once he raised his hand as though to pound on one of the doors, but evidently thought better of it. Two or three times he looked quickly behind him, turning his head to do so, much to Boss' astonishment. Talker had already deduced from the location of the eyes that the head must be mobile.

The light, set in the ceiling near the front end of the hall, was made the subject of a careful examination. The man looked back along the corridor, noting the row of similar, unlighted bulbs at equal intervals along the ceiling, and the single other lighted one at the far end. Talker was unable to tell from his attitude whether they were something utterly new or completely familiar to him.

Caution had by now succumbed entirely to curiosity. Several doors, including that which led to the control room, were tried. In accordance with Boss' orders, all were locked. For a few moments the man's face stared through the grillework not two feet from his observers; but the control room was in complete darkness, Talker having closed the shutters the instant he was sure the man had entered the lock. The reflection of the ceiling lamp from the glass filling helped to conceal them from the tiny human eyes, and the man turned away without realizing the nearness of the two.

He wandered down to the far end of the hallway, trying a door here and there. None yielded to his efforts, and eventually he swung open the air-lock door and passed out. Talker hastily opened the control-room shutters, in case the being had noticed their previous condition, and saw him disappear in the direction from which he had come. Evidently whatever plans he had formed for the day had been given up.

"Did you get anything?" asked Boss eagerly, as the tension relaxed. He watched impatiently as Talker walked to the control desk, opened a drawer, and helped himself to a tablet of accelcrine before answering.

"As much as I expected," he replied finally. "I was able to isolate the radiations of his optical section, when he first looked at the single light at this end—that was why I arranged it that way. Concentrating on those emanations, I think I know the patterns corresponding to some of the more simple combinations of

straight lines and circles—the impressions he got while examining the corridor and doors. It is still difficult, because he is highly intelligent and continuously radiates an extremely complex and continually changing pattern which must represent not only the integration of his various sensory impressions, but the thought symbols of abstract ideas; I don't see how I can master those. I think all we can hope to do is to learn his visual pattern, and try to broadcast to him pictures that will explain what we want. That will take long enough, I fear."

"It better not take too long," remarked Boss. "We can breathe the air and eat the food of this planet, tough as the latter is. But we will live under this gravity just as long as the accelerine holds out, which won't be too many weeks."

"You can synthesize accelerine out of those plants with the straight needlelike leaves," answered Talker. "Doc told me this morning; that was some of his product that I just ate. Accelerine won't be enough, however. It speeds up our metabolism, makes us eat like power furnaces, and gives us enough muscular strength to stand up and walk, or even fly; but if we keep taking it too long, it's an even bet whether we die young of old age, or get so accustomed to it that it becomes useless. Also, it's dangerous in another way—you were telling me that two of the fighters have broken legs, from landing too hard or trying to stand up too quickly. Our muscles can stand the gravity, helped by the dope, but our skeletons can't."

"Can't you ever deliver a little good news, without mixing it so thoroughly with bad that I feel worse than ever?" asked Boss. He stalked aft to the engine room, and relieved his feelings by promising a couple of unfortunate workers the dirty job of replacing the main attractor bar in the power converter, the next time the flood of incoming radiation from space riddled it into uselessness.

Talker squatted where he was, and thought. Learning a language was a new form of exercise to one who had never before dreamed of its necessity. He guessed, from the attitude of the native as he departed, that it would be necessary to reveal the presence of the aliens aboard if the man's interest in the ship was to be maintained. Thinking the matter over, it suddenly occurred to Talker that the man himself must have some means of communicating with his kind; and there had been no antennae visible. If the method were different from that employed by Talker's people, it might be more suited to present requirements. Yes, revealing their presence was definitely indicated, the more so since, finding himself unable to solve the ship's mystery alone, the man might go off to obtain others of his kind. It was no part of Boss' plan to reveal his presence to the main population of the planet in his present nearly defenseless condition.

It would be easy enough to induce the man to return. One of the crew, flying toward the ship, could "accidentally" pass over his camp. Whether, on finding the vessel inhabited, he would be bold enough to venture near any of the aliens, was a matter that could be tested only by experiment; Talker believed he would, since he had shown sufficient courage to enter the ship in ignorance of what lay within.

The herald crept to the controls, and pressed the signal switch indicating that the commander's presence was desired in the control room. Perhaps a minute later, Boss struggled up the spiral, air hissing from his breathing vents as his lungs tried to cope with the results of his haste. If he had had to rely on vocal speech, he probably couldn't have spoken at all.

"Careful," warned Talker; "remember those broken legs among the crew."

"What is it now?" asked the captain. "Come to think of it, why do I always have to come to you? I'm in command here."

Talker did not bother to dispute the statement. The feeling of superiority ingrained in every member of his class was, through motives of prudence, kept very much under cover. He informed the captain of the results of his cogitation, and let him give the necessary orders—orders which had to be relayed through Talker, in any ease.

There were no communicating devices on the ship; the herald had to radiate all of Boss' commands to the proper individuals. There was no machine known to these beings which was capable of receiving, analyzing and transmitting through wires or by wave the delicate impulses radiated by their minds. They had the signal system already referred to, which was limited to a few standard commands; but in general, messages to be transmitted more than a few yards, or through the interference of metal walls, had to pass

through the antennae of a herald. It is conceivable that the heralds themselves had subtly discouraged, for their own ends, research in mechanical communication.

One of the fighters was ordered to the air lock. Talker and Boss met him there, and the former carefully explained the purpose of the flight. The soldier signified his understanding, made sure that his tiny case of accelerine tablets was securely fastened to his leg, and launched himself from the sill. He rose almost vertically, and disappeared over the trees. Talker, after a moment's thought, rose also, and settled on the bank opposite the air-lock door. Boss started to follow, but the other "advised" him not to.

"Stay in the doorway," said Talker, "but be sure you are in plain sight. I want him to concentrate his attention on me, but I don't want to give him the impression that you are trying to hide. He might misinterpret the action.

When he gets here, keep quiet. I'll have other things to do than listen to you."

The wait, which Talker had expected to be a few minutes, grew into half an hour, without any sign from the decoy. Boss, true to his nature, fumed and fidgeted, providing his companion with a good deal of—well—concealed—amusement. His temper did not improve when the fighter, appearing with a rush of wings, settled in front of Talker, instead of the commander, to make his report.

"He was still in the woods when I went out, sir," said the flier. "I found a spot where I could watch an open place on the trail. I was sure he hadn't come by yet, so I landed on a ridge—the place was near the cliffs—and waited. When he appeared at the edge of the clearing, I flew low; out of sight from the ground, to the other side of the hills; then I came back, quite high, toward here. I'm sure he saw me; I passed directly over him, and he stopped in the middle of the clearing with his whole head tipped up—I suppose he had to, in order to look up with those sunken-in little eyes."

"You have done well. Did you see the creature turn, as though to come back this way?"

"He turned to watch me as I passed overhead; he was still standing motionless the last I saw of him. I don't know what he was going to do. So far as I can tell, he doesn't think at all."

"All right. You may return to your quarters, and eat if you wish. Tell the rest of the crew they are free to move about in the ship, but the ports must be left closed—no one but Boss and me must be visible from the outside."

The soldier vanished into the vessel, showing his near exhaustion in the clumsiness of his movements. Boss looked after him.

"We can't get away from this place too soon to suit me," he commented finally. "A few more weeks and I won't have a single soldier or engineer fit for action. Why did you pick this ghastly planet as a place to restock, anyway? There are eight others in this system."

"Yes," replied Talker sarcastically, "eight others. One so far from the Sun we'd never have noticed it, if our course hadn't taken us within half a million miles; four almost as cold, the smallest of them four times the size of this world; two with decent gravity, but without air enough to activate a lump of phosphorus—one of them near the Sun and continually facing it with one hemi-sphere; and one like this one, with air that would have mummified you at the first attempt to breathe. If you want to go to one of the others, all right—maybe it would be a better way to die, at that."

"All right, forget it—I was just wondering," answered Boss. "I'm so full of this blasted dope we have to take that I can't think straight, anyway. But when is that native coming back?"

"I'm not sure he is, just yet. The soldier flew so as to make it appear that he was coming from the other side of the hills; possibly the creature went to make sure his camp had not been molested. In that case, he may not return today; it's quite a trip for a ground animal, you know."

"Then what are we waiting here for? If he is very long coming, you won't be able to stay awake to meet him. You should have told the soldier to stay out until he was sure what the creature was going to do."

"That would probably have cost us the soldier. You saw the condition he was in when he came back. If you feel energetic, you can send out watchers in relays; but on a day like this, I don't see how they can keep out of sight—there's not a cloud in the sky. I was planning to allow a reasonable time for the native to come back from the point where he saw our soldier. If he doesn't show up, I'll get a night's sleep and expect him tomorrow morning."

"How do you know how long he'll take? You don't know the turns and twists in the trail, and you don't know how fast he walks when he's going somewhere."

"I know how long it took him to come from the pass this morning," answered Talker. "He was near there when the soldier saw him."

"Well, it's your idea, but I don't mind waiting. This sunlight is comfortable." Boss swung the air-lock door wide open, letting the sun shine some distance into the lock chamber, and settled himself on the smooth metal floor. Any long period of inactivity had one inevitable result; for it was necessary to sleep some sixteen hours out of twenty-four to offset the enormous consumption of energy exacted by Earth's gravity. Boss may have intended to watch, but he was asleep in two minutes.

Talker remained awake longer. He had indulged in less physical activity than anyone else on the ship, and his mind was normally by far the most active. He squatted on the soft carpet of grass, legs spread spiderwise on either side of his body, while the great topaz eyes took in the details of the surroundings.

Numerous living creatures were visible or audible. Birds were everywhere, as were the insects upon which many of them fed; for in August even Alaska knows that summer has been present for quite a while. The insects, naturally, interested Talker. Some of them bore rather close resemblance to himself, except in the matter of size. A few butterflies fluttered near him in erratic circles; he radiated a thought to them, but got no answer. He had expected none; but he continued to think to them, as a man thinks aloud to a dog, until their intoxicated flight carried them away from the neighborhood.

The flowers, too, caught his eye. They were "not much," as a human florist might have told him, but all were strange to Talker—his home planet had flowers, but they grew in the wilder regions, where it was decidedly unsafe to venture at any time. The only plants allowed in the vicinity of the castlelike fortresses, in which all civilized beings dwelt, were those which were of use in sustaining life. The few vegetables of this variety which bore attractive blooms were too common to be appreciated.

Talker himself was half asleep when he became aware of the man's approach. Had the alien known more of Earthly conditions, he would have realized, from the fact that the man was audible at all of fifty yards, that he was a city dweller.

Talker folded his wings tight against his streamlined body and watched the opening of the trail. The native was even more cautious in his approach than he had been the first time; but in spite of this, the two saw each other almost simultaneously. The man had stepped from the forest with his eyes fixed on Boss, asleep in the air lock, and did not see Talker until the shelter of the trees was behind him.

He stopped instantly, rifle halfway to his shoulder; but Talker carefully refrained from moving anything but his eyes until the weapon was lowered again. To his surprise, the gun was not merely lowered, but slung across the man's back; the man himself took a step or two forward, and stopped about fifteen feet away from the alien.

Talker was wondering just how far he could go without alarming the other into flight. Allen Kirk was wondering exactly the same thing. The human being was on the less comfortable side of the exchange, for he was seeing for the first time a creature who had obviously not originated upon his own planet. He felt uncomfortable, under the unwinking stare of two pairs of eyes—the optical organs of Talker's kind are lidless, and Kirk had no means of knowing that Boss was asleep—and the uncanny stillness of the two strange beings got on his nerves. In spite of this, Talker was the first to break down the tension.

His antennae had been folded back, unnoticeable against the silver-gray fur of his body. Now they swung forward, expanding into two iridescent plumes as their owner sought to interpret the mental radiations from the human brain.

Kirk was at first startled, then interested. He knew that the antennae of terrestrial moths were strongly suspected of acting as organs of communication, in some cases at least. It was possible, then, that this mothlike entity was interested solely in conversing with him—a possibility made more probable by the fact that neither creature had as yet made a hostile move, so far as the Earthling could tell.

Talker was fortunate in encountering Kirk, instead of a member of one of the several small tribes dwelling in the surrounding territory. Kirk was educated—he had just completed his third year of university study, and was working during the summer recess at plotting the activities of a minor insect

pest which was threatening to spread south and west into Canada. He had majored in sociology, and had taken courses in biology, astronomy and psychology—though the last subject had bored him excessively.

He had realized from the first, of course, that the object in the gully was a flying machine of some sort; nothing else could have reached this spot without leaving traces in the surrounding forest. He had noticed the air-tight construction of the doorway, but subconsciously refused to consider its full implication until he was actually confronted by one of the vessel's owners, and realized that neither ship nor navigators could possibly have originated on Earth.

With the realization that the being before him wanted to communicate, Kirk bent his thoughts in that direction. He regretted the nearly wasted psychology course; it was practically certain that none of the languages he knew would be of use. Nevertheless, he uttered a few words, to see if they produced any effect; for all he knew, the alien might not be able to hear.

Talker did hear, and showed the fact by a slight start; but the auditory impression he received was unimportant. As he had mentioned to Boss, he had managed to disentangle the cerebral radiations corresponding to a few simple line patterns, as received by the human eyes and symbolized in the brain; and he received, coincidentally with the vocal sounds, a thought-wave which he could translate easily into a series of just such patterns. Kirk, like many people, involuntarily visualized the written form of the words he uttered—not perfectly, but in sufficient detail for the keen mind of the listener to decipher.

Kirk saw the start, though he misinterpreted it. The motion that caught his attention was the sudden stiffening of the antennae as he spoke, the two plumelike organs expanding sideways and pointing diagonally forward, as though to bring his head between their tips. For almost a minute the two creatures remained absolutely motionless, Talker hoping for and expecting further speech, and Allen Kirk watching for some understandable signal. Then the antennae relaxed, and Talker considered the possible meaning of the images he had received.

His own race had a written language—or rather, a means for permanently recording events and ideas; since they had no vocal speech, their "writing" must have been utterly different in basis from that of any Earthly people, for the vast majority of terrestrial written languages are basically phonetic. At any rate, it is certain that Talker had severe difficulty in connecting with any, to him, normal means of communicating the symbols he learned from Kirk, for a time, at least; he did not realize that they were arbitrary line arrangements.

Kirk watched the nearly motionless insect for several minutes, without any idea of the true nature of the difficulty. Then, since speech had produced some effect the first time, he tried it again. The result caused him to doubt his own sanity.

Talker knew that he needed further data; in an attempt to obtain it he simply reached forward to a bare spot of earth and scratched with his odd "hand" the line pattern he had last seen in the human mind. Like Kirk's speak-ing, it was purely an experiment.

To the man, it was a miracle. He spoke; and the grotesque thing before him wrote—crudely and clumsily, to be sure, for Talker's interpretation was still imperfect, and he was, to put it mildly, unpracticed in the art of penmanship—the last few words that the man had uttered. Kirk was momentarily dumfounded, unable for an instant to think coherently; then he jumped to a natural, but erroneous, conclusion. The stranger, he decided, must lack vocal cords, but had learned written English from someone else. That implied previous friendly relationships with a human being, and for the first time Kirk felt fully at ease in the presence of the strange creatures.

He drew his knife, and with the tip scratched, "Who are you?" on the ground beside Talker's line. The meaning of the question lay in his mind; but it was couched in terms far too abstract for Talker to connect directly with the marks. A problem roughly similar would be faced by a three-year-old child, not yet literate, presented with a brick covered with cuneiform writing and told that it meant something. Talker saw the same letters in the man's brain, but they were as utterly meaningless there as on the ground. The conference seemed to have reached an impasse.

In spite of his relatively deepset eyes, which should, in Talker's opinion, have limited his range of vision to what lay before him, Kirk was the first to see Boss move. He turned his head to see more

clearly, and Talker followed his gaze with one eye. Boss had awakened, and was standing as high as his legs would lift him in an effort to see the marks on the ground—the top of the bank was about on the same level as the air-lock floor. He saw the attention of the other two directed his way, and spoke to Talker.

"What is that? Have you got in touch with him? I can't see what you have on the ground there."

Talker turned his antennae toward the air lock, not that it was necessary, but to assure the human being that Boss was being included in the conversation. "Come on over," he said resignedly, "though it won't do you much good to see. Don't fly too close to the native, and don't get nearer to him than I do at any time."

Kirk watched Boss spread his wings and launch himself toward Talker. The pinions moved too fast to be visible; it occurred to Kirk that these creatures were heavier than any Earthly bird, except for flightless forms like the ostrich, yet their wings spanned less than eight feet.

Boss took a single glance at the letters on the ground, and turned his attention to the Earthman. This was the first time he had seen him in full daylight, and he made the most of the opportunity, mercifully remaining silent the while. Talker promptly forgot him, as nearly as such an individual can be forgotten, and brought himself back to the matter in hand.

The "natural" method of learning a language consists of pointing out objects and having their names repeated until one can remember them. This is the first method that suggests itself to a human being, if no printed grammar is available. Talker hit upon it only after long and profound cogitation, when he suddenly realized that he had learned to interpret the human visual impressions in just that fashion—placing the subject in contact with simple objects, and examining the resulting mental radiations. He tried it.

Normally, the teacher of a language, whatever method he uses, knows what is being done. Kirk did not, for some time. Talker pointed at the ship with one of his hands, watching the man's mind intently for a series of marks such as had accompanied the sounds from his mouth. Kirk looked in the indicated direction, and then back at Talker. The latter pointed again; and a distinct picture, such as he had been seeking, appeared for an instant in the man's mind, to be replaced almost at once by an indecipherable complex of abstract thoughts.

Talker scratched the first impression on the ground—a perfectly recognizable word, "Ship," and looked up again. The man had disappeared. For an instant Talker was confused; then he heard various sounds from the gully, and crawled to the edge to look over. Kirk was below, raising his pole, which had been lying where he had left it, to the sill of the air lock. Still believing that Talker was able to write English, he had completely misinterpreted the gestures and writing, and supposed he was being requested to enter the craft.

Talker had a feeling of helplessness, in the face of his troubles; then he pulled himself together, forcing himself to remember that his life, and the other lives on the ship, depended on his efforts. At least, he now knew that the marks had a definite meaning, and he had learned the symbol for "ship." It was, he tried to convince himself, a fair beginning.

The man was crouching in the lock entrance—it was not high enough for him to stand—watching expectantly. Talker beckoned him back. If the man misunderstood his first attempt, now was the time to straighten it out. Kirk looked annoyed, though the aliens could not interpret the expression, slid down the pole, and scrambled back up the bank.

Talker tried again, pointing this time to the early afternoon Sun, and writing the word when it formed in Kirk's mind. The Earthman looked down at the result.

"If that job were necessary, it would be hopeless, friend," he said, "but it isn't necessary. I can speak English, and read it, and write it, thank you. If you can't talk, why don't you just write out what you want me to know?"

Not a word of this was understandable to Talker; in a rather hopeless fashion, he wrote the word or two which had been pictured clearly enough for him to catch, and succeeded in exasperating Kirk still further.

The man certainly could not be accused of stupidity; it was not his fault that he failed to experience a

flash of insight that would give the clue to the alien's meaning. The great majority of people would have done no better, except, perhaps, for some lucky chance. Human experience of thought transference is limited to the claims of "psychics" and to fantastic literature, except for a few scientific experiments of doubtful value; Kirk was not addicted to the reading of any of these products of mental aberration, and made no claim to be any sort of scientist. He had begun by jumping to a conclusion, and for some time it simply did not occur to him that the conclusion might be erroneous—the evidence had been quite convincing, to him, that Talker was acquainted with the English language. It followed that the mothlike one's intentions, motivating all this gesticulation and writing, were to teach Kirk the same tongue: an idea so exactly opposite the true state of affairs as to be almost comical.

Twice more Talker repeated his forlorn attempt to get his idea across to the other; twice Kirk repeated his expostulation, once going so far as to write it out on the ground, when it occurred to him that Talker might be deaf. The third time, the Earthling's temper broke free of its moorings—almost. He was not accustomed to using profanity; his family, whose elder members had carefully controlled his upbringing, was almost Puritanical in that respect, and habit got control of his reactions in time to prevent his speaking aloud the words in his mind. His reaction may be imagined when, without Kirk's having uttered a sound, except for a strangled snort, Talker extended a forelimb and scratched a perfectly legible "Damn" on the bare patch of ground.

The word "insight" provides a psychologist with material for hours of talk. Its precise meaning cannot be given without tacit assumption of understanding of its nature; neither Kirk nor the narrator possesses that understanding. It is assumed that the readers have had experience of insight, and can understand the habit of cartoonists of symbolizing its presence by an incandescent bulb—whether this habit antedates or succeeds the coining of the phrase "to see light" is a purely academic question. All that matters to us is the fact that Kirk abruptly saw the light—dimly at first, and then, though it strained his credulity to the breaking point, with something like comprehension. Why that particular incident should have served to unlock the door we cannot say: certainly Talker's knowledge of a bit of English profanity could have had many other explanations. Insight, as we have intimated, is a rather obscure process.

For almost a full minute, Earthling and alien stared at each other, the former struggling with his own prejudices and the latter wondering what had happened—even he, unused to interpreting human attitudes, could perceive that Kirk was disturbed. Then the Earthman, with the seeds of truth rapidly maturing in his mind, deliberately visualized a simple design—a circle inscribed in a square. Talker promptly and accurately reproduced it on his improvised blackboard. Kirk tried various letters of the English and Greek alphabets, and finally satisfied himself that Talker was actually obtaining the impressions directly from the thoughts. Talker, for his part, discovered that the visual impressions were almost as clear to him now as those of Boss, who had lost his patience and temper long before the Earthman, and had withdrawn by request. He was now sulking, once more squatting in the air lock.

The auditory impressions and abstract thoughts were still a hopeless confusion, so far as Talker was concerned; he never did make a serious attempt to unravel them. Both he and Kirk were satisfied to have found a common ground for expression, and completely ignored lesser matters. Kirk seated himself on the ground beside Talker, and an intensive course in English was rapidly embarked upon.

Not until the Sun was low did Kirk abandon the task, and then it was only because of hunger. Talker had already learned enough to understand the man's declaration that he would return in the morning; and Kirk went back to his camp in the gathering dusk, to prepare a meal and obtain a few hours' sleep—very few, as may well be imagined. He spent a good deal of the night awake in his blankets, staring up at the clear sky and wondering, at times aloud, from which of the thousands of points of light his new acquaintance had come. He was sufficiently adventurous by nature not to ask himself why they had come.

Talker watched the man disappear into the woods, and turned wearily toward the ship. He was overtired; the effects of the earlier dose of accelerine were beginning to abate, and he had a well-founded objection to taking more of the stuff than was necessary to keep him alive. With an effort, he flew the few yards between the bank and the air lock, settling heavily beside Boss. The sound of his wings woke the commander, who eagerly demanded a report on progress in communication. Talker obliged, somewhat

shortly; his fatigue had brought him unusually close to anger.

"I have made a beginning, in spite of your aid. How long it will take to set up working communication, I don't know; but I will try to direct the conversations so that the ideas we need to impart are used. He will be back when the Sun rises again; in the meantime, I need sleep. Don't disturb me until the native returns."

Boss was too elated at Talker's news to take offense at his manner. He allowed the herald to depart to his own quarters, and went off himself to spread the news, after closing the outer airlock door. The second in command received the information with glee, and in short order the crew was in better spirits than it had enjoyed since landing on this unhealthy and uncomfortable planet. Even the inhabitants of the sick bay, now three in number since the decoy who had gone after Kirk had returned with a complete set of pulled wing ligaments, began to feel that they were suffering in a good cause, and ceased thinking uncomplimentary thoughts about their officers. The doctor, too, usually by far the most pessimistic member of the ship's personnel, ceased making pointed remarks about "wasted effort" as he worked over his patients. Not one of them appreciated the very real difficulties that still lay ahead, before Talker would have any chance of making the human being understand their needs. None thought that anything more than the transmission of that knowledge would be necessary; and all, except Talker, regarded that matter as practically solved.

The herald had a better appreciation of what lay before him, and was far from sure of his course of action. He had promised Boss to arrange matters so that their needs would be among the first things to be transmitted to the Earthling; but he could not see how he was to fulfill the promise. Had it been merely a matter of keeping his word to the commander, Talker would not have been bothered in the least; he considered anything said to Boss was justified if it succeeded in bothering him. Unfortunately, Talker's own future existence depended on his ability to carry out the terms of that promise. Even with his lack of experience in learning, or teaching, languages, it occurred to him that making advanced chemistry the subject of the lessons was bound to be rather awkward. One cannot point out atoms and molecules individually; it would be pure chance if the man recognized either diagrams or samples, since the latter would be of value only to a chemist with a laboratory, and the former might not—probably would not—conform to human theories of atomic formation. It did not occur to Talker that the ship's pharmacist might be of help; he had been out of contact with his own class for so long that an unfortunate, but almost inevitable, sense of his own superiority had grown up within him. The rest of the crew, to him, were mere laborers; he had never talked with any of them as friend to friend; he had solved all his own problems since joining the crew, and would undoubtedly continue to do so unless and until something drastic forced him out of his rut. But it said for him that he was not conceited in the ordinary sense of the word; the feeling of superiority was the result of class training; and the ignoring of others' abilities was completely unconscious.

At the moment, Talker was not worrying about his course of action. He was sound asleep, crouched on the padding of the floor of his quarters. Boss, having made sure that his own contributions toward the present state of near-success were not being minimized in the rapidly spreading news, also retired. The second officer made sure that both air locks were fast, and made his way to the long wardroom in the lower part of the ship. Most of the soldiers and several engineers were gathered there, discussing the day's events and the chances of reaching their original planetary system—they no longer had "homes" since Boss had broken allegiance with his overlord. The officer's presence did not interrupt the conversation; the Second was a member of the soldier class, and entered the discussion on an equal plane with the others.

It is exceedingly doubtful if any of the crew had ever objected to Boss' dereliction; the act had made little or no change in the course of their existence, and they cared little for whom they worked and fought. If anything, they preferred the new state of affairs, for the constant internecine warfare between the rulers of their home world resembled organized piracy more than anything else, and there was now no need to turn over most of the loot to their own overlord. Boss, of course, had acted almost on impulse, giving little or no thought to such matters as the problem of replenishing exhausted food and ammunition—he

expected to supply those wants from his victims. Unfortunately, an unexpected encounter with a full-armed ship belonging to his erstwhile ruler had left him in no condition to fight anybody; after three or four attempts to bluff supplies from isolated stations in his own system, he had made matters a little too hot for himself and fled in the handiest direction, which happened to be straight away from the four pursuing warships. Near the speed of light, his vessel became undetectable; and once out of his own system, he had not dared to stop until Sol was bright on his navigation plates. His reasons for landing on Earth have already been made clear. He had food in plenty, and his ship drew its power from stellar radiations; but, not a locker on his ship contained a round of ammunition.

If the discomfort of their environment had turned any of Boss' crew against him, Talker's recent efforts had brought them back. The second officer found himself in complete agreement with the crew—it was good to have a commander like Boss, to keep things under control! There passed a peaceful and happy evening on Boss' vessel.

Boss had found it almost impossible to set regular watches. No matter how often he relieved his men, the inactivity of the job promptly put the relief to sleep. The bodies of the crew, exhausted by the constant battle against Earth's savage gravity, would give up and drop the individuals into a coma before they realized that the stimulant accelerine had worn off. The sleep was short, but apparently unavoidable; Talker, alone, had been able to force himself to more or less regular waking and sleeping hours, simply because he did practically no manual labor. For this reason, as soon as he was convinced that there was nothing in the neighborhood that constituted a menace to the ship itself, Boss ceased setting watches and merely closed the ports at night. There were enough differences in physique among the crew members to make it practically certain that someone would always be awake, day or night. The whole thing was horribly unmilitary by any standards, but it was typical of Boss' line-of-least-resistance nature.

It chanced that Boss himself was asleep when Kirk showed up the next morning, and the ports were still sealed. The man threw a stone at the air-lock door, and examined the ship more closely while he waited for something to happen. The Sun had just cleared the tree and was shining directly on the bow of the vessel. This time, Kirk found that he could see a little through the control-room ports—a few glimpses of boards, covered with dials and levers, the latter oddly shaped to conform to the peculiar "hands" of the operators. He was not close enough to the ship to obtain a very wide vision angle through the ports, and he had to move around to see the various parts of the chamber. While he was thus improving his knowledge, his eye caught a flash of reflected sunlight from the beveled edge of the air-lock door, and he turned to see who or what was emerging.

The sound of the stone Kirk had thrown had echoed through the main corridor and reached the "ears" of a party of engineers in the wardroom below. These individuals had interrupted a form of amusement startlingly similar to contract bridge, in which they were engaged, and one had gone to inform Boss. The latter cursed him, told him to rouse Talker, and went back to sleep.

It was Talker, therefore, followed by some of the more curious engineers, who emerged from the lock. Kirk was able to recognize the herald by his antennae, but could discern no difference between the other members of the group. The meeting adjourned, at Talker's direction, to a spot in the gully, in front of the ship, which bore a large and exceptionally smooth area of sun-dried clay, and lessons began. Talker had brought the appropriate materials with him, and had planned to take notes in his own form of "writing"; but he delegated this task to a member of the audience, and gave his full attention to the delicate matter of guiding the choice of words in the proper direction.

This task was no sinecure, since Talker was still extremely uncertain as to the precise nature of words. The meaning covered by a single word in English sometimes requires several in another language; the reverse is also true. Talker had learned the symbol that indicated the ship; he discovered later, to his confusion, that there exist such things as synonyms, other words that mean the same thing. He never did discover the variety of objects that could have been meant by "ship." Kirk saw these sources of difficulty almost from the beginning, and went to considerable trouble to avoid them.

Each written word, to Talker, was a complete unit; it is doubtful if he ever discovered that they were made of twenty-six simple marks, in various combinations. Obviously this fact complicated his task

enormously, but there was nothing to be done about it. To explain the individual letters would have been tantamount to teaching the verbal language; and months, or even years, would have been necessary to teach Talker's auditory organs to recognize the innumerable fine distinctions of pitch and overtone to be found in a single sentence.

The details of the weeks that were taken up in the learning would be of interest to psychologists and semanticists, but would extend the present narrative to an unjustifiable length. There were several short interruptions when Kirk had to forage for food, and once he, was forced to absent himself for nearly a week, in order to turn in his parasite report at the nearest center of civilization. He told no one of his find in the forest, and returned thereto as quickly as he could. He found the aliens impatiently waiting for him, and the herald at once returned to the task. Kirk had long since perceived that some tremendous anxiety was behind Talker's insistence, but no amount of effort served to make clear any details.

September and Kirk's patience were drawing to an end by the time that exchange of ideas had progressed to a point where it could be called conversation. Talker wrote with considerable facility, using a pencil and pages from

Kirk's notebooks; the man spoke aloud, since he had discovered that this apparently resulted in a sharper mental image of the words. To him, the herald's need was less urgent than the satisfaction of his own curiosity; he asked, so far as Talker's rapidly increasing vocabulary would permit, questions designed to fill that want. He learned something of the physical and sociological nature of the alien's home world—not too much, for Talker had other ideas than the telling of his life story, and Boss became suspicious and almost aggressive when informed of the nature of the Earthman's curiosity. He could conceive of only one use to which such information could possibly be turned.

Kirk finally accepted the inevitable, and permitted Talker to run the conversation in his own fashion, hoping to get a few words of his own into the discussion when the herald's "urgent business" was completed. Talker had kept the man ignorant of Boss' attitude, justly fearing detrimental effects on Kirk's willingness to cooperate.

The attempts at explanation, however, seemed as futile as the first words had been. Talker's premonition of the futility of drawings and diagrams was amply justified; not only were the conventions used in drawing by the engineers of his people utterly different from those of Earth, but it is far from certain that the atoms and molecules the aliens tried to draw were the same objects that a terrestrial chemist would have envisioned. It must be remembered that the "atoms" of physics and of chemistry, used by members of the same race, differ to an embarrassing extent; those conceived in the minds of Talker's people would have been simply unrecognizable, even had Kirk possessed any knowledge of chemistry.

The supply of the requisite arsenic was completely exhausted, so that no samples were available; in any case, Kirk's lack of chemical knowledge would undoubtedly have rendered them valueless.

"There is no use in trying to make your needs known in this manner," the human being finally stated. "The only way in which I am at all likely to hit upon the proper word is for you to describe the more common characteristics of the substance, and the uses to which you put it. Your pictures convey no meaning."

"But what characteristics are you likely to recognize?" asked Talker, on the paper. "My engineers have been striving to do that very thing, since we started."

"They have sought to describe its chemical nature," responded Kirk. "That means nothing to me in any case, for I am not a chemist. What I must know are things like the appearance of the stuff, the appearance of the things that can be made from it, and the reasons you need it so badly. You have not told me enough about yourselves; if I met a party of my own kind stranded on an uninhabited land, I would naturally know many of the things of which they might stand in need, but there is no such guide for me in this case. Tell me why you are here, on a world for which you are so obviously unfitted; tell me why you left your own world, and why you cannot leave this one. Such things will guide me, as could nothing else you might do."

"You are probably right, man. My captain forbade me to divulge such knowledge to you, but I see

no other way to make clear our need."

"Why should the commander forbid my learning of you?" asked Kirk. "I see no harm which could result; and I have certainly been frank enough with you and your people. Mothman, I have considered you as being friend-ly, without seeking evidence of the fact; but I think it would be well for you to tell me much about yourselves, and tell it quickly, before any more efforts are made to supply your wants."

Kirk's voice had suddenly grown hard and toneless, though the aliens could neither appreciate nor interpret the fact. It had come as an abrupt shock to the man, the idea that the helpless-seeming creatures before him could have any motive that might augur ill to humanity, and with it came a realization of the delicacy and importance of his own position. Were these beings using him as a tool, to obtain knowledge of humanity's weaknesses, and to supply themselves with means to assault the race? Unbelievable as it may seem, the thought of such a possibility had not entered his head until that moment; and with its entrance, a new man looked forth at the aliens from Kirk's eyes—a man in whom the last trace of credulity had suddenly vanished, who had lost the simple curiosity that motivated the student of a few minutes before, a man possessed and driven by a suspicion of something which he himself could not fully imagine. The doubts that had failed to appear until now were making up for lost time, and were reinforced by the uncomfortable emotion that accompanies the realization that, through no act or idea of one's own, one has barely been diverted from the commission of a fatal blunder.

Talker realized his own error before the Earthman had finished speaking, and wasted no time in endeavoring to repair it. His ignorance of human psychology was an almost insuperable obstacle in this attempt.

"We need the substance which I am trying to describe, far more urgently than we can say," he wrote. "It was the commander's idea, and my own, that it would be a fatal waste of time to allow the conversation to move to other topics, which I can well understand must interest you greatly. Had we learned where it might be found, there would have been no objection to answering any questions you might ask, while we were obtaining it; but we cannot remain here very long, in any case. You must have noticed—indeed your words have shown that you have noticed—how uncomfortable we are on this planet.

Nearly half of us, now, are disabled from fractured limbs and strained tendons, fighting your terrible gravity; we live at all only through the use of a drug, and too much of that will eventually prove as dangerous as the condition it is meant to counteract."

"Is your vessel disabled, then?" asked Kirk.

"No, there is no mechanical trouble, and its power is drawn from the matter around it in space. We could travel indefinitely. However, before we dare return to a region where our enemies may locate us, we need a large store of—the material we seek."

"Have you no friends in that neighborhood, to whom you could have fled, instead of making such a long voyage to this solar system?"

"The voyage was not long—perhaps four hundred of your days. Our ship is powerful, and we used full acceleration until your Sun showed its nearness by increasing rapidly in brilliance. We would have risked—did risk, since we had no idea of the distance—a much longer flight, to get away from that system. We had a ruler, but the captain decided we would do better on our own, and now there is no armed vessel within the orbit of the outermost planet that would not fire on us at sight."

"It would seem that you lack ammunition, then, and possibly weapons." Kirk proceeded to make clear the difference in meaning between the words, using his rifle as an example.

"Weapons we have; it is the ammunition we lack," affirmed Talker. "I see how your rifle works; ours are similar, throwing a projectile by means of explosives. We have already manufactured the explosives from organic materials we found here; but the element we use in our projectiles is lacking."

"It would, I suppose, be a metal, such as that from which my bullets, or possibly the gun, are made," decided Kirk. "I know where these substances may be found, but you have not yet convinced me that my people can trust you with them. Why, if you are an outlaw in your own system as you claim, do you wish to return at all? You could not, so far as I can see, hope for security there, even with weapons at

your disposal."

"I do not understand your question," was the reply. "Where else would we go? And what do you mean by `security'? Our lot would be better than before, for we would not have to render up the greater portion of what we obtain to our ruler—we can keep it ourselves. There are many uninhabited portions of our world where we can make a base and live in ease."

"Something tells me that your way of life is different from ours," remarked Kirk dryly. "What is the metal you seek?" He wanted to know this for the sake of the knowledge; he had as yet no intention of helping the mothmen to obtain the substance. He wished that Talker's pencil could convey some idea of what the herald was really thinking. Writing, by one who barely knows a language, is not an extraordinarily efficient method of conveying emotions. "If you will show me one of your weapons, it may help," the man added as an afterthought.

Talker, naturally, had suspicions of his own arising from this suggestion. Unlike Boss, however, he was not blinded by them; and remembering that he had already divulged probably the most important characteristic of the weapons—the fact that they were projectile -throwers—he answered after a moment, "Come, then, and see."

It was characteristic of the herald that he tendered the invitation without consulting Boss, or even mentioning to Kirk the objections that the commander would probably raise. He had a contempt, born of long experience, for the captain's resolution, and it never occurred to Talker to doubt his own ability to override any objections. His confidence was justified. If Boss had possessed a heart, instead of a system of valves and muscle rings along the full length of his arterial and-venous systems, he would probably have had heart failure when Talker coolly announced his intention of displaying the ship's arma-ment to the Earthling; he was still sputtering half-formed thought waves as he followed the pair toward the air lock. Talker had merely explained the reason for his action, and acted; Boss would never have admitted, even to himself, that he considered Talker's opinion superior to his own, but he invariably accepted it as though it were. He was firmly convinced that his own genius was responsible for their successes to date, and Talker saw no reason to disillusion him.

Kirk learned little from the ships guns, though the sighting apparatus would have given an artilleryman hours of ecstasy. The weapons themselves were simply ordinary-looking small-caliber, smooth-bore cannon, but with extremely ingenious mountings which permitted them to be loaded, aimed, and fired without losing air from the ship. The turret rooms were divided by bulkheads into two parts, one containing the gun and auxiliary mecha-nisms, and the other, to Kirk's surprise, piled high with metal cylinders that could be nothing but projectiles. He picked up one of these, and found it to be open at one end, with an empty hollow taking up most of its interior. Talker, who had made explanations from time to time, began to write again.

"We need material to manufacture the filling of that projectile," were his words. "Empty, it is useless for any purpose whatsoever."

"And when it is full—" asked Kirk.

"The shell penetrates the walls of a ship, leaving only a small hole which is promptly sealed by the material between the inner and outer hulls. The projectile is ruptured by a small explosive charge, and its contents evaporate, releasing an odorless gas which takes care of the crew. The ship can then be towed to a planet and looted without opposition and without danger—if you can reach a habitable world unseen."

"Why can you not use an explosive charge which will open a large hole in the hull, and do your looting in space?" asked the man.

"Air extends only a short distance outward from each world," explained Talker, his respect for the Earth-man's knowledge dropping about fifty points, "so it is impossible to leave a ship or change ships while in space. An explosive shell, also, would probably destroy much of the interior, since the hull of a ship is far stronger than the inner partitions, and we want what is inside as nearly intact as possible."

Kirk waited rather impatiently for the herald to finish scrawling this message, and snapped, "Of course, I know about the airlessness of space; who doesn't? But have you no protective garment that will permit you to carry air and move about more or less freely, outside a ship?"

"Many attempts have been made to devise such a suit," was the answer, "but as yet there is nothing which can be trusted to permit all our limbs to move freely, carry air to our breathing orifices, and possess air-tight joints and fastenings. I can see that there might be very little difficulty in designing such a garment for your simply constructed body, but Nature built us with too many appendages."

Kirk said nothing as he half-crawled down the low corridor to the air lock, but he did a lot of thinking. He was reasonably sure that most of his cerebral operations were indecipherable to the alien, though it was chiefly mental laziness which kept him from making any particular effort to couch his thoughts in nonvisual terms—such an effort would have been a distinct bar to constructive thinking, in any case. The herald's story, while strange from Kirk's Earthly point of view, was certainly not impossible; the conditions of life he had described had, in large measure, existed on Earth at various times, as the Earthling well knew. Kirk had gained considerable appreciation of Talker's rather cynical character, and had been somewhat amused at the unconscious egotism displayed by the herald.

The Sun was low in the west when the group emerged from the air lock, and a stiff northeast wind made its presence felt at the top of the bank, out of the shelter of the hull. Kirk looked at the sky and forest for a few minutes, and then turned to Talker.

"I will return to my camp now, and eat. You have given all the help you can, I guess. I will try to solve the problem tonight. I can make no promise of success, and, even if I do discover what your chemical is, there is the possibility that I will still fear to trust you with it. Your people are peculiar, to me; I don't pretend to understand half of your customs or ideas of propriety, and my first consideration must be the safety of my own kind.

"Whatever happens, I cannot remain much longer in the territory. You may not be acquainted with the seasonal changes of this planet, but you must have noticed the drop in temperature that has been evident at night the last week or two. We are located almost upon the Arctic Circle"—Kirk pictured mentally just what he meant—"and I could not live very far into the winter with my outfit. I should have returned to my own country several weeks ago."

"I cannot control your actions, even if I wished to do so," answered Talker. "I can but hope for the best—an unusual situation, all around, for me."

Kirk grinned at the herald's wry humor, turned, and strode away in the direction of his camp—he had not moved it closer to the ship, because of the better water supply at its original location. As he walked, the grin melted quickly from his features, to be replaced by the blank expression which, for him, indicated thought. He had no idea of what he should do; as he had told the herald, the man's first consideration was his own kind, but he wanted to believe and trust in the alien, whom he had come to like.

It was evident that Talker had not exaggerated the seriousness of his own position. Kirk had seen members of the crew moving painfully about their duties on board the ship, and had seen one of them collapse as the horny exoskeleton of his absurdly thin legs gave way under a body weighing more than three times what it should have. On the other hand, a crew of Earthmen under such conditions would have left long since, weapons or no weapons. Kirk found himself unable to decide whether the stubbornness of these creatures was an admirable trait, or an indication of less worthy natures. It occurred to him, fleetingly, that their idea of a "worthy" trait probably differed widely from his own.

Possibly, if the man decided to refuse aid to the strangers, he could quiet his conscience by comparing them to children refusing to come in out of the rain until mother promised them some candy—but a scientist, working overtime in his laboratory, could be described by the same simile, and Kirk knew it. No, the need was surely real enough to them.

And why should they want to attack mankind? Earth was useless to them, as a dwelling place; if, as they claimed, their own king were against them, only fools would make such an attempt, however armed. And Kirk was not impressed with the gas guns of the aliens—they were, even he could realize, worth absolutely nothing except in the confined space of an ether ship. On the other hand, Talker might have stretched the truth beyond its yielding point; and the "king," whom he might still be serving, would not need excuses such as the possible utility of a world in order to attack it, unless he differed greatly from Earthly rulers. The chance to extend his dominions would be motive enough.

Well, let that go for a minute. Kirk had arrived at his camp, and prepared a light meal. He ate slowly, still thinking, and washed the few utensils in the same fashion. The Sun had long been gone, and he sought his blankets with the intention of sleeping on the problem.

Sleep refused to come. He would absolutely refuse to consider one angle, and another promptly rose to torment him. What was the gas the aliens used? Kirk was not sure whether or not he regretted his ignorance of chemistry. The train of thought led by imperceptible, but perfectly natural, steps to the idea of insect poisons, his own original job in the territory, and the stock of copper sulphate and arsenate of lead which was stored at the river mouth port, for use the following spring. The idea left his mind as quickly as it had entered; for such materials did not, so far as Kirk knew, form any kind of gas. The job recalled his other occupation, which was still that of acquiring an education. The imminent opening of college presented itself as an additional reason for immediate departure; it was doubtful even now whether he could return to the States in time for registration—unless, he thought with a flicker of amusement, the aliens performed the necessary transportation. And so the trail of thought led itself in a circle, and he was once again considering the matter of the requirements of those on the spaceship.

And then another thought struck him. Let it be granted that the herald had adhered strictly to the truth at all times. He might, then, be a likable individual; he might be a shepherd trying to save the lives of his flock; he might be an officer worthy of respect for his ability and devotion to duty—no matter what he might be in his character, the simple and undeniable fact remained that, by his own admission of past activities and by his declaration of the uses to which he intended to put the weapons he hoped to acquire, he was neither more nor less than a pirate. He had stated plainly that Boss had revolted against the authority of his original ruler; he had tacitly admitted that he himself had concurred in the expression of independence; and he had used the term "outlaw" in describing the ship and its crew.

If Earth were to have any dealings with the herald's people, they would normally be with the law-abiding section of society. Kirk had no moral right to give assistance to that crew, no matter what his personal feelings might be. For a while, the Earthman pondered the matter, seeking flaws in the argument—seeking them solely because of the friendship he had commenced to feel for Talker, for any sort of decision would be a boon to his tortured mind.

But the fact stood; and eventually Kirk ceased attempt-ing to argue it away, and accepted the simple idea that aiding the strangers would be, legally and morally, an offense against justice. Owing to the natural contrariness of human nature, he now found himself wishing he could help the alien with whom he had conversed so long; but the attainment of a decision had eased the tension in his mind, and at long last the man succeeded in falling asleep. He might have slept even more peacefully had he known a single fact—one of which not even Talker and Boss had dreamed.

Their interstellar voyage had consumed, not four hundred days, but more nearly forty years. The greater part of the flight had been made at a speed near that of light; hours of ship's time had been days outside. A similar period was certain to elapse on the return; and the ruler who had been defied would certainly have been succeeded by another. Talker and Boss could easily have passed themselves off as returning members of a legitimate interstellar expedition; even had they failed to do so, it is unlikely that they would have been punished for defying a ruler whose place their judge, as likely as not, would have inherited either by private assassination or conquest in war.

Unfortunately, Talker's race had no inkling of relativity, as their science was of the type which develops better guns and faster ships, without bothering too much with theory; and Kirk's only acquaintance with the concept had been made through the pages of a classic novel on time travel—the only such work he had ever read, and one which had emphasized the fourth dimension rather than velocity-mass ratios.

When Kirk awoke, therefore, it was with a distinctly uncomfortable feeling connected with the day's probable events. He rose, shivering in the biting cold of early morning, washed and ate, and broke camp. Whatever happened, he intended to head south that day, and he carefully made tent, blankets, and the other gear into a single large pack. This he cached near the camp site; then he picked up his rifle and took the trail over the hill into the next valley. He was fairly sure that the aliens could not harm him,

except by landing their vessel on top of him, since they were without weapons and far inferior to him in physical strength.

But why, he suddenly thought, should there be any trouble? He need not refuse to help; it was simple truth that he had not been able to solve the problem—he still had no idea of the identity of the substance they desired. He could keep to himself his opinion of their occupation. Kirk was sure that the words describing that opinion had not been used in any of his conversation with Talker, and the herald must by this time be accustomed to receiving untranslatable waves from the Earthman's mind.

Thus determined, Kirk now emerged from the forest to the bank of the arroyo where the interstellar flier lay. As usual at this time of day, none of the crew was visible; also as usual, Kirk attracted attention to the fact of his presence by sending a stone clattering against the outer hull.

Talker, in spite of the ever-mounting fatigue that was threatening the lives of his party as much as any other single trouble, had also spent a portion of the night in thought. He had seen more and more clearly in the last few days that the chances of Kirk's learning the name of the poison were microscopic. A practical chemist, given a sample of the substance, could have identified it without difficulty; but without even a milligram sample on board, it seemed doubtful whether anyone could tell what was needed. The natives of this planet had, and used, poison gases; Kirk had told him that much. In their case, however, it was necessary in general to use them outdoors, and special characteristics of density and effectiveness were thus required. Talker knew that his gas was about twice as dense as the air of this world, under the same conditions of temperature and pressure; but he had no idea of the extent of its toxic qualities on terrestrial life.

The only chance, it seemed, if Kirk failed in his task, was to have him direct the voyagers to a place where someone skilled in chemistry, or warfare, or both, might be found. The herald had learned to communicate; the rest should not be difficult.

So it came about that Talker answered the bell-like clang on the hull with his mind set to expect the worst, and prepared to do something about it. He noticed at once that the human being was carrying his rifle, which he had not done since the first day, and the alien partially interpreted the reason for the act. He flew to the bank and squatted in front of Kirk, antennae alertly spread. The Earthling, his mind made up, wasted no time.

"I have not solved the problem," he stated flatly.

"I am not surprised," wrote Talker, "nor am I angered. There was no need to bring the weapon—you cannot be blamed for failure at a task where one better trained than you could probably have done no more. It would be childishly stupid to hold animosity against you, in spite of our disappointment.

"But you can still help us, There must be, somewhere on this planet, individuals who are trained in such matters. You have mentioned your own need of getting out of this region before the onset of winter. We could easily transport you to your own place, and you in return can direct us to such a person as I have described. Are you willing?"

The herald's attitude at his failure had taken Kirk completely by surprise, and had added much to his opinion of the creature. The new suggestion found him unprepared, for his intended refusal seemed now even more unpleasant than before. Some inner guardian made him say simply, "I have left my equipment at the camp," and then he turned and strode, as rapidly as he dared, into the forest and away from the danger of betraying the thoughts whirling about in his mind.

A mile from the ship, Kirk stopped and tried to settle the recent happenings into his picture of the alien's personality. He had felt friendship of a sort for Talker, even after deciding he was a pirate and unworthy of such feeling; the attitude the herald had shown, in the face of what must have been a bitter disappointment, had strengthened Kirk's respect. Refusing to help was going more and more against the grain.

He tried to argue down his feelings. It was evident, from Talker's conversation, that the human admired characteristics of altruism and sympathy were foreign to his make-up. He was perfectly selfish, and Kirk had no doubt that he would have seized any chance of saving his own neck, whether or not that chance also included the necks of his fellows. He looked on those others with tolerance, since they made life easier for him, but there was certainly no trace of fellowship in his feelings toward them. Kirk had

repeatedly sensed the amusement in Talker's mind as he spoke of Boss and others of the crew, and was reminded of the interested contempt with which he himself had sometimes watched a child building sand castles at the seashore.

No, Talker was not an ideal character from a human point of view; but Kirk still felt attracted to him. Could he go back and tell the alien that it was useless to ask him for further aid? The man shrank from the thought; and yet what else could he do? Nothing. Slowly the human being finished the walk to his former camp site, shouldered the heavy pack, and turned back toward the ship. He walked sturdily, but the morning sunlight filtered through the leaves onto a face that looked far older than Kirk's twenty years would demand.

Talker was still waiting on the bank, both his great yellow eyes fixed upon the opening of the trail. He saw Kirk coming with his burden, and at once turned and flew to the air lock, disappearing within. Kirk saw him go, and called; the herald's head and antennae reappeared at the portal. The man dropped his pack to the ground, and stood motionless and silent, looking at the mothman and trying to find words in which to express the thing he had to make clear. He couldn't do it.

The thoughts were enough. Talker spread his wings and, concealing the frightful effort the act cost him, returned to the place where Kirk was standing. He still carried the writing materials, and, as the Earthling commenced to realize the extent to which he had been analyzed, he began writing.

"What is it that we have done to offend your cus-toms?" asked the herald. "What possible interest can you have in those of my kind whom you have never seen, of whom you would never have heard except for me?"

Kirk tried to explain his attitude on the subject of piracy, but failed signally. To the alien, raiding and looting were the natural means of making a living; his ideas of right and wrong simply did not match those of human civilization, any more than could be expected. It was Talker who finally decided that further effort in that direction was useless.

"When I first discovered you," he said, "it took some time for me to realize that the waves you radiated represented a pattern of intelligence. Your behavior eventually showed the truth, and with much effort I learned to interpret, to a certain extent, those thought waves. I fear that we are up against the same problem here. Just as it took me some time to comprehend that my thoughts were not the only possible kind, I am just beginning to understand that my behavior pattern is not the only possible one. With time, perhaps I may understand yours; I must, if to do so lies within the powers of intelligence. Therefore, I invite you to come with us, anyway, to the southern regions from which you say you have come. On the way, you will tell me more about your people, as I have told you of mine. Perhaps, with that background, I shall begin to appreciate your point of view and find a means of persuading you to help us. In any case, the knowledge will be of great interest for its own sake.

"Until I do have some understanding of your reasons for refusal, I shall not repeat our request; nor shall I inform the commander of what has occurred. The less he knows, the better for both of us, as well as himself. He could never appreciate what I am now trying to do, and he has no understanding of how a mind can seek pure knowledge without some immediate use for it—curiosity and imagination are unknown to him.

"Come, then; we will travel southward slowly, and converse as we fly. Some time at least will be saved; and we do not dare spend more than a few more days on this planet. We would not have enough of the crew left to man the engines—there are few enough of us now who remain able."

Kirk accepted, though never thereafter could he account for his reasons for doing so. Unconsciously, he wanted to give the creature a chance to justify itself; more and more the idea was winning ground that a being so generally reasonable and so utterly imperturbable in the face of telling disappointment could not be a criminal on any code. Such a belief, of course, is unreasonable and unjustifiable even when considered with respect to a single culture. Applied by a member of one civilization to a creature of another, such an emotional attitude is sheer lunacy. Logic alone stands a chance, and even that is likely to be badly crippled for lack of data.

Earthman and alien entered the air lock, and closed both doors—for nearly the last time on Earth, the herald hoped. Talker relaxed for a moment in the corridor, fervently vowing never again to spread his

wings on a world where he couldn't fly without stimulants; then he crawled forward and up the ramp to the control room, Kirk following.

They found themselves alone in the control chamber, for it was still early morning. Talker sounded the signal intended to let Boss know he was wanted, and the oddly assorted pair waited in silence. Several repetitions of the call were necessary before Boss finally appeared from below. His attitude was even more domineering than usual, partly because he had just been awakened by the signal, and partly because he never missed an opportunity to try to impress the native with his importance; he never fully appreciated the fact that the human being could neither "hear" his speech nor interpret his bodily attitude.

Talker told him to get the ship into the air, and cruise slowly toward the equator of the planet until ocean was reached. Boss promptly began asking questions about the state of progress in locating the object of their search; and the herald replied that at the moment no progress was being made because the individual who should be working was talking instead. That silenced the captain, and he moved to the control board to call the engineers to their stations. Talker took his place at the command-er's side, ready to transmit more detailed instructions if and when necessary. The signal board was a sufficiently versatile affair to transmit the relatively simple commands involved in raising the ship, however; as a matter of fact, the actual take-off, as would be expected, was handled from the control room, and orders were given merely to start the proper generators below.

Kirk laid his pack on the floor beside the captain and sat on it, thus bringing his head down to within about two feet of the other's. The glass ports, larger than any others in the ship, permitted him to see in all directions forward, while a periscope, which he quickly noticed, gave a partial view backward, leaving the lower rear the vessel's only blind spot. The periscope eyepiece was made to accommodate the huge optics of the ship's owners, and transmitted a decidedly distorted image to Kirk's eyes, as he found by experiment. The field of view could not be shifted, and its lower half was occupied by the hull. The man turned his attention to the great port which gave a clear view of what lay below and in front.

He settled himself more solidly as the ground slid smoothly away from him. There was no take-off run; the vessel rose straight for two thousand feet, turned the streamlined bow southward, and followed its nose. Boss relaxed at his post as soon as they were on course, and merely kept his eyes on a row of dials supposed to indicate the behavior of the generators. An engineer was watching a duplicate set below, and it made little difference whether or not Boss stuck to his job—though he would not have admitted that fact to Kirk had he been able to speak to him.

The human being and the herald watched and commented upon the terrain below, as it drifted sternward. Talker drew attention to the deserted appearance of the forest, and compared it to the similar vast, uninhabited regions of his own planet. This, as intended, drew from Kirk a description of the more densely populated countries, of the different peoples who inhabited them, and the various relationships existing between them. On this last point he was a fair lecturer, for he had spent a good deal of time on sociology. The herald kept him talking, asking questions whenever the man seemed to be running down, and in general doing everything which was likely to result in the production of any information that might be of use.

Their pace was only moderately rapid. The sound of the ship's passage through the air could not have been heard on the ground, and was inaudible through the double hulls; whatever power drove and supported them was efficient enough to be soundless, as well.

They came in sight of the sea and a small settlement at almost the same instant. The town was not large, but possessed several docks and a fair-sized fleet of fishing boats. Kirk recognized it—it was the town where he had landed upon his arrival at the beginning of the summer, and where he had recently turned in his report of the season's progress. It was now late afternoon, and a glance at his watch and a moment's calculation informed Kirk that the ship could not have been traveling more than thirty miles an hour, for they had left the base of his operations only slightly after noon. Five hours in the low control chamber had left the man rather cramped; he flung a query at Talker, and was informed that the main corridor was probably the only room on the ship spacious enough to permit him to stretch, even lying down. Kirk's memory of the gun rooms suggested that the herald was right, so he sent his pack sliding

down the ramp, followed it, detached a blanket and stretched out on the corridor floor, to the no small astonishment of a pair of soldiers who emerged from their rooms at that moment. He had brought no food, but did not feel particularly hungry. After a few minutes, he propped himself up with the pack as a pillow, and stared off down the hallway. The door at the far end was now open, and faint sounds came from below. Kirk considered investigating, but thought better of it and relaxed on his blanket.

A very faint trembling of the floor roused him a few minutes later. He stood up—too suddenly, for his head impinged sharply on the metal ceiling—and turned toward the control-room ramp once more. Something appeared to be happening. He started up the incline, but did not reach the top, for as his head attained the level of the floor above he saw Talker starting down, and retreated before him.

Boss followed the herald into the main corridor, and Kirk walked behind the pair to the air lock. Evidently the ship had landed. The man brushed Talker's wing tip with a finger to get his attention, and asked, "What is the matter? Why have you come down so soon? I know of none around here who could give you help."

"Your words do not agree with your thoughts of a few moments ago," returned Talker, who still carried the paper and pencil. "I hoped, when I asked you aboard after your avowal of enmity toward us, that your mind would betray some knowledge of value. It has done that; you are not accustomed to having your thoughts read, and have surprisingly little control over them. Had I not been delayed through having to learn your system of mental symbology, we would have had long ago the information we needed, without the necessity of asking your consent. When the settlement near which we are now landed came into view, your mind gave out word patterns of all sorts—the name of the place, which means nothing to us, the fact that the individual who directs your work resides therein, and—the fact that there is stored somewhere in that town a supply of a chemical to be used for poisoning insects. Your master is an expert on such matters; he must be, to hold the position. It is possible that the chemical will prove to be what we require; if not, I have learned to read human minds from you, and I can pry the knowledge from the one who directs you."

"Then you asked me aboard solely in the hope of tricking me?" asked Kirk. "There was no friendship, as I had believed? No sincere attempt to understand my point of view, as you claimed?"

"It would indeed be interesting to understand your peculiar ways of thought," replied the herald, "but I have spent all too much time in satisfying idle curiosity; and I see no practical value to be derived from the understanding you mentioned. You are like the others on this ship—easily swayed by stereotyped patterns of thought; I can see no other possible reason for your refusal to aid us. I bear you no enmity, since I have almost achieved my goal in spite of you; but it would be truly idiotic to expect me to feel friendly toward you. None the less, it would be interesting to know—" the strangely shaped hand abruptly ceased writing, and its owner turned toward the air lock, where Boss was waiting impatiently.

That last, unfinished sentence did much to check the cold anger that was starting to rise in Kirk. In silence, he watched the air-lock doors swing open. Through a screen of tangled deadwood, a few houses were visible; but no people appeared to be interested in the ship. How Boss had been able to bring the vessel down unseen so near the town will forever remain unknown.

The two aliens flew over the brush, choosing a moment when no human beings were in sight, and concealed themselves behind bushes fairly close to the nearest houses. Kirk, sitting on the sill of the outer door, could imagine the herald's sensitive antennae picking up the thought waves of one after another of the unsuspecting townspeople. He would have trouble with some of them, thought Kirk with a grin, as he recalled the three-quarters Indian population of the place and the illiteracy of a large percentage of this group, but how would it be possible to prevent the alien's looting the minds of Faxon, the poison specialist, or old MacArthur, the storekeeper? Warning them would be easy enough, but useless; the more they tried not to think of what was wanted, the more certain most of them were to do so. If they tried to attack and drive away the aliens, the latter could simply retreat into the ship and study the attackers at will. It looked as though Talker would win after all; or did it?

A thought struck the man, hazy and ill-defined at first. It had something to do with Indians and illiterates; something he couldn't quite place, dimly remembered from his psychology study—and then he had it. A grin spread over his face; he leaned back against his pack, and watched the herald as men,

women, and children, both white and red, passed within a hundred yards of his hiding place. Once again Kirk pictured the mind-reading "danger"; but it was markedly different from the former picture. He tried to control his thoughts, to make the joke last as long as possible—he wasn't sure that the herald could read his mind at this range, but why take chances? He tried to think about the subject in French, since he had to think about it; the results were not exactly what he had intended, but the mental pictures were undoubtedly tangled enough to baffle any mind reader. And then the mothmen were winging their way back to the ship.

Kirk moved aside to let them enter, and watched as the pair settled to the air-lock floor. Talker made no attempt to write; he simply stood and looked at the Earthman with an expression of hopeless resignation in his very carriage that sent a stab of pity through Kirk's heart.

The man stared back for a few moments, and then began speaking softly.

"You know, now. I did not think of it until you had gone—but I should have, from what you told me; and you should long since have known from your own observations. When we first learned to communicate with each other, you told me that my thought-wave pattern was different from that of your race, which was natural enough, as you finally realized. You did not carry that reasoning, which told you it was natural, to its logical conclusion; nor did I. Your people all 'think' alike—so far as either of us is able to tell what thought is. The patterns you broadcast are mutually intelligible to members of your race, but not to me, because you have received those wares from others of your kind from earliest childhood, and I am a stranger. But my people do not communicate in that fashion; as you have learned, we have organs capable of impressing fine modulations on sound waves, and of detecting these modulations. The activity that occurs in our brains is never directly transmitted to other brains—it is first 'coded' and then broadcast.

"The waves you 'hear' arise from chemical activity in your nervous systems, activity that accompanies thought.

They are—must be—controlled to a vast extent by the structure of the nerve pattern in your brains; a structure which is itself controlled during your growth by the impressed waves from outside, in conjunction with whatever strange process accompanies learning."

Kirk held out a hand to the herald.

"Look closely at the ends of my fingers. In the skin you will see a complex pattern of ridges and hollows. That pattern, stranger, is unique in me; every one of my people has a similar, but individual, pattern—no two have identical fingerprints. They form the most positive means of identification we possess, although there are more than two billion beings on this planet.

"And yet, friend, I think I am safe in saying that there are many times as many chances that two of us should bear identical fingerprints as there be chances that two human brains should be exactly alike, nerve for nerve. From birth, each brain is isolated, can be reached only through the means of communication natural to us; there is no reason that all should develop alike.

"On that assumption, the tiny currents that pass from nerve to nerve and give rise to the waves that you can sense cannot possibly be the same for any two of us; and so no two sets of 'thought waves' could be identical. You learned some of my pattern, and thought that you had the key to communicate with all my kind; but I tell you sincerely that you will have to learn afresh the 'thought language' of every new human being with whom you wish to converse. You have just discovered that for yourself.

"These cerebral radiations are not entirely unknown to us. Certain devices, in the nature of extremely sensitive electric detectors, have been able to measure and record them; but the only pattern shared by any significant number of human minds is that characterizing sleep—mental inactivity. The instant the subject wakes, or even has a dream, the 'alpha pattern' breaks up into a seemingly disorganized jumble.

"We also know a little concerning direct thought exchange. Some of our scientists have experimented for many years, in the attempt to determine its nature and cause. Many people—not the scientists—assume that it is due to radiations like those recorded by the devices I mentioned; they imagine the possibility of perfecting those machines and using them for communication. They have heard of the experiments in telepathy, but have not bothered to investigate their details.

"The experimenters themselves have pointed out that the phenomena of telepathy and clairvoyance, which seem to be closely connected, are quite inconsistent with the known laws of radiation, such as the inverse square law. I don't remember all the details, and, anyway, I'm not a physicist; but the best known of those scientists claims that our present science of physics does not contain the explanation of the experimental results.

"Whatever the true state of affairs may be, I am sure you will never get anything from any human mind but my own. I hate to tantalize you, but if you had not made this attempt to deceive me, my emotions would probably have overcome my common sense sufficiently to force me to help you; even now I am tempted to do so, because I can't help feeling that your mind contains the roots of curiosity, with which I sympathize—I wouldn't have pursued my studies this far, otherwise. But I could never trust you, now. My intelligence, such as it is, gave one estimate of your character, and my feelings gave another; and unfortunately for you, your actions showed the intelligence to be at least partially correct. Your character probably isn't your fault, but I can do nothing about that. My advice to you is to take on supplies and get away from here while some of you are still alive; the fact that you found an inhabited planetary system at the first try suggests that others may not be too hard to locate. I wish you luck, so far as good luck for you doesn't mean bad for us."

Allen Kirk turned, swung the pack to his shoulder, and walked away from the spaceship. He was acutely aware, as he went, of the two pairs of yellow eyes gazing after him; but he didn't dare to look back.